## PUBLIC

Part 2 of 2
INFORMATION SHEET
PRESIDING: Commissioner Duffley, Presiding; Chair Mitchell, and Commissioners Brown-Bland, Clodfelter, Hughes, McKissick, Jr., and Kemerait
PLACE: Raleigh, NC
DATE: Friday, September 1, 2023
TIME: 12:07 p.m. to 1:21 p.m.
DOCKET NO.: E-7, Sub 1134 and E-7 Sub 1276
COMPANY: Duke Energy Carolinas, LLC
DESCRIPTION: In the Matter of Duke Energy Carolinas, LLC Application for Approval to Construct a 402 MW Natural Gas-Fired Combustion Turbine Electric Generating Facility in Lincoln County, and for an Application for Adjustment of Rates and Charges Applicable toElectric Service in North Carolina and for Performance-BasedRegulation

VOLUME NUMBER: 15

## APPEARANCES

See attached
WITNESSES
See attached

## EXHIBITS

None attached

| REPORTED BY: Lisa A. DeGroat | TRANSCRIPT PAGES: 93 |
| :---: | :---: |
| TRANSCRIBED BY: Lisa A. DeGroat | PREFILED PAGES: 1227 |
| DATE FILED: September 8, 2023 | TOTAL PAGES: 1320 |

PLACE: Dobbs Building, Raleigh, North Carolina
DATE: Friday, September 1, 2023
TIME: 12:07 p.m. - 1:21 p.m.
DOCKET NO: E-7, Sub 1134 and E-7, Sub 1276
BEFORE: Commissioner Kimberly W. Duffley, Presiding Chair Charlotte A. Mitchell

Commissioner ToNola D. Brown-Bland
Commissioner Daniel G. Clodfelter
Commissioner Jeffrey A. Hughes
Commissioner Floyd B. McKissick, Jr.
Commissioner Karen M. Kemerait

IN THE MATTER OF:
Duke Energy Carolinas, LLC
Application for Approval to Construct a 402 MW Natural Gas-Fired Combustion Turbine Electric Generating Facility in Lincoln County and

Application for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina and for Performance-Based Regulation

VOLUME 15

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# NORTH CAROLINA UTILITIES COMMISSION APPEARANCE SLIP 

DATE: 8-28-23
DOCKET NO:: $E-7$ Sub 1276
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ZIP CODE: 27602
APPEARANCE ON BEHALF OF: Dute Energy Carolinias, Le

## APPLICANT: $x$

 COMPLAINANT:INTERVENOR: $\qquad$
PROTESTANT:
RESPONDENT:
DEFENDANT: $\qquad$
Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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NORTH CAROLINA UTILITIES COMMISSION APPEARANCE SLIP

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ADDRESS: $\qquad$
CITY: $\qquad$ STATE: $\qquad$ ZIP CODE: $\qquad$
APPEARANCE ON BEHALF OF: $\qquad$ Duke Envy Campus ll Co
$\qquad$
APPLICANT: $\qquad$ COMPLAINANT: $\qquad$ INTERVENOR: $\qquad$
PROTESTANT: $\qquad$ RESPONDENT: $\qquad$ DEFENDANT: $\qquad$
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## NORTH CAROLINA UTILITIES COMMISSION

## APPEARANCE SLIP

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| :---: | :---: | :---: |
| PROTESTANT：－－ | RESPONDENT： | DEFENDANT： |

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| PROTESTANT: | RESPONDENT: | DEFENDANT: |

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| PROTESTANT: _-_ | RESPONDENT: | DEFENDANT: |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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# NORTH CAROLINA UTILITIES COMMISSION 

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| website. To view and/or print transcripts, go to https://www.ncuc.net/, |
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DATE: August 22,2023
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| APPLICANT: $x$ | COMPLAINANT: | INTERVENOR: |
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| PROTESTANT: | RESPONDENT: | DEFENDANT: |

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# NORTH CAROLINA UTILITIES COMMISSION <br> APPEARANCE SLIP 

DATE: August 23,2023
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| :---: | :---: | :---: |
| PROTESTANT: _-_ | RESPONDENT: | DEFENDANT: |

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## NORTH CAROLINA UTILITIES COMMISSION

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APPEARANCE ON BEHALF OF: _CUCA
APPLICANT: _-- COMPLAINANT: _-_ INTERVENOR: $x$
PROTESTANT: ___ RESPONDENT: ___ DEFENDANT: __

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DOCKET NO.: E-7 Sub 1276
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APPEARANCE ON BEHALF OF: Carolina Utility Customers Association

| APPLICANT: $-\ldots$ | COMPLAINANT: _-- | INTERVENOR: $x_{-}$ |
| :--- | :--- | :--- |
| PROTESTANT: _-_ | RESPONDENT: |  |

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CITY: Wimington ____ STATE: NC Z__-_-_-_ ZIP CODE: 28401
APPEARANCE ON BEHALF OF: _CUCA

| APPLICANT: | COMPLAINANT: | INTERVENOR: $\times$ |
| :---: | :---: | :---: |
| PROTESTANT: _-_ | RESPONDENT: _-_ | DEFENDANT: _-_ |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

ONLY fill out this portion if you have signed an NDA to receive CONFIDENTIAL transcripts and/or exhibits:
x_-_ Yes, I have signed the Confidentiality Agreement.
Email: cdodd@brookspierce.com
SIGNATURE: _ Is/Christopher Dodd
(Signature Required for distribution of CONFIDENTIAL information)

DATE: August 22, 2023 DOCKET NO.: E-7, Sub 1276; E-7, Sub 1134
ATTORNEY NAME and TITLE: Christina Cress, Parner; Douglas "D.C." Conant, Associate (Bailey \& Dixon, LLP)
Chris S. Edwards, Partner (Ward \& Smith, LLP)
FIRM NAME:
Bailey \& Dixon, LLP (CDC \& DC); Ward \& Smith, LLP (CSE)
ADDRESS: _434 Fayetteville St., Ste. 2500 (Bailey \& Dixon); 127 Racine Drive (Ward \& Smith)
CITY: Raleigh (B8D); Wimington (W\&S) STATE: NC_ ZIP CODE: 27601 (B8D); 28403 (W\&S)
APPEARANCE ON BEHALF OF: CIGFUR ill, Haywood EMC, Blue Ridge EMC, Piedmont EMC, and Rutherford EMC

| APPLICANT: $-\ldots$ | COMPLAINANT: $-\ldots$ | INTERVENOR: $x^{-}$ |
| :--- | :--- | :--- |
| PROTESTANT: _-_ | RESPONDENT: |  |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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x__ Yes, I have signed the Confidentiality Agreement.

## Email: ccress@bdixon.com

SIGNATURE: Christina D. Cress
Digitaty slgned by Christins D. Cress
(Signature Required for distribution of CONFIDENTIAL information)

# NORTH CAROLINA UTILITIES COMMISSION <br> APPEARANCE SLIP 

DATE: 8/28/23
DOCKET NO.: E-7 Sub 1276
ATTORNEY NAME and TITLE: Ethan Blumenthal, Regulatory Counsel
FIRM NAME: _North Carolina Sustainable Energy Association
ADDRESS: $\quad 4800$ Six Forks Rd., Suite 300
CITY: Raleigh
APPEARANCE ON BEHALF OF: North Carolina Sustainable Energy Association

| APPLICANT: $-\ldots$ | COMPLAINANT: _-- | INTERVENOR: $x^{\ldots}$ |
| :--- | :--- | :--- |
| PROTESTANT: _-_ | RESPONDENT: $-\ldots$ | DEFENDANT: $-\ldots$ |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

ONLY fill out this portion if you have signed an NDA to receive CONFIDENTIAL transcripts and/or exhibits:
__-_ Yes, I have signed the Confidentiality Agreement.
Email: ethan@energyncorg
SIGNATURE: Ethan Blumenthal
(Signature Required for distribution of CONFIDENTIAL information)

## NORTH CAROLINA UTILITIES COMMISSION

## APPEARANCE SLIP



FIRM NAME: _NCSEA
ADDRESS: 4800 Sivisorks Rd sure 300 cITY: Rough ----- STATE: $n C$ ZIP CODE: 2 _- 609

APPEARANCE ON BEHALF OF: NCSEA

| APPLICANT: _-_ | COMPLAINANT: _-_ | INTERVENOR: $\mathbb{Z}_{-}$ |
| :--- | :--- | :--- |
| PROTESTANT: _-_ | RESPONDENT: ___ | DEFENDANT: _-_- |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

ONLY fill out this portion if you have signed an NDA to receive CONFIDENTIAL transcripts and/or exhibits:
$\square$ Yes, I have signed the Confidentiality Agreement.
Email:
 SIGNATURE: flyby KIM: Cassie Gives
(Signature Required for distribution of CONFIDENTIAL information)

## NORTH CAROLINA UTILITIES COMMISSION

## APPEARANCE SLIP

DATE： 8128123 DOCKET NO：E－7，Subl27le
ATTORNEY NAME and TITLE：Ben Snowden，Patriner

ADDRESS：－434 Fayetteville St．，Suite 2800
CITY：Ralegh $\quad$ STATE：NC ZIP CODE： 27601

APPEARANCE ON BEHALF OF：North Carolina League of Municipalties

| APPLICANT：$-\ldots$ | COMPLAINANT：$-\ldots$ | INTERVENOR：$-\ldots$ |
| :--- | :--- | :--- |
| PROTESTANT：$-\ldots$ | RESPONDENT： | DEFENDANT：$-\ldots$ |

Non－confidential transcripts are located on the Commission＇s website．To view and／or print transcripts，go to https：／／www．ncuc．net／， hover over the Dockets tab，select Docket Search，enter the docket number，and click search，select the highlighted docket number and select Documents for a list of all documents filed．

ONLY fill out this portion if you have signed an NDA to receive CONFIDENTIAL transcripts and／or exhibits：
$\times \quad$ Yes，I have signed the Confidentiality Agreement．
Email：bsnowden＠toxrothschild．com
SIGNATURE：BSnowden
（Signature Required for distribution of CONFIDENTIAL information）

# NORTH CAROLINA UTILITIES COMMISSION APPEARANCE SLIP 

DATE: 8/25/2023
DOCKET NO.: E-7 Sub 1276
ATTORNEY NAME and TITLE: $\qquad$

Alan Jenkins
FIRM NAME: Jenkins at Law, LLC
ADDRESS:

APPEARANCE ON BEHALF OF: The Commercial Group

| APPLICANT: | COMPLAINANT: | INTERVENOR: ${ }^{\text {x }}$ |
| :---: | :---: | :---: |
| PROTESTANT: _-_ | RESPONDENT: | DEFENDANT: |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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____ Yes, I have signed the Confidentiality Agreement.
Email:
aj@jenkinsatlaw.com
SIGNATURE:
(Signature Required for distribution of CONFIDENTIAL information)

# NORTH CAROLINA UTILITIES COMMISSION 

 APPEARANCE SLIPDATE: August 22, 2023
DOCKET NO.: E7, SUb 1276
ATTORNEY NAME and TITLE: Catheme Crale Jones

FIRM NAME: LLaw Offices of F. Bryan Brice, Jr.
ADDRESS: -130 S. Salisbury Street

APPEARANCE ON BEHALF OF: Sierra Club

| APPLICANT: | COMPLAINANT: | INTERVENOR: ${ }^{\text {x }}$ |
| :---: | :---: | :---: |
| PROTESTANT: -_- | RESPONDENT: | DEFENDANT: |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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$x$ _._ Yes, I have signed the Confidentiality Agreement.

(Signature Required for distribution of CONFIDENTIAL information)

# NORTH CAROLINA UTILITIES COMMISSION 

## APPEARANCE SLIP

DATE: August 22,2023
DOCKET NO.: E-7, Sub 1276
ATTORNEY NAME and TITLE: Andrea C . Bonvecthio
$\qquad$
FIRM NAME: _Law Offices of F. Bryan Brice, Jr:
ADDRESS:
CITY: Raleigh _-_
APPEARANCE ON BEHALF OF: Sieraciub

APPLICANT: _-_ COMPLAINANT: _-_ INTERVENOR: $\underset{\ldots}{ }$
PROTESTANT: ___ RESPONDENT: _-_ DEFENDANT: _-_
Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

ONLY fill out this portion if you have signed an NDA to receive CONFIDENTIAL transcripts and/or exhibits:
x_-_ Yes, I have signed the Confidentiality Agreement.

(Signature Required for distribution of CONFIDENTIAL information)

DATE: August 28,2023
DOCKET NO.: E-7, Sub 1276
ATTORNEY NAME and TITLE: David L. Neal, Senior Attorney

FIRM NAME:
Southern Environmental Law Center
ADDRESS:
601 West Rosemary Street, Suite 220
CITY: Chapel till _-_-_-_-_ STATE: North Carolina__ ZIP CODE: 27516
APPEARANCE ON BEHALF OF:
North Carolina Justice Center, North Carotina Housing Coalition, Southern Alliance for Clean Energy, Natural Resources Defense Counci,
and Vote Solar (NC.JC, et al.)
APPLICANT: _-- COMPLAINANT: .-- INTERVENOR: $\times$

PROTESTANT: _-_ RESPONDENT: _-_ DEFENDANT:
Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

ONLY fill out this portion if you have signed an NDA to receive CONFIDENTIAL transcripts and/or exhibits:

﹎._-_ Yes, I have signed the Confidentiality Agreement.

## Email: dneal@selcnc.org

SIGNATURE: 2ex 2023.08.23 12:33:09-04'00
(Signature Required for distribution of CONFIDENTIAL information)

# NORTH CAROLINA UTILITIES COMMISSION APPEARANCE SLIP 

DATE: 오2882023
DOCKET NO.: E-7, Sub 1276

## ATTORNEY NAME and TITLE: <br> Munaashe Magarira, Staff Atiorney

$\qquad$
FIRM NAME: Southern Environmental Law Center

## ADDRESS:

APPEARANCE ON BEHALF OF: North Carolina Justice Center, North Caroina Housing Coaltion,

| APPLICANT: $-\ldots$ | COMPLAINANT: $-\ldots$ | INTERVENOR: $\times--$ |
| :--- | :--- | :--- |
| PROTESTANT: _-_ | RESPONDENT: $-\ldots$ | DEFENDANT: $-\ldots$ |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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x___ Yes, I have signed the Confidentiality Agreement.

## Email: mmagarira@selcnc.org

SIGNATURE:
$\qquad$

# NORTH CAROLINA UTILITIES COMMISSION 

 APPEARANCE SLIPDATE: 05/04/2023 DOCKET NO.: E-2 Sub 1300

ATTORNEY NAME and TITLE: Thomas Gooding, Associate Attorney

FIRM NAME:


ADDRESS:
CITY: Chapel hill

APPEARANCE ON BEHALF OF: North Carolina Justice Center, North Carolina Housing Coalition,
Natural Resources Defense Council, Southern Alliance for Clean Energy, and Vote Solar

| APPLICANT: | COMPLAINANT: _-_ | INTERVENOR: ${ }_{\text {x }}$ |
| :---: | :---: | :---: |
| PROTESTANT: | RESPONDENT: | DEFENDANT: |

## Non-confidential transcripts are located on the Commission's

 website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.ONLY fill out this portion if you have signed an NDA to receive CONFIDENTIAL transcripts and/or exhibits:
x__-_ Yes, I have signed the Confidentiality Agreement.
Email: tgooding@selcnc.org
SIGNATURE: Thomas Gooding
(Signature Required for distribution of CONFIDENTIAL information)

# NORTH CAROLINA UTILITIES COMMISSION APPEARANCE SLIP 

DATE: _-08/22/2023 _-_-_-_-_ DOCKET NO.: E-7. Sub 1276
ATTORNEY NAME and TITLE: Matthew D Quinn Partner

FIRM NAME: _Lewis \& Roberts.PLLC $\qquad$
ADDRESS: _-_P. O.Box 17529

APPEARANCE ON BEHALF OF: _NC WARN

APPLICANT: _-_ COMPLAINANT: -_- INTERVENOR: _X
PROTESTANT: _-_ RESPONDENT: _-_ DEFENDANT: _-_
Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncucnet/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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Email: $\qquad$
SIGNATURE: $\qquad$
(Signature Required for distribution of CONFIDENTIAL information)

# NORTH CAROLINA UTILITIES COMMISSION APPEARANCE SLIP 

DATE: 8:28:2023
DOCKET NO.: ETSub 1278:
ATTORNEY NAME and TITLE: kurfobelini

FIRM NAME: Boafim: Kuitit \& Lowny
ADDRESS: - 36 East Sevent street sule 1510


APPEARANCE ON BEHALF OF:

| APPLICANT: $-\quad$ COMPLAINANT: $-\quad$ INTERVENOR: $x_{-}$ |  |
| :--- | :--- | :--- |
| PROTESTANT: $-\quad$ RESPONDENT: $-\infty$ | DEFENDANT: -- |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to hites//wwwene.net, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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$\times$ $\qquad$ Yes, I have signed the Confidentiality Agreement.

(Signature Required for distribution of CONFIDENTIAL information)

DATE: August25,2023
DOCKET NO:: Eq Subi276.
ATTORNEY NAME and TITLE: Jody Eyler Comesq,

FIRM NAME: Boetrm,krtz \& Lowy

## ADDRESS: <br> $\qquad$ <br> $3 E$ Cast 7 St Street, Sulte 1510

CITY: Cincinnati_-_-_ STATE. Ohio_-_-_-_ CODE: 45202
APPEARANCE ON BEHALF OF: $\qquad$
The Kroger Company
APPLICANT: - - COMPLAINANT: - INTERVENOR: $x$

## PROTESTANT: RESPONDENT: - - <br> DEFENDANT:

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www nouc.net, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

ONLY fill out this portion if you have signed an NDA to receive CONFIDENTIAL transcripts and/or exhibits:
___._. Yes, I have signed the Confidentiality Agreement.
Email:
SIGNATURE:
(Signature Required for distribution of CONFIDENTIAL information)

NORTH CAROLINA UTILITIES COMMISSION APPEARANCE SLIP

DATE: 08/25/2023
DOCKET NO.: E-2 Sub1300
ATTORNEY NAME and TITLE: Benjamin M. Royster, Atorney

FIRM NAME: _Royster \& Royster PLLC
ADDRESS: $\qquad$
CITY: Mt.Ary ___ STATE: NC
ZIP CODE: 27030
APPEARANCE ON BEHALF OF: Kroger Co and Haris Teeter

| APPLICANT: $-\ldots$ | COMPLAINANT: $-\ldots$ | INTERVENOR: $\underline{x}_{--}$ |
| :--- | :--- | :--- |
| PROTESTANT: $\ldots$ | RESPONDENT: |  |

Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

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Email: $\qquad$
SIGNATURE:
(Signature Required for distribution of CONFIDENTIAL information)

# NORTH CAROLINA UTILITIES COMMISSION 

## APPEARANCE SLIP

DATE: 8-28-23
DOCKET NO.: E-7, Sub 1276
ATTORNEY NAME and TITLE: Marcus W. Trathen

FIRM NAME: Brooks Pierce McLendon Humphrey \& Leonard, LLP
ADDRESS: 1700 Wells Fargo Capitol Center, 150 Fayetteville St.
CITY: Raleigh__-__-_-_-_ STATE: NC CODE: 27601
APPEARANCE ON BEHALF OF: _Andale, LLC

| APPLICANT: _-_ | COMPLAINANT: _-_ | INTERVENOR: $x^{\prime}$ |
| :--- | :--- | :--- |
| PROTESTANT: ___ | RESPONDENT: ___ | DEFENDANT: ___ |

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To receive an electronic CONFIDENTIAL transcript, please complete the following:

* Yes, I have signed the Confidentiality Agreement.

Email: mtrathen@brookspierce.com
SIGNATURE: _-_is/Marcus Trathen
(Required for distribution of CONFIDENTIAL transcript)

# NORTH CAROLINA UTILITIES COMMISSION 

 APPEARANCE SLIPDATE：8／28／2023
DOCKET NO．：E－7，Sub 1276
ATTORNEY NAME and TITLE：Tirrill Moore
Assistant Attorney General

ADDRESS： 114 West Edenton Street
CITY：Raleigh $\ldots$ STATE：NC $\ldots$

APPEARANCE ON BEHALF OF：＿The using and consuming public；the State and its citizens

| APPLICANT：＿－＿ | COMPLAINANT：$\ldots$ | INTERVENOR：$\underline{x}$ |
| :--- | :--- | :--- |
| PROTESTANT：＿＿－＿ | RESPONDENT： | DEFENDANT： |

Non－confidential transcripts are located on the Commission＇s website．To view and／or print transcripts，go to https：／／www．ncuc．net／， hover over the Dockets tab，select Docket Search，enter the docket number，and click search，select the highlighted docket number and select Documents for a list of all documents filed．

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X＿＿Yes，I have signed the Confidentiality Agreement．

## Email：temoore＠ncdoj．gov

SIGNATURE：
工亚 $M$
（Signature Required for distribution of CONFIDENTIAL information）

# NORTH CAROLINA UTILITIES COMMISSION 

 APPEARANCE SLIPDATE: August 28,2023
DOCKET NO.: E-7, Sub 1276
ATTORNEY NAME and TITLE: Derrick C. Mertz, Special Deputy Attorney General;

FIRM NAME: _North Carolina Department of Justice ADDRESS: $\qquad$ 114 W. Edenton Steet
CITY: Raleigh

APPLICANT:
PROTESTANT: ___ RESPONDENT: ---DEFENDANT: $\qquad$
Non-confidential transcripts are located on the Commission's website. To view and/or print transcripts, go to https://www.ncuc.net/, hover over the Dockets tab, select Docket Search, enter the docket number, and click search, select the highlighted docket number and select Documents for a list of all documents filed.

ONLY fill out this portion if you have signed an NDA to receive CONFIDENTIAL transcripts and/or exhibits:
x___ Yes, I have signed the Confidentiality Agreement.

## Email: dmerz@ncdo.gov

SIGNATURE: Derrick Mertz

(Signature Required for distribution of CONFIDENTIAL information)

# NORTH CAROLINA UTILITIES COMMISSION PUBLIC STAFF - APPEARANCE SLIP 

| DOCKET \#: E-7, Sub 12 |  |  |  |
| :---: | :---: | :---: | :---: |
| PUBLIC STAFF ATTORNEY |  |  |  |
| TO REQUEST A CONFIDENTIAL TRANSCRIPT, PLEASE PROVIDE YOUR EMAIL ADDRESS BELOW: |  |  |  |
| Accounting |  |  |  |
| CONSUMER SERVICES COMMUNICATIONS $\qquad$ ENERGY |  |  |  |
|  |  |  |  |
|  |  |  |  |
| ECONOMICS $\qquad$ <br> LEGAL lucy.edmondson@psncuc.nc.gov, robert.josey@psncuc.nc.gov, nadia.lunr@psncuc.nc.gov, thomas. felling@psncuc.nc.gov, zeke.creech@psncuc.nc.gov; william.freeman@psncuc.nc.gov; anne.keyworth@psncuc.nc.gov |  |  |  |
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| TRANSPORTATION WATER |  |  |  |
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| Non-confidential transcripts are located on the Commission's website. To view and/or print, please access https://www.ncuc.net/. |  |  |  |
|  |  |  |  |
| COUNSEL/MEMBER(S) REQUESTING A CONFIDENTIAL TRANSCRIPT WHO HAS SIGNED A CONFIDENTIALITY AGREEMENT WILL NEED TO SIGN BELOW. <br> /s/Lucy E. Edmondson |  |  |  |
|  |  |  |  |
| /s/Robert B. Josey |  |  |  |
| Is/ Nadia L. Lunr |  |  |  |
| Is/ Thomas J. Felling |  |  |  |
| /s/William E. H. Creech |  |  |  |
| Is/ William Freeman Is/Anne M. Keyworth |  |  |  |

## David Hill

 David Hill joined EFG as a Managing Consultant at the start of 2020, after 22 years of employment with VEIC, most recently as Director of Distributed Resources and a VEIC Policy Fellow. He is known nationally for his advancement of sustainable energy program design and evaluation, and renewable energy policy. David has been the principal investigator and led analysis teams for multi-year stakeholder informed studies on solar market and decarbonization pathways and scenarios. David provides expert testimony and regulatory support; participates in international, national, and state boards; leads policy committees and conferences; provides comprehensive studies of the economic, technical, and achievable potentials for sustainable energy programming; and supports program budget planning and implementation. He has led or significantly contributed to the design and development of efficiency and renewable energy programs with annual budgets of $\$ 100+$ million for initiatives in New Jersey, Washington DC, New York, Vermont, Arizona, and Maryland. Recent work includes expert testimony and whitepaper analyses related to gas infrastructure investments, pilot programs and planning. He has clients in more than a dozen states and six countries; several of them are international organizations.

## Experience

January 2020 - present: Managing Consultant, Energy Futures Group, Hinesburg, Vermont (VT)
2014 - 2019: Director, Distributed Energy Resources, Policy Fellow, VEIC, Burlington, VT
2010 - 2014: Managing Consultant, VEIC, Burlington, VT
2008 - 2010: Deputy Director, Planning and Evaluation, VEIC, Burlington, VT
2000 - 2008: Senior Consultant, VEIC, Burlington, VT
1998 - 2000: Consultant, VEIC, Burlington, VT
1993 - 1998: Research Associate, Tellus Institute and the Boston Center of the Stockholm Environment Institute

## Testimony as Expert Witness

Expert witness and reports for technical working groups and before commissions on renewable energy, energy efficiency, and gas infrastructure, in Illinois, Vermont, New York, Rhode Island, New Jersey, Maryland, Pennsylvania, South Carolina, for the Federal Energy Regulatory Commission, Nova Scotia and Ontario.

## Energy Futures Group, Inc

PO Box 587, Hinesburg, VT 05461 - USA | 802-482-4874 \| dhill@energyfuturesgroup.com

## David Hill <br> Managing Consultant

2022 In the Matter of: Application of Duke Energy Progress, LLC for Authority to Adjust and Increase its Electric Rate Schedules and Charges Docket No. 2022-254-E, on behalf of South Carolina Coastal Conservation League, Southern Alliance for Clean Energy, and Vote Solar, South Carolina Public Service Commission, December 1, 2022.
2022 In the Matter of the Merger of South Jersey Industries, Inc. and Boardwalk Merger Sub, Inc. in Docket No. GM22040270, on behalf of Environmental Defense Fund, State of New Jersey Board of Public Utilities, November 10, 2022.
2022 GTN Xpress Project: A Critical Review of Need, Cost and Impacts, prepared for the Washington State Office of the Attorney General, and filed with the Federal Energy Regulatory Commission in Docket No.CP22-2-00, on behalf of the States of Washington, California, and Oregon.
2022 In the Matter of Avoided Costs for EfficiencyOne’s 2023-2025 Demand Side Management Plan Application, before the Nova Scotia Utility and Review Board, on behalf of EfficiencyOne. February 11, 2022.
2022 Appearance before the Rhode Island Energy Facilities Siting Review Board, Docket SB-2021-03, regarding a declaratory Order filed by Sea 3 Providence. LLC. Hearing appearance in support of Direct Testimony of Gabrielle Stebbins of Energy Futures Group, on behalf of the Conservation Law Foundation.
2021 Nicor Smart Neighborhood and Total Green Pilots. Expert witness testimony on behalf of Citizens Utility Board, Environmental Defense Fund and Natural Resources Defense Council, Docket 21-0098 before the Illinois Commerce Commission.

2021 Nicor Renewable Natural Gas Pilot. Expert witness testimony on behalf of Citizens Utility Board and Natural Resources Defense Council, Docket 20-0722 before the Illinois Commerce Commission.
2020 NH Saves 2021-2023 Triennial Plan. Expert witness testimony reviewing joint gas and electric triennial efficiency plan before the New Hampshire Public Service Commission submitted on behalf of Clean Energy New Hampshire, DE 20-092.

2020 Dominion Energy South Carolina, 2020 Integrated Resource Plan. Expert witness testimony before the South Carolina Public Service Commission submitted on behalf of Southern Alliance for Clean Energy and the South Carolina Coastal Conservation League on the characterization and analysis of energy efficiency and demand response in Dominion's 2020 IRP. Docket No. 2019-226-E.

2019 Efficiency One 2020-2022 DSM Plan: Portfolio Diversification and Lighting Transition. Expert Witness Testimony submitted on behalf of Efficiency Nova Scotia, to the Nova Scotia Utility and Review Board, Matter 09096.
2018 In the Matter of an Application by Nova Scotia Power for Approval of its Advanced Meter Infrastructure Project. Expert Witness Testimony submitted on behalf of Ecology Action Center, to the Nova Scotia Utility and Review Board, Matter 08349.
2018 Becoming an Advanced Solar Economy. Testimony before the Vermont House Committee on Energy and Technology, Montpelier.

## Energy Futures Group, Inc

PO Box 587, Hinesburg, VT 05461 - USA | 802-482-4874 \| @dhill@energyfuturesgroup.com

## David Hill <br> Managing Consultant

2017 Maryland Public Service Commission. On behalf of Office of People's Counsel on EmPOWER Maryland Utilities 2018-2020 plans. Presentation and testimony, October 25-26, 2017.
2016 Maryland Office of People's Counsel, EmPOWER Maryland. Written Comments on 2015 Semi Annual (Q3 and Q4) Review. Presentation and testimony, May 4, 2016.
2015 Maryland Office of People's Counsel, EmPOWER Maryland. Written Comments on 2015 Semi Annual Review. Presentation and testimony, October 14-15, 2015.
2014 Maryland Office of People's Counsel, EmPOWER Maryland. Written Comments on 2015-2017 Utility Proposed Plans. Presentation and testimony, October 21-22, 2014.
2014 Maryland Office of People's Counsel, EmPOWER Maryland. Evaluation of Semi-Annual Reports Case Nos. 9153-9157. Presentation and testimony, April 7, 2014.
2013 Pennsylvania Public Utility Commission. On behalf of the Office of Consumer Advocate, regarding Petitions of the Pennsylvania Power Company for Approval of its Act 129 Phase II Energy Efficiency and Conservation Plan (Docket Nos. M-2012-2334395 and M-2012-2334392); Petition of Metropolitan Edison Company (Docket No, M-2012-2334387); and Petition of West Penn Power Company (Docket No. M-2012-2334398). Written testimony. January 8, 2013.
2013 Maryland Office of People's Counsel, EmPOWER Maryland. Written comments on 2012 Q3-Q4 Semi-Annual Report. Presentation and testimony, October 2-3, 2013.
2011 Maryland Office of People's Counsel. Utility-Specific Comments on the 2012-2014 EmPOWER Maryland Program Plans. Case Nos. 9153-9157. Written testimony. October 19, 2011.
2011 Maryland Office of People's Counsel. Written Comments on 2010 Annual Reports, and Q4 2010 reports. Case Nos. 9153-9157. Presentation and testimony. March 31, 2011.
2011 Maryland Public Service Commission. On behalf of the Maryland Office of People's Counsel. Comments on the 2012-2014 EmPOWER Maryland Utility Program Plans. October 2011.
2009 Pennsylvania Public Utility Commission. On behalf of the Office of Consumer Advocate, regarding Petition of Duquesne Light Company for Approval of Its Energy Efficiency and Conservation and Demand Response Plan, Docket No. M-2009-2093217. August 7, 2009.

2005 Ontario Energy Board. On behalf of Green Energy Coalition, regarding Hydro One Networks and Brampton Conservation and Demand Management Plans. February 4, 2005 (written comments) and February 17-18, 2005 (testimony).
2005 Pennsylvania Public Utility Commission. On behalf of Penn Future, regarding net metering standards. Written comments and testimony. June 2005.
2005 Pennsylvania Public Utility Commission. On behalf of Penn Future. Written testimony and comments on interconnection standards. April 2005.
2005 Testimony to the Vermont State Legislature House Committee on Energy and Natural Resources on Vermont's Solar and Small Wind Incentive Program. February 9, 2005.

## Energy Futures Group, Inc

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## Selected Projects (from more than 100)

Vermont Agency of Natural Resources. Co-leader of Vermont Pathways Analysis team providing technical support and quantitative modeling to the Vermont Climate Council, leading to adoption of Vermont Climate Action Plan.
Conservation Law Foundation. Lead author, for "Rhode Island's Investments in Gas Infrastructure A Review of Critical Issues", discussing renewable gas potential, gas planning in relation to greenhouse gas reduction goals and, depreciation periods for gas new infrastructure.
Institute for Energy Economics and Financial Analysis. Lead author, for "Critical Elements in Short Supply: Assessing the Shortcomings of National Grid's Long-Term Capacity Report", study calling into question proposed natural gas pipeline investment for New York City region.
Massachusetts Executive Office of Energy and Environmental Affairs. Senior advisor for team creating Low Emissions Analysis Platform (LEAP) integrated scenario modeling to inform Massachusetts efforts to reach greenhouse gas reduction targets.
Pennsylvania Department of Environmental Protection. Led team creating scenario modeling using the Low Emissions Analysis Platform (LEAP) model in support of two- and half-year study "Pennsylvania's Solar Future". Presentations for modeling review and collaborative stakeholder feedback at more than half a dozen stakeholder meetings and webinars.
U.S. Department of Energy. Principal Investigator for a three-year SunShot Initiative Solar Market Pathways study, investigating the technical, regulatory, and business model implications of getting 20 percent of Vermont's total electric supply from solar by 2025.
Sun Shares. Created and launched, and responsible for management and business development of, a community solar business subsidiary to provide "Easy and Affordable Solar for Employers and their Employees," 2015 - present.
New Jersey Clean Energy Program. Program design and policy advisor for the renewable energy program for more than a decade.
Rhode Island Office of Energy Resources. Strategic Advisor on State Energy Plan and System Reliability Procurement and Distributed Generation programs.
Alaska Energy Authority. Principal consultant for two studies on renewable and energy efficiency financing and funding strategies.
New York State Energy Research and Development Authority (NYSERDA). Twice led the renewable energy analysis for 20-year forecast of energy efficiency and renewable energy potential, 2003 and 2012.
World Bank. Expert consultant on a short-term study of efficiency and micro- / mini-grid opportunities in Tanzania, 2014.
Arizona Public Service. Managed a rapid assessment and redesign of PV and solar hot water incentives, 2009.

## Selected Presentations

[^0]
## David Hill <br> Managing Consultant

2016 Oxymoron: Harmonizing Distributed Energy Integration Realities with Policy Frameworks. Solar Power International.
2015 World Bank, International Conference on Energy Efficiency in Cities, Puebla New Mexico. Invited Panel speaker on Efficiency Vermont and Third-Party Administration Model. February, 2015.

2015 Vermont Solar Market Pathways. Presentations at Solar 2015 (State College, Pennsylvania), and Renewable Energy Vermont Conference.

2014 New York State Energy Research and Development Authority (NYSERDA), Renewable Energy Potential Study Results, Albany, NY.

2013 Transformative Energy Planning. Invited speaker at Innovations in Renewable Energy Symposium, Metcalf Institute for Marine and Environmental Reporting, Narragansett, Rhode Island.

2012 World Renewable Energy Forum, 2012 - Welcome Address and Introduction of Keynote Plenary Speakers. American Solar Energy Society, Denver.
2012 Efficiency Vermont: A Successful Statewide Clean Energy Utility Model. Presented at the 2012 Business of Clean Energy in Alaska Conference, Anchorage.
2011 Nova Scotia Feed In Tariff Forum: Invited speaker for two panels addressing Regional Coordination and Export Potential and International Feed-in Tariffs.
2011 Integrating Renewable Energy and Efficiency Services. Presentation to the Clean Energy States Alliance Fall 2011 Meeting, Washington, DC.
2010 The Potential for Energy Efficiency and Renewables as Resources in Wholesale Capacity Markets, Presentation at EUEC 2010 Conference, Phoenix, AZ.

2008 "Technology and Policy; Getting it Right." Solar Power International, Invited panel speaker. San Diego, California.

2008 Solar Market Transition in New Jersey: Promise and Progress towards Sustained Growth. Solar 2008, American Solar Energy Society.

2008 Review of Efficiency Vermont Administrative Structure and Experience. Penn Future 2008 Clean Energy Conference, May 2008.

2006 Scoping Analysis of Potential Photovoltaic Contributions Towards Offsetting Transmission System Upgrades in Southern Vermont. Solar 2006, American Solar Energy Society.
2006 Growing New Construction Markets for Photovoltaics: Recent Strategies and Activities from LIPA's Solar Pioneer Program. Solar 2006, American Solar Energy Society, 2006.
2005 Market Response to Photovoltaic Incentive Offerings: An Analysis of Trends and Indicators. Presented at the International Solar Energy Society Solar World Congress, 2005.
2003 Solar Energy Value and Opportunities in Vermont, Invited Session Panel Moderator and Speaker, 2nd Annual Power for a New Economy Conference, Burlington, Vermont, October 8, 2003. Renewable Energy Vermont.
2003 Renewable Energy Case Studies: Redefining the Models, Refining the Messages, and Getting the Word Out, Invited Session Panel Moderator, Solar 2003 National Solar Energy Conference, Austin, Texas June 22, 2003. American Solar Energy Society.

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## David Hill <br> Managing Consultant

2002 Transforming Markets for Customer Sited Clean Renewable Energy: Connecting Field Experience with Lessons from the Efficiency World, Invited Session Panel Moderator, Solar 2002 National Solar Energy Conference, Reno, Nevada June 18, 2002. American Solar Energy Society. IDENTIFY: Improving Industrial Energy Efficiency and Mitigating Global Climate Change. Software and paper prepared for the United Nations Industrial Development Organization, presented at the 1997 ACEEE Summer Study on Energy Efficiency in Industry. E2/FINANCE: A Software System for Evaluating Industrial Eco-Efficiency Opportunities, sponsored by the U.S. Department of Energy. ACEEE 1997 Summer Study on Energy Efficiency in Industry.
1995 Process Evaluation of Three Gas Utility Commercial Industrial Demand Side Programs. Prepared for the Colonial Gas Company, and presented at ACEEE 1995 Summer Study on Energy Efficiency in Industry.

## Selected Publications

2017 Smart Electric Power Alliance, 51 ${ }^{\text {st }}$ State Initiative, Role of Utilities in the Transforming Energy Economy of the 51st State, September 2017.
2016 Vermont Solar Market Pathways: From a Developed to an Advanced Solar Economy. A Phase II Roadmap document prepared for the Smart Electric Power Alliance 51 ${ }^{\text {st }}$ State Initiative.
2016 Vermont Solar Market Pathways, Vols. 1-4. U.S. Department of Energy, Sun Shot Initiative, Office of Energy Efficiency and Renewable Energy. Award DE-EE-0006911. www.Vermontsolarpathways.org.
2016 Energy Efficiency Program Evaluation and Financing Needs Assessment. Report prepared for the Alaska Energy Authority, May 2016.
2015 Michigan Renewable Resource Assesment. Final Report, prepared for the Michigan Public Service Commission Staff under agreement with the Clean Energy States Alliance. April 2015.
2012 Renewable Energy Grant Recommendation Program: Process and Impact Evaluations. Principal in Charge for comprehensive two-volume study. Alaska Energy Authority.
2011 "Solar in Nepal: Small Systems, Big Benefits." Solar Today. July / August 2011.
2011 "National Clean Energy Standard: Congress Needs to Design It Properly." Perspective with Shaun McGrath and Jeff Lyng. Solar Today. July / August 2011.
2010 "National RPS Now!" Solar Today. July / August 2010.
2009 "Carbon Regulation: What's the Most Effective Path?" Solar Today. June 2009.
2009 "Policy Recommendations for the $111^{\text {th }}$ Congress: Tackling Climate Change and Creating a Green Economy." Prepared by the American Solar Energy Society Policy Committee.
2008 "Pennsylvania Solar Assessment." Final Report, November 25, 2008. Incorporated into American Council for an Energy-Efficient Economy, Potential for Energy Efficiency, Demand Response, and Onsite Solar Energy in Pennsylvania. ACEEE Report No. E093. Washington, DC: ACEEE, April 2009.

## Energy Futures Group, Inc

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## David Hill <br> Managing Consultant

2008 "Solar Market Transition in New Jersey: Promise and Progress towards Sustained Growth." Proceedings of Solar 2008, American Solar Energy Society.
2004 "Cost Effective Contributions to New York's Greenhouse Gas Reduction Targets from Energy Efficiency and Renewable Energy Resources." Proceedings of 2004 ACEEE Summer Study on Energy Efficiency in Buildings.

2002 "The Ten Percent Challenge: A Participatory Community Scale Climate Campaign." Proceedings of 2002 ACEEE Summer Study on Energy Efficiency in Buildings. Volume 9, (with Tom Buckley, Jennifer Green, and Debra Sachs).
2000 "Implementing and Monitoring Community-Based Climate Action Plans." Proceedings of 2000 ACEEE Summer Study on Energy Efficiency in Buildings. Volume 9, pp. 149-160 (with Tom Buckley, Mark Eldridge, Debra Sachs, and Abby Young).
1998 Eco-Efficiency Financing Resource Directory. Electronic web-site, and printed directory prepared for the Environmental Protection Agency, Region I, New England.

## Regulatory and Other Governmental / NGO Documents

| 2000-2012 | New Jersey's Clean Energy Programs - Honeywell Team Program Plans. Led team on designing and implementing of Renewable Energy Program plans and initiatives. Many program plans and strategies for transition to market-based incentives. |
| :---: | :---: |
| 1998-2008 | Long Island Power Authority's Clean Energy Initiative. Lead Technical and Senior Advisor on Renewable Energy Plans, including the Solar Pioneer Initiative and Residential Energy Efficiency Programs. |
| 2000 | The Climate Action Plan: A Plan to Save Energy and Reduce Greenhouse Gas Emissions, Lead author for the Burlington (Vermont) Climate Protection Task Force. |
| 1998 | Home Weatherization Assistance Program Environmental Impact Analysis. Prepared for the Ohio Department of Development, Office of Energy Efficiency. |
| 1997 | Achieving Public Policy Objectives Under Retail Competition: The Role of Customer Aggregation. Prepared for the Colorado Governor's Office of Energy Conservation. |
| 1997 | IDENTIFY: Improving Industrial Energy Efficiency and Mitigating Global Climate Change, software and paper. For the United Nations Industrial Development Organization. |
| 1997 | Review of the Swaziland Energy Information System and Report on LEAP Training Activities. Prepared for the Ministry of Natural Resources and Energy, Government Kingdom of Swaziland. |
| 1996 | Evaluation of the IDB's Policies and Practices in Support of Renewable Energy and Energy Efficiency: A Report to the Inter-American Development Bank. Brower and Company and Tellus Institute. |
| 1996 | Action Plan for the Massachusetts' Industrial Services Program (ISP), prepared for the Sustainable Industries Initiative of the Corporation for Business Work and Learning. |
| 1995 | Framework for National Energy Planning: Mission Report, The Republic of Maldives. United Nations Department for Development Support and Management Services. |

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## David Hill

1994
The SEI / UNEP Fuel Chain Project: Methods, Issues, and Case Studies in Developing Countries. Venezuela Case Study.
Future Energy Requirements for Africa's Agriculture (Sudan Case Study). Report to the African Development Bank by the UN Food and Agriculture Organization. Report to the Idaho Public Utility Commission on Suggested Cost Allowances for the Idaho Power Company's DSM Programs. Prepared for the Idaho Public Utilities Commission, Tellus Report No. 94-177.

Review of Pennsylvania Electric Company's 1995 Demand Side Management Filing. Prepared for: Pennsylvania Office of Consumer Advocate. Tellus Study No. 94-071. Review of Union Electric Company's Electric Utility Resource Planning Compliance Filings. Prepared for: The Missouri Office of Public Counsel. Tellus Study No. 93-300. Incorporating Environmental Externalities in Energy Decisions: A Guide for Energy Planners. A Report to the Swedish International Development Agency. SEI-B Report No. 91-157.

## Leadership

| 2017 - 2019 | Energy Coop of Vermont, Board Member and Treasurer. |
| :--- | :--- |
| 2013 | Solar 2013, "Power Forward, Baltimore Maryland." Chair of Conference Advisory <br> Committee responsible for recruiting and coordinating four main conference plenary <br> sessions. |
| $2012-2013$ | American Solar Energy Society (ASES), Chair of the Board. |
| 2012 | Policy Track Chair for the World Renewable Energy Forum, Denver, Colorado, May. <br> $2009-2012$ |
| ASES Policy Committee, Board Member and Chair. |  |
| 2007 | Vermont Governor's Climate Change Committee, Member of the Plenary Working <br> Group. |
| $2000-2010$ | Renewable Energy Vermont, Founding Board Member, Past Board Chair. |

## Education

Ph.D., Energy Management and Policy Planning, University of Pennsylvania, Philadelphia, Pennsylvania (PA), 1993.

- Fulbright Scholar: Research on energy decision-making in rural Nepal, 1991-1993.

Master's, Appropriate Technology and International Development, University of Pennsylvania, Philadelphia, PA, 1989.
B.A., Geography and Political Science, Middlebury College, Middlebury, VT, 1986.

## Energy Futures Group, Inc

## Other Qualifications

Nepal, Himalayan Light Foundation. Installed solar lighting systems in 3 remote health clinics and 3 homes, 2010.
Advanced PV Installation certificate. Solar Energy International, 2010.
Peace Corps volunteer. Sierra Leone, 1984-1986.
Languages

- Nepali: ILR Level 3, speaking; ILR Level 2, reading
- Krio and Mende (Sierra Leone): ILR Level 2, speaking


## Software competency

- LEAP (Low Emissions Analysis Platform), Stockholm Environment Institute. Former trainer and current Principal Investigator of team using scenario modeling on three projects.
- NREL System Advisor Model. Financial and technical modeling tool for renewable energy systems.

Jake Duncan<br>Jduncan@votesolar.org | Chattanooga, TN

## Professional Experience

## Vote Solar, Southeast Regulatory Director

 RemoteJune 2022 - Present

- Leads regulatory and legislative efforts in North and South Carolina to advance a rapid, cost-effective, equitable transition to a carbon free power system.
- Engages in rate cases, resource plans, grid plans, and program design efforts.
- Develops testimony, comments, and coalition positions through qualitative and quantitative analysis.

Institute for Market Transformation, Senior Associate
August 2018 - May 2022 Washington, DC

- Co-developed IMT's power sector strategy, which focuses on supporting broader regulatory engagement, expanding utility regulator's legislative mandate to include climate and equity, and using building performance policies to advance utility reform.
- Supported local government and community partner's engagement in regulatory proceedings with a focus on climate and equity, including intervention in utility resource planning, distribution planning and data access proceedings; co-authoring comments; co-creating and supporting two advocacy coalitions.
- Managed two peer-learning groups within the Urban Sustainability Director's Network on grid flexibility and data access.
- Directly assist local governments as they design, pass, and implement building performance policies.
- Managed a Department of Energy sponsored field study on building codes in the Southwest.
- Led the development of several proposals, including a $\$ 9$ million, multi-year proposal to the Department of Energy's Connected Communities program.
- Developed a spreadsheet-based model to assess the impact of building performance standards on the national building stock.
- Supported the Green Lease Leaders program and Small Business Energy Initiative.
- Represented IMT at conferences and through speaking engagements.
- Developed written resources, including reports and blogs.

Resources for the Future, Future of Power Fellow
June - August 2018
Washington, DC

- Published a report on how utility planning processes view and integrate demand side management approaches compared to supply side investments.

Natural Capitalism Solutions, Policy and Research Intern
March - August 2016

- Supported the Presidential Climate Action Project, which advanced opportunities for climate action using executive authority under the Obama Administration.

Solar Energy Industries Association, Research Intern
Summer 2015
Washington, DC

- Managed the National Solar Database.
- Collected and organized data about solar industry growth.
- Contributed to the Solar Market Insight Report.


## RELEVANT Filings

- Oregon Public Utilities Commission (Docket UM 2005, 2197, and 2198). Investigation into Distribution System Planning, Comments of Verde, Coalition of Communities for Color, and Institute for Market Transformation. Dec 3, 2021.
- Minnesota Public Utilities Commission (Docket No. E-002/M-21-694). Xcel Energy's 2021 Integrated Distribution Plan, Comments of the City of Minneapolis. February 25, 2022.
- Minnesota Public Utilities Commission (Docket No. E002/RP-19-368). 2020-2034 Xcel Energy Upper Midwest Integrated Resource Plan, Comments of the City of Minneapolis. Feb 11, 2021.
- Minnesota Public Utilities Commission (Docket No. E002/RP-19-368). 2020-2034 Xcel Energy Upper Midwest Integrated Resource Plan, Comments of the Coalition of Minnesota Local Governments and the Suburban Rate Authority. March 12, 2021.


## RELEVANT PUBLICATIONS

- Duncan, J and Eagles, J. 2022. Public Utility Commissions and Consumer Advocates: Protecting the Public Interest. National Association of Utility Regulatory Commissioners.
- Duncan, J., Eagles, J., Farnsworth, D., Shenot, J., \& Shipley, J. 2021. Participating in Power: How to Read and Respond to Integrated Resource Plans. The Institute for Market Transformation and the Regulatory Assistance Project.
- Debelius, H., Duncan, J., Gahagan, R., Kirby, K. \& White, A. 2020. New Leasing Languages - How Green Leasing Programs Can Help Overcome the Split Incentive. American Council for an Energy Efficient Economy.
- Crandall, K. and Duncan, J. 2019. Local Government Engagement with Public Utility Commissions. National Association of Utility Regulatory Commissioners.
- Bonulgi, C., Crandall, K., Duncan, J, \& Etter-Wenzel, C. 2019. Utilizing City-Utility Partnership Agreements to Achieve Climate and Energy Goals. The Institute for Market Transformation and the World Resources Institute.
- Burtraw, D. and Duncan, J. 2018. Does Integrated Resource Planning Effectively Integrate DemandSide Resources? Resources for the Future.


## RELEVAnt Presentations

- National Association of Utility Regulatory Commissioners Fall Meeting. Nov 2022. Federal Funding for Energy Justice Has Arrived! Everything You Need to Know to Ensure Consumers Receive the Benefits.
- Cincinnati 2030 District. May 2021. Building Electrification and the Grid 101.
- Urban Sustainability Directors Network. September 2020. Balancing Efficiency, Renewables, Storage, and Electrification.
- Building Performance Standard Coalition Summit. March 2020. How to Achieve Demand Flexibility through a Building Performance Standard.


## EDUCATION

MS in Climate Science and Policy
May 2019
Bard College, Annandale-on-Hudson, NY
BS in Economics
December 2015
Georgia College, Milledgeville, GA

## Comparison of Duke's Grid Modernization Spending



* Note: NCJC et al DR 6-15 states that the up to date MYRP distribution project request total is $\$ 3,056$.
million. Duke did not break out the substation and line project cost updates, therefore we are unable to
accurately update this table with the final cost estimates.


# Gennelle Wilson 

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## EXPERIENCE

## RMI

Senior Associate, Carbon-Free Electricity

- Analyzes state-level regulatory policy reforms and changes to the utility business model needed to support the integration of clean energy.
- Provides analysis, strategic guidance, and stakeholder facilitation support to the Hawaii Public Utilities Commission in support of market reforms to achieve the Hawaii state goal for $100 \%$ renewable electricity by 2045.
- Facilitated an assembly of thought leaders and decision makers from across the U.S. electricity sector to collaboratively innovate on ways to address the critical institutional, regulatory, business, economic, and technical barriers that cause and prevent solutions to energy burden and disparity of access to clean distributed resources in the U.S.


## Nicholas Institute for Environmental Policy Solutions <br> Durham, NC

Climate \& Energy Policy Associate
August 2020 - December 2020

- Provided research, analysis, and report writing support to a portfolio of projects focused on state- level environmental policy work in the Southeast.
- Engaged and coordinated with stakeholders on energy efficiency, electrification, and equity policies.
- Co-authored Power Sector Carbon Reduction: An Evaluation of Policies for North Carolina report, which outlined policy options to support achieving the Clean Energy Plan targets.


## Graduate Research Assistant

September 2018-May 2019, August 2019-June 2020

- Provided research and advisory support to help inform North Carolina policymakers on the most appropriate avenues for the implementation of a recommendation from the Clean Energy Plan.
- Conducted data analysis on the spread and intensity of energy burden across North Carolina.
- Supported state-initiated stakeholder working group focused on carbon policy exploration and design with research and analysis.
- Supported a year-long, collaborative and inclusive process to create a set of energy efficiency (EE) recommendations for a state-wide policy roadmap for North Carolina.
- Designed meeting agendas and collaborative exercises to extract actionable insight and expertise from $40+$ NC stakeholders, and derive agreement on top priorities for the state.
- Researched EE targets, measures, challenges and successes as implemented by other states.


## Southern Environmental Law Center (SELC)

Solar \& Energy Efficiency Policy Intern

Chapel Hill, NC
June 2019 - August 2019

- Conducted research and assisted with the crafting of cross-examination questions for a utility's expert witness in avoided cost hearings before the NC Utilities Commission.
- Wrote official comment letters on behalf of SELC's clients regarding:
- A utility's EE and Demand Side Management mechanism and what changes are necessary to improve the mechanism for greater implementation of EE; and,
- The rationale for excluding swine-to-waste biogas production from inclusion in the Clean Energy Plan for North Carolina.
- Researched the status of community solar across the Southeast and wrote an internal report on the adequacy of existing programs for reaching low-income and rural customers.


## RTI International

Durham, NC

## Senior Strategy Analyst

December 2017 - July 2018

- Provided critical strategic advisory to organizational leadership to support creation and evaluation of business cases and plans to help reach desired business goals.
- Lead corporate strategic \& planning processes to develop and implement strategies that would enable RTI to successfully tackle social and scientific challenges and expand its service offerings to meet future client needs.
- Designed and facilitated strategic working sessions focused on ideation, prioritization, codification, and consensus finding, with groups ranging in size from $10-45$ staff.
- Lead and coordinated analyses of un-tapped markets and assessed potential for RTI to gain market share.


## Strategy Analyst

March 2016 - November 2017
Project Management Associate
December 2014 - February 2016

- Responsible for the financial and operational management of three large, early grade reading projects in Sub-Saharan Africa and Southeast Asia per strict budgets and government regulation.
- Supervised the sourcing, selection, on-boarding and ongoing management of 30+ consultants and subcontractors.
- Ensured the development and timely submission of project deliverables.
Market Research Analyst
Intern

June 2013 - November 2014
June 2012 - May 2013

## EDUCATION

Master of Environmental Management<br>(MEM) May 2020<br>Duke University, Durham, NC<br>Nicholas School of the Environment<br>Energy Economics \& Policy focus<br>B.A. International Studies, summa cum laude May 2013<br>North Carolina State University, Raleigh, NC<br>International Studies - Sub-Saharan Africa Concentration<br>Political Science \& French Minors

PUBLICATIONS (reverse chronological order)
Jessie Ciulla, Gennelle Wilson, and Rachel Gold, What Utility Regulators Needs to Know about the Inflation Reduction Act: How to Ensure the Biggest Boon to the Energy System in US History

Supports Affordable, Reliable Electric Service, RMI, 2022, https://rmi.org/insight/what-utility-regulators-need-know-about-ira/

Rachel Gold, Gennelle Wilson, Rewarding What Matters in Energy Efficiency: Shifting Utility Performance to Focus on Climate, RMI, 2022, https://rmi.org/rewarding-what-matters-in-energyefficiency/

Rachel Gold, Weston Berg, and Gennelle Wilson, "Climate-Forward Efficiency Performance Incentives: Rewarding What Matters," ACEEE Summer Study on Energy Efficiency in Buildings, 2022, https://www.aceee.org/sites/default/files/pdfs/20220810190543432_9f62dfcf-14c7-4fc4-960158055a933493.pdf

Cara Goldenberg and Gennelle Wilson, Shining a Light on Utility Performance in Hawaii's Clean Energy Transition, RMI, 2022, https://rmi.org/shining-a-light-on-utility-performance-in-hawaii/

Gennelle Wilson, Cory Felder and Rachel Gold, States Move Swiftly on Performance-Based Regulation to Achieve Policy Priorities, RMI, 2022, https://rmi.org/states-move-swiftly-on-performance-based-regulation-to-achieve-policy-priorities/

Gennelle Wilson, "Wholesale Decarbonization: An Assessment of RTO Options to Advance Carbon Objectives in the Carolinas," 2021, Energy Transition Institute, https://energytransitions.org/report\%3A-wholesale-decarb

Kate Konshnik, Martin Ross, Jonas Monast, Jen Weiss, and Gennelle Wilson, "Power Sector Carbon Reduction: An Evaluation of Policies for North Carolina," 2021, Nicholas Institute for Environmental Policy Solutions at Duke University, https://nicholasinstitute.duke.edu/publications/power-sector-carbon-reduction-evaluation-policies-north-carolina

# THE ECONOMIC AND RATE IMPLICATIONS FROM AN ELECTRIC UTILITY'S LOSS OF LARGE-LOAD CUSTOMERS 

REPORT PREPARED FOR:

DUKE ENERGY CAROLINAS \& PROGRESS ENERGY CAROLINAS

## REPORT PREPARED BY:

J. A. WRIGHT \& ASSOCIATES

ST. THOMAS, VI

INITIAL DRAFT: SEPT 30, 2012
FINAL: MARCH 9, 2013

## EXECUTIVE SUMMARY

The commercial and industrial electric consumer sectors are by and large the primary non-governmental economic engine of the US and the Carolinas, providing and supporting the predominance of employment and trade in the country and all the attenuating economic activity associated with these activities. Consequently, an important issue for policymakers to fully understand is the economic and rate implications should a large commercial or industrial customer either shut down or otherwise leave a region and a utility's service area.

Intuitively, if electricity is a major cost to a large electric load customer, the price of electricity can play a role in a firm's decision about a facility's location; expansion, or closing. Electric demand studies of industrial customers' price elasticity have indicated these type customers have a limited ability.to respond to electric price changes in the short-run (less than $2-3$ years). This means that in the short-run increased electricity costs, absent reductions in other costs, will likely have a very direct impact on these customers' profitability. From a longer-term perspective, price elasticity studies indicate that the industrial class of customers will respond very dramatically, as compared to some other customer classes, to changes in electricity prices up to and including the closing of a facility.

This report also confirmed the importance of reliable and favorably priced electricity to economic development and that the Carolinas are experiencing a transition in their economy, generally to more energyintensive types of industries and facilities. However, another related finding in this research was that both states have been experiencing a decade long decline in the number of industrial customers with a related decline in employment in that sector of the economy. While some of these declines could be attributed to the recent recession, the industrial job losses and declining electric usage in the industrial class began well prior (at least as early as 2001) to the current recession (2007-08). This trend indicates that the loss of these type customers is due to more systemic based problems with impacts beyond the normal business cycle. For example, Duke Energy Carolina's ("Duke") 2011 IRP indicates that from 2001 up through 2010 it has lost approximately 1000 customers from its industrial class, while gaining customers in every other customer classification. During that same time period, while all other classes saw growth in energy sales, Duke's Industrial class saw a decline from $26,902 \mathrm{GWh}$ to $20,618 \mathrm{GWH}$, a decline of $23.3 \%$. Over a similar time period, according to the Progress Energy Carolina's ("PEC") 2011 IRP, PEC's Industrial Class of customers' sales over that time period declined by $15.9 \%$.

To address these issues will likely require efforts aimed at reducing the underlying costs related to a particular industry - such as efforts aimed at

JAW EXHIBIT-2<br>Rebuttal Testimony Exhibit of Julius A. Wright<br>Page 3 of 92

lowering labor costs, regulatory costs, or input costs including electricity. All these strategies could be productive attempts for helping reinvigorate industrial growth. Consequently, electric policy decisions specifically as it relates to rates are likely important issues for both states with respect to large customer retention and economic development.

To demonstrate the importance of large electric customers to a region or state, this report utilized an input-output econometric model to quantify the economic impact on the Charlotte, NC metropolitan region from the expansion or closing of four different large electric customer facilities. The specific facilities examined were an AT\&T data center, a Caterpillar heavy equipment manufacturing facility, a surgical products manufacturing facility, and a plastic products manufacturing facility. Note that the analysis was performed using Duke data and economic information regarding the Charlotte, NC region. However, as the report states, the basic economic analysis and results would be expected to be generally similar for PEC.

The results of this analysis indicated that for every new (or lost) employee at the specified facility:

- There are from 1-3 additional new jobs created (lost) in the region,
- There is a region-wide increase (loss) of approximately \$500K per year in additional economic output, and
- There is a region-wide increase (loss) of \$200K-\$350K in employee earnings.

Beyond these more region-wide economic impacts there could be an effect on the remaining customers' rates when large electric users depart any regulated electric utility's system. When electric load is lost from customers severely cutting back on load; moving out of an electric utility's service territory; or by going out of business entirely, the remaining customers will theoretically have to pay the fixed costs (non-energy related) portion of revenues no longer being recovered from the "lost" customer. A portion of the "lost' revenues are directly due to the change in electricity sales to the lost customer. However, there are additional changes in electricity usage in that customer's geographic region and these changes are related to the economic multiplier effects discussed above. Theoretically, the lost fixed costs attributed to the change in electricity usage related to this multiplier effect will also have to be recovered from the remaining customers.

Based on these assumptions about fixed cost recovery, publicly available data from the FERC, Duke's and PEC's North Carolina SCP cost of service study, the BEA, and from the EIA was used to develop models to calculate

[^1]the dollar amounts of "lost" fixed costs and the resulting rate impacts, both related to the specific customer's electricity usage and the usage related to the economic multiplier effect. Again note that the analysis, while performed using Duke data and economic information regarding the Charlotte, NC region, would be expected to produce generally similar rate impacts for PEC..

Assuming varying percentages of load lost in Duke's "I" and "OPT". customer classes, these "lost" fixed costs were then re-allocated to the remaining classes of customers consistent with Duke's 2011 cost of service studies in order to estimate the rate impact on the remaining customer classes. The resulting analysis indicated that for a $1 \%$ loss of load in the I customer class, the Residential customers would theoretically experience an increase in their rates of $\$ 450,000$ or $0.0212 \%$ due directly to the departing facility's lost load. The economic multiplier effect increased this rate impact to $0.0647 \%$. A $5 \%$ Industrial class load loss resulted in a Residential rate increase of $\$ 2.249$ million or $0.106 \%$ due directly to the departing facility's lost load. The economic multiplier effect increased this rate impact to $0.323 \%$. A similar analysis estimated that the Residential Class of customers would experience a rate increase of approximately $\$ 3.9$ million or $0.184 \%$ for the loss of $1 \%$ of the load in the OPT class due directly to the departing facility's lost load. The economic multiplier effect increased this rate impact to $0.561 \%$. The allocation of fixed costs resulting from as much as a $5 \%$ loss in load from the OPT customer class would result in a $0.919 \%$ increase in the remaining customers' rates due directly to the departing facility's lost load. The economic multiplier effect increased this rate impact to $2.804 \%$.

For PEC, the loss of large load customers in PEC's LGS class has generally similar rate impacts. For example, a $5 \%$ loss of PEC's LGS load would theoretically mean that Residential customers would experience a $0.40 \%$ increase in their electric rates due to the recovery related to the departing customer's lost fixed costs. In addition, the economic multiplier effect increases this Residential rate impact to an increase of $1.23 \%$. PEC's small general service customers would be similarly affected.

The overall results from this economic and rate analysis yield three basic conclusions. First, that the economic multiplier effect on a region's electricity consumption (and revenues) are expected to be larger than are the changes in electricity consumption resulting directly from a large customer's usage when that customer exits or expands into a utilitiy's system. Second, that the loss (or gain) of a larger customer (assume $3 \%$ to $5 \%$ of Duke's OPT load or PEC's LGS load) would theoretically result in Residential (and also General Service) customers experiencing rate increases (or decrease) ranging from approximately $1 \%$ to $3 \%$.

The third and likely most important conclusion from this economic analysis is that a comparison of the rate and economic impacts that accrue from the attraction of new, expanded, or retained large load customers are likely far larger in economic value than the negative rate impacts should these customers leave Duke's or PEC's system. Consequently, to the extent that electric rate setting decisions have the potential for retaining or attracting large customers to a region, it would seem appropriate for policy makers to consider both the rate impacts and the economic impacts resulting from such decisions. In so doing, when establishing electric pricing terms and conditions electric rate-setting policy makers may find it reasonable and in the public interest to depart from historical or strictly applied rate-setting methodologies and rules if larger customers' retention hangs in the balance.

Further research in this report supported this conclusion by finding that a number of states and electric utilities have developed tariffs with discounted pricing options with the objective of both large customer retention and economic development and in some cases states have used these terms and resulting tariffs interchangeably. There are usually several criteria that these types of retention, special contract, or economic development tariffs adhere to including:

- Rate concessions vary, sometimes stated in the tariff, other times the tariff indicates rates will be negotiated
- Some tariffs state the minimum rate will be the utility's marginal cost plus some contribution
- A customer's minimum peak demand varies from as low as 150 kW to as high as 1500 kW
- Some utilities require that the company receiving the new rate participate in an energy audit or in other energy conservation measures
- In some cases, the customer receiving the new rate must provide an affidavit affirming the need for the rate to remain viable. In other cases the company receiving the new rate must provide documentation the utility considers sufficient to affirm that the rate is justified for that particular customer, and in some states no affidavit or documentation from the customer is required
- Sometimes there is a contract limit, and if so, it is usually no more than 5 year contract limit

Given these various considerations, it would not be unwarranted should Duke or PEC seek to obtain a tariff focusing on retaining jobs with the additional benefit of aiding in keeping customers on the Company's system and in the State. The analysis in this report indicates that such a tariff, to the extent large electric loads were retained on the system, provides substantial positive economic benefits to a region with potentially minor increases in the remaining customers' rates.

## CHAPTER 1: INTRODUCTION

### 1.0 INTRODUCTION AND PURPOSE

According to the Energy Information Administration ("EIA"), in the United Sates ("US"), from 1950 to 2000, industrial and commercial customers used approximately two-thirds of the electricity consumed in the country (see Chart 1.1 below). Since 2000, that figure has declined slightly, but nevertheless, the commercial and industrial electricity consumer sectors continue to use the majority of the electric power consumed in the US. ${ }^{2}$ in North Carolina and South Carolina, ("Carolinas" collectively) the percentage of statewide total electric sales by kWh to the commercial and industrial sectors, according to the EIA, was $46 \%$ and $51 \%$, respectively, of total kWh electric sales in 2011.3 For Duke Energy Carolinas ("Duke") specifically, the percentage of energy sales to its commercial and industrial customers represents $58 \%$ of the Company's total energy sales. ${ }^{4}$ For Progress Energy Carolinas ("PEC") the percentage of energy sales to its commercial and industrial customers represents $56 \%$ of the Company's total energy sales. ${ }^{5}$ Moreover, the commercial and industrial electric consumer sectors are a significant economic engine for the entire US and the Carolinas' economy, providing and supporting a large portion of non-government employment and trade in the country and all the attenuating economic activity associated with these activities.

Given the importance of these industrial electric consumers to a region and to the US economy, it is important for policy makers to fully understand the economic and rate implications should a large industrial customer either shut. down or otherwise leave a region and a utility's service area. To study this question Duke Energy and Progress Energy Carolinas engaged J. A. Wright \& Associates ("JAW") and this report is the result of that research. This issue is particularly important not only from the perspective of retention but also at the state and smaller-region level where there is intensive competition for and recruiting of large-employee enterprises, such as a big manufacturing facility. A necessary component of that recruiting effort is often a region's availability of reliable and affordable electric power.

[^2]JAW EXHIBIT- 2<br>Rebuttal Testimony Exhibit of Julius A. Wright<br>Page 7 of 92

## CHART 1.1



At the outset, this study segregated the impacts resulting from a large electric customer leaving a region and a utility's, in this case Duke's or PEC's, service territory into two distinct categories.

The first category of impacts, discussed in Chapter 3, considered the basic economic effects on a region should a large electric customer depart that region. To study this question this research employed a literature review and a quantitative analysis that utilized econometric-modeling techniques supported by the US Department of Commerce Bureau of Economic Analysis. ${ }^{6}$ The second category of impacts, discussed in Chapter 4, examined the rate-related impacts on the remaining customers should a large customer depart Duke's or PEC's service territory. This research used these two utilities publicly available accounting and customer data and employed basic regulatory ratemaking accounting in estimating these impacts. Finally, Chapter 5 reviews a number of tariffs that are currently being used in the electric industry to promote large customer attraction and retention. Before

[^3]proceeding with the findings from this analysis of the economic and rate impacts resulting from a large electric customer departing a region and electric system, the following Chapter reviews some relevant economic theory and data related to this analysis.

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## CHAPTER 2: BACKGROUND: THE ROLE OF ELECTRICITY IN ECONOMIC DEVELOPMENT

### 2.0 INTRODUCTION

The purpose of this Chapter is to provide some basic economic underpinnings and background with respect to the two major issues that are the subject of this research: the economic implications and rate impacts when a large electric customer either shuts down or leaves a utility's service area. More specifically, before investigating what happens when the aforementioned large customer "leaves" an electric system and region, it is beneficial to understand the importance of electricity within a firm (whether commercial or industrial).

It is widely understood that electricity plays a vital role in both the production and consumption of goods and services within an economy. ${ }^{7}$ In fact, a study of the US economy from 1950-1984 indicated "Growth in electric power consumption accounts for $79 \%$ of the growth of manufacturing value-added [during this period of time]." Another more recent study of $99 \%$ of the world's global economy found a highly statistically-significant correlation between electricity consumption per capita and GDP per capita. ${ }^{9}$ These various findings indicating the importance of electricity to economic growth and assures us that historically reliable and affordable US electric supplies have played a key, even predominate, role in the ongoing operations of most large commercial and industrial customers in the US.

However, over the past two decades many firms, particularly large manufacturing firms, have closed facilities in the US and North Carolina to establish foreign operations, while other firms have relocated from one region to another within the US. With this being the case, this Chapter provides a basic review of electricity's current role with respect to a firm's location/relocation decision and a review of the recent trends related to electric demand particularly commercial and industrial in North Carolina.

[^4]
### 2.1 THE ROLE OF ELECTRICITY IN LARGE CUSTOMER OPERATIONS

### 2.1.1 BASIC ECONOMIC CONSIDERATIONS

In basic economic terms, electricity is an input, also called a factor of production, which is used in a firm's operations, be it a manufacturing facility, restaurant, or whatever type of business. Other factors of production include raw materials, employees, capital, and other resources. All factors of production have costs and in the case of electricity these costs are determined by the rates of the utility. Historically this was input cost or technology driven, firms had some ability to substitute some factors of production for other factors, e.g. more labor for less capital equipment. Consequently, as one factor of production's costs increased firms could historically respond by substituting other fower cost inputs while maintaining consistent levels of production. Intuitively, it would seem that there is limited substitutability of any other resource for electricity, particularly as firms have become more automated and computer reliant. Whether this intuitive belief is correct is an important consideration in understanding and predicting how US industrial customers will respond to changing electricity rates.

From an economic perspective, the ability for a consumer, in this case an industrial customer, to respond to changes in electric rates is called the price elasticity of demand. This is an important concept for policymakers to understand because it illustrates to policymakers the capability of an industrial customer to respond to changing electric rates. This price-response capability can play an important role in those customers' ability to remain competitive, profitable, and to maintain ongoing operations. There have been a number of studies that have investigated this question, several of which are reviewed below.

## COMMERCIAL CUSTOMER PRICE ELASTICITY OF DEMAND


#### Abstract

A 1982 study sponsored by the Electric Power Research Institute ("EPRI") reviewed the price elasticity data available at that time. ${ }^{10}$ While this review cited concerns with much of the available modeling data and the aggregation of the commercial class as a whole, ${ }^{11}$ it did conclude that the short-run ${ }^{12}$ price elasticity of demand for the commercial class of customers averaged -0.20 , while the long-run averaged -1.0. A later (1984) review by Bohi and Zimmerman that included additional elasticity studies found similar results for short-run elasticity but evidence of higher long-run elasticity. ${ }^{13} \mathrm{~A}$ more recent (2010) review of commercial customer electric price elasticity cited by EPRI ${ }^{14}$ found short- and long-run elasticities of -0.21 and -0.97 respectively with some slight variance to these numbers based on US regional differences.


In straightforward terms, the data indicates that if a commercial customer's electric rates increased by $10 \%$, then that customer would generally reduce electric usage by around $2 \%$ in the short-run (less than 3 years). In the longrun ( $2+$ years), this data indicates that a commercial customer has a slightly greater response to changes in electricity prices, indicating a $10 \%$ electric rate increase could result in as much as a $10 \%$ long-run reduction in the commercial customer's electric usage.

## Industrial Customer Price Elasticity of Demand

The 1982 EPRI study cited above ${ }^{15}$ also found the industrial class of customers had short-run price elasticity of demand that averaged approximately -0.15 ,

[^5]while the long-run price elasticity of demand generally ranged -1.3 to as high as -3.5. The Bohi and Zimmerman study (sited above), found similar short-run elasticity and also higher long-run elasticity, generally ranging from -1.0 to 1.7. A 2004 study by Kamerschen and Porter ${ }^{16}$ found that industrial customers had a short-run price elasticity of demand (they examined annual data) ranging from -0.34 to -0.55 . Interestingly, they also found that residential customers are more price sensitive, or rather can respond faster and more aggressively to electricity price changes, than can industrial customers.

Numerically, the data simply indicates that industrial customers have, like commercial customers, very limited ability to respond to electricity price changes in the short-term. However, in the long-run the data indicates that industrial customers have the ability and will radically alter their electricity consumption, as much as $30 \%$ to $40 \%$, in response to a $10 \%$ increase in electric rates - a much more aggressive response to electric price changes than is exhibited by the commercial class of customers. From an electric rate policy-maker perspective, this latter finding is quite instructive in that it indicates a willingness and capability of industrial customers, who are usually much larger electric consumers than the average commercial customer, to respond more dramatically to changes in electricity prices than the commercial class of customers as a whole. It is important to note that the studies only indicated a more aggressive long-run response to electric price changes by industrial customers, the studies did not indicate whether these responses were capital investments, relocating, or closing the facility - all of which appear possible given the high level of long-run price elasticity of demand.

## SUMMARY OF PRICE ELASTICITY CONSIDERATIONS

These various studies and analysis demonstrates that historically industrial and commercial customers either cannot or do not change their electricity consumption dramatically in the short-run when electricity prices change. However, over a longer period of time (estimate of 2-3 years plus) the industrial class of customer will respond in a far more aggressive fashion to electric rate changes. That response could be as straightforward as implementing energy conservation measures or as encompassing as the closing or relocating of a facility. While the cited studies in the discussion above do not provide information sufficient to explore these alternative responses, it is sufficient for policy makers to recognize that industrial customers will, over time, respond rather dramatically to changes in electricity prices in the US, and it is likely that the larger electric customers will

[^6]JAW EXHIBIT-2<br>Rebuttal Testimony Exhibit of Julius A. Wright<br>Page 13 of 92

be the most responsive. To explore this assumption further, the next section examines the evidence related to the importance of electricity in terms of economic development and firm location decisions.

### 2.1.2 ELECTRICITY RATES AND ECONOMIC DEVELOPMENT

Intuitively, one assumes that reliable, comparatively lower-cost electricity would be a prime factor in economic development. This was confirmed in various studies cited in Section 2.0. A related but different way to consider this question is to examine the importance of electricity in terms of determining a particular facility's location. This is more localized focus and it invokes a crucial question to consider that relates very specifically to this study's primary objective of analyzing the impact on regional economy and remaining customers' electric rates should a large firm choose to enter/leave a utility's service area. While the foregoing Section discussed price elasticity and the fact that industrial customers would dramatically alter their electric usage over time in response to electricity rate changes, it raised but did not provide empirical or research-based evidence supporting the assumed importance of electricity rates in the location, or re-location, of a firm or facility.

There are numerous survey-based and other more analytical econometricbased studies dealing with a firm's site-selection process and the primary factors motivating that process. For example, an early econometric-based study by Carlton (1983) ${ }^{17}$ employed Dunn and Bradstreet data to examine the facilify location determinants of three industrial SIC codes (fabricated plastic products, communication equipment, and electronic components). The results indicated that "energy costs, especially electricity price, exert a large effect" on the decision of where to locate these facilities. Another, more broad based economic analysis of this issue, reviewed the literature and found the cost of electric power was one of several critical factors in facility site location. ${ }^{18}$

More generic survey-based analyses of the factors that impact the location decision of a facility are numerous. For example, a recent (2009) study by the State of New York specifically mentioned the importance of energy costs to facility location decisions and made explicit comparisons of that state's electricity costs to other states. ${ }^{19}$ in this comparison the states of North

[^7]Carolina were both used as examples of low electric cost states as compared to New York when it came to facility recruiting factors. In addition, numerous site selection firms list the availability and the price of electricity as key factors in site selection. ${ }^{20}$ In the last 18 months Area Development Online cited energy availability and costs as one of the top ten site selection criteria and for some industries like data centers as a more important criteria. ${ }^{21}$ In state-run economic development activities (such as through a state's department of Commerce), many states, and particularly Southeastern states including North Carolina, ${ }^{22}$ South Carolina, ${ }^{23}$ and Mississippi, ${ }^{24}$ promote their state's below national average electricity prices as a factor that should be a consideration for firms contemplating locating large facilities in their states.

As might be expected, the importance of electricity costs as a criterion for the site selection of a commercial or industrial consumer is largely dependent upon the facilities electricity usage and/or the type of facility. In an econometric analysis of this issue Lescaroux (2008) ${ }^{25}$ found that "energy price rises also seem to affect the industrial structure in the long-run: high energy prices do not only induce a shift from manufacturing activities to services but also induce a permanent shift inside the manufacturing sector from energy intensive industries to non-intensive ones." Another recent study examined manufacturing employment levels in different industries in different counties across the US ${ }^{26}$ confirmed that the location of energy intensive industries was highly correlated with the price of electricity. While this would not seem to be a surprising result, in those states where manufacturing facilities were historically dominated by labor-intensive facilities with electricity costs being a small portion of total production costs, the price of electricity may have been considered relatively inconsequential in terms of those types of large customers' site location decisions. However, as evidenced by this recent research, in the US and in North Carolina today, as labor-intensive facilities

[^8]have moved offshore and more energy intensive, automated, and dataintensive industries emerge, reliable and favorably-priced electricity has become a more important factor in these types of industries' site location decisions.

### 2.2 CURRENT TRENDS IN ELECTRICITY DEMAND

### 2.2.1 INTRODUCTION

The preceding sections have developed two basic but very important points. First, that firms, particularly larger size firms or facilities, have the ability and will in the long run dramatically alter their electricity consumption as electricity prices change. Second, that reliable and favorably priced electricity is a key factor in firm site selection and operational decisions, and that this importance is growing as economies move from labor-intensive to more energy-intensive operations. Given these overall facts, it will be instructive to relate these findings to the electricity customer usage and future electric demand trends in North Carolina. The following sections provide this review.

### 2.2.2 NORTH CAROLINA ECONOMY AND ELECTRIC DEMAND TRENDS

As illustrated in Chart 2.1 below, for the last two decades the demand for electricity continues to grow in North Carolina. Even considering the severe 2008 recession and the loss of manufacturing facilities to off-shore operations, based on data from the EIA, statewide electricity demand has reached prerecession levels in virtually every sector of the economy.


Moreover, according to the North Carolina State Energy Report ${ }^{27}$ electricity continues to be the dominant source of energy for. North Carolina's economy. This is shown in Chatt 2.2 below.

[^9]CHART 2.2:


With respect to current trends and projected future electric consumption by larger electric consumers, the 2011 North Carotina Economic index28 indicated that "North Carolina's economy is transitioning from traditional labor-intensive industries (e.g. textiles, furniture, etc.) to knowledge-based or service-related industries." This same report (page 2) indicated that the movement of industrial and other facilities around the globe, referred to as globalization, will continue meaning that North Carolina's "ability to compete for national $\square$ and international export markets is critical for the retention and growth of [the State's] employment opportunities." Of particular importance to this study was this report's conclusion that (page 30) "New economic development projects and the expansion of existing businesses are impacted

[^10]JAW EXHIBIT-2<br>Rebuttal Testimony Exhibit of Julius A. Wright<br>Page 18 of 92

by the cost, availability, and reliability of energy. North Carolina's inexpensive and reliable electricity has historically been a competitive advantage for economic development prospects [emphasis added]."

Consequently, as the North Carolina economy continues to develop, the price, reliability, and availability of electricity is considered by State economic development experts as being an even more important factor in future economic development, especially as the State's economy expands from its historical labor-intensive manufacturing base into more high-tech types of industries. To illustrate this trend, while Noth Carolina has lost significant numbers of textile facilities over the past decade,29 in the past four years North Carolina has been chosen as the location for major data centers for Google, Apple, and Facebook. A key factor mentioned in these Companies' choice of North Carolina over many other states was "affordable power." 30 Other well-known corporations who have recently sited data centers in North Carolina include American Express, AT\&T, and the Walt Disney Co. The Business Expansion Journal cited the State's electric reliability as a key to these Companies' location choice of North Carolina. ${ }^{31} 32$ Furthermore, data centers and their use of electricity is increasing, with electricity used by data centers in the US having increased by about $36 \%$ from 2005 to $2010{ }^{33}$

Moreover, it should be noted that notwithstanding the apparent statewide small gain in industrial electric sales illustrated in Chart 2.1, for Duke the industrial class does not appear to be expanding. Based on Duke's 2011 IRP (p. 18), since 2001 up through 2010 the Company has lost approximately 1000 customers from its industrial class, while gaining customers in every other customer classification. During that same time period, while all other classes saw growth in energy sales, Duke's industrial class saw a decline from 26,902 GWh to $20,618 \mathrm{GWH}$, a decline of $23.3 \%$. Over a similar time period, according to the PEC 2011 IRP, PEC's Industrial class of customers declined from 4,655 in 2001 to 4,241 (some customer losses due to reclassification, see footnote) ${ }^{34}$ in 2008, while that Company's industrial sales over that time period declined from $13,332 \mathrm{GWh}$ to $11,215 \mathrm{GWH}$, a decline of $15.9 \%$.

[^11]From a more general statewide perspective, the lingering economic recession continues to impact the state of North Carolina's employment levels. As shown in Chart $\mathbf{2 . 3}$ below, the State's unemployment levels have remained higher than the national average since the beginning of the current recession and remain higher today. Furthermore, as shown in Table 2.1, since the start of the current recession manufacturing, logging, and construction jobs have declined by $17.9 \%, 20.3 \%$, and $32.6 \%$ respectively.

## CHART 2.3: NORTH CAROLINA UNEMPLOYMENT LEVELS


which differs by customer class. However, this reclassification had a minimal impact on sales/revenue.

JAW EXHIBIT-2

## TABLE 2.1: NORTH CAROLINA JOB LOSSES BY CLASSIFICATION

| Nerin Carolina Seasonally Adjusted Nonlarm Employment Irends by Supersector |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sector | Mar 12 <br> (revised) | Jun-12 (prellm/nory) | Previous Month (6/12 compared to 5/12) |  | Last Year-Same Morth (6/12 compered to 6/11) |  | Start of hecession ( $6 / 12$ compared to $12 / 07$ |  |
|  |  |  | Change | xChange | Change | *Chanre | Chanfe | \%Chant |
| Mining at Lexing | 5,500 | 5,500 | 0 | $0.0 \times$ | (200) | -3.5x | $(1,400)$ | -20.3\% |
| Construction | 168,700 | 170,100 | 1,400 | 0.8x | $(4,500)$ | -2.6\% | $(82,200)$ | -32.6\% |
| Manufacturing | 436,000 | 437,500 | 1,500 | 0.3\% | 3,200 | 0.7x | $(95,300)$ | -17.9x |
| Trade, Transportation, willtes | 736,400 | 737,600 | 1,200 | 0.2\% | 9,400 | 1.3x | $(43,000)$ | -5.5\% |
| Information | 68,500 | 68,700 | 200 | 0.3\% | 200 | 0.3x | $(3,500)$ | 4.3x |
| Financial Activities | 205,200 | 205,800 | 600 | 0.354 | 1,500 | 0.7x | $(10,200)$ | -4.7\% |
| Professional at Businesa Services | 515,300 | 521,700 | 6,400 | 12\% | 7,200 | 1.4\% | 15,500 | 3.1\% |
| Education Health Services | 555,200 | 557,200 | 2,000 | 0.4\% | 12,100 | 2.2x | 24,200 | 4.5* |
| telsure 1 Hosplallty | 399,700 | 399,000 | (700) | -0.2\% | (2,500) | -0.6\% | $(6,900)$ | -1.7\% |
| Other Seratces | 153,700 | 152,800 | (900) | -0.6\% | $(2,300)$ | -15\% | (23,300) | -13.2x |
| Govennment | 702,000 | 707,200 | 5,200 | 0.7\% | 13,000 | 1.9x | 12,500 | 1.5\% |
| Total Nonfarm Employment | 3,946,200 | 3,963,100 | 16,900 | 0.4x | 37,000 | 0.9x | [213,600) | -5.1* |

What can be concluded from this brief summary of electricity demands and economic growth in North Carolina is that reliable and lower cost electricity will likely play an increasingly important role in maintaining and expanding the State's economy. However, from a more micro-perspective, what is more evident is that the state is suffering severe job losses in the industrial sector and in related sectors like logging and construction. While one can attribute some of this decline to the recent recession, the fact that industrial job losses and declining electric usage in the industrial class began well prior (at least as early as 2001) to the current recession (2007-08) point to the loss of these type customers being due to more systemic problems, and ones that simply won't go away when the economy recovers. One way to potentially help address these types of systemic problems is to institute efforts aimed at reducing the underlying costs related to a particular industry - whether that effort is aimed at lowering labor costs, regulatory costs, or input costs, such as the cost of electricity, all of these efforts should be positive factors in attempts at reinvigorating industrial growth.

### 2.3 SUMMARY

This Chapter began by providing a brief review of studies indicating the importance of electricity to economic development in the US. Given this significant relationship, the link between changing electric rates and
economic development was considered examining closely the responses of commercial and industrial customers to changes in electric rates. This analysis indicated that commercial and industrial customers would have limited ability, over the short-run, to modify their electric consumption in response to changes in electric rates. However, over the long-run, the industrial class of customers would alter their electric consumption dramatically, and much more so than commercial customers, in response to changes in electric rates. Based on the industrial customers' numerically large long-run price elasticity, it could be assumed that the industrial customer response likely included not only significant alteration of electricity usage but potentially facility closures.

Next, data was presented that confirmed the importance of reliable and favorably priced electricity to economic development efforts across the US and the Carolinas. Finally, there was a brief analysis of the current and expected future trends in the demand for electricity in North Carolina. A conclusion from this latter analysis was the finding that the State is experiencing a transition in its economy, generally to more energy-intensive types of industries and facilifies. A second conclusion was that the state has been experiencing a decade long decline in the number of industrial customers and a decline in employment in that sector of the economy. While some of these declines could be attributed to the recent recession, the fact that industrial job losses and declining electric usage in the industrial class began well prior (at least as early as 2001) to the current recession (2007-08) point to the loss of these type customers is likely due to more systemic problems. To address these systemic problems will likely require efforts aimed at reducing the underlying costs related to a particular industry - such as efforts aimed at lowering labor costs, regulatory costs, or input costs, like the cost of electricity. All of these efforts should be positive factors in. attempts at reinvigorating industrial growth.

In sum, this Chapter has provided the fundamental economic principles and electric demand data necessary to establish the basic premise that reliable and comparatively favorably priced electricity is a key consideration in economic development and likely a critical element in large customer retention in the US and in North Carolina. Consequently, as electric policy decisions are contemplated policy makers should have a clear understanding that these decisions, specifically as it relates to rates, are becoming increasingly important in today's and future firms' ongoing operation and locational decisions. Given these basic conclusions, the following two chapters provide an explicit analysis of the impact of electricity pricing decisions that result in a large customer either moving to or leaving Duke's or PEC's North Carolina system.

### 3.0 QUANTIFYING THE ECONOMIC IMPACT OF LARGE ELECTRIC CUSTOMERS ON REGIONAL ECONOMIES

### 3.1 INTRODUCTION

Having established the importance of reliable and lower cost electricity in economic development generally and specifically to North Carolina, the next task of this report is to examine the economic consequences resulting from the closing of a large electric-consuming facility. The primary quantitative technique used to estimate the economic benefits of a proposed development project, or conversely, an estimate of the economic impact should a facility close, is called an economic impact analysis. These analyses estimate the changes in economic activity resulting from a firm locating to or leaving a community.

For example, a new facility can have positive economic impacts in a region related to both construction and ongoing operations. Once a new facility is operational, a business will spend money directly on certain items such as payroll and purchases of other goods and services. These initial expenditures set in motion additional spending creating a ripple effect through a region's economy (called multiplier effect). These effects are generally categorized as direct, indirect, or induced effects. Increased demand for a product leads to a direct effect on the economy when a firm increases its output. Increased output by that same firm requires more inputs, which leads to an indirect effect on the economy. As a result of the direct and indirect effects on the economy, the level of household income throughout the economy increases, resulting in more spending, and this is the induced effect.

An impact analysis seeks to quantify the direct, indirect, and induced effects on the economy from a firm's expansion (or contraction). This Chapter applies an input-output model to estimate the economic impact from a specific facility's expansion or contraction (such as relocating the facility or closing a facility) in Duke's service teritory using the Charlotte RIMS II metropolitan area multipliers. It should be noted that the use of Charlotte and Duke's service teritory was simply based on the fact that the Charlotte metropolitan area covers a large area of North Carolina, and that the RIMS II multipliers in other areas of the state would be generally similar to the Charlotte area multipliers. Therefore, while the economic analysis was
developed using the Charlotte metropolitan area input-output economic multipliers, the estimates of economic impacts would be similar for essentially any location in Duke's or PEC's Carolinas based electric utility service territory.

### 3.2 QUANTIFYING THE IMPACT OF AN ECONOMIC Stimulus: InPut-OUTPUT MODELS

An economic impact analysis often employees input-output models to quantify the effects of a factory or other facility either locating to or leaving a region. These input-output models are based on the principle that new spending and/or employment by a firm will stimulate additional economic activity that can be quantified and forecast. Econometric input-output models simply make use of accounting data to develop mathematical relationships to estimate this type of economic stimulus, usually for a community or state. This is accomplished by developing what are called regional multipliers for numerous business enterprises, which are simply mathematical measures that estimate the changes in output, income and employment resulting from an initial çhange in spending by a firm.

For example, assume that a particular industry located in the Charlotte, NC metropolitan area has a regional output multiplier of 2.5. If a facility in that industry located in Charlotte were to increase its level of services or products purchased locally by $\$ 10$ million, the resulting total economic output resulting from this would be a $\$ 25$ million increase in total final demand for the Charlotte metropolitan area. These models also have indices to predict the change in employment levels from various economic stimulants, such as a new industry moving into or leaving a region.

Probably the most widely used input-output model, (or actually a set of economic multipliers) is called "RIMS II" which was developed and is kept current by the US Bureau of Economic Analysis (BEA). ${ }^{35}$ RIMS II is based on accounting data collected by the BEA from approximately 500 U.S. industries. Using RIMS II for an impact analysis has several advantages. RIMS II multipliers can be estimated for any region composed of one or more counties and for any industry, or group of industries, in the national l-O table. Empirical tests show that estimates based using other data and RIMS II-based estimates are similar in magnitude. In terms of the reliability aspect of the RIMS 11 model, it should be noted that it is widely used in both the public and private sector, including by the Department of Defense. State transportation Departments and numerous private-sector analysts.

[^12]
#### Abstract

JAW EXHIBIT-2 Rebuttal Testimony Exhibit of Julius A. Wright Page 24 of 92 The RIMS II economic multipliers utilization requires the following steps. First, an appropriate geographic region of study must be identified and the appropriate data package for the identified region must be purchased from the US BEA. Next, the industry or industry group that is to be studied must be identified. In other words, if a facility is moving to Charlotte, NC, or closing down, the exact type of faciility must be identified, such as a plastic manufacturing plant. This is necessary in order to identify the exact RIMS II multipliers specific to that industry. Finally, some detailed information about what is happening to the identified facility is required, for example, a plastic factory is hiring 300 additional workers, or the factory has a $\$ 10 \mathrm{M}$ expansion. Consequently, to proceed with a reasonable estimate of the economic consequences related to a utility retaining, adding, or losing a large electric customer, it is first necessary to identify a likely customer and some related employment and economic output specific data about that particular customer. The following section provides this information.

As stated previously, while this analysis employed Duke and Charlotte, NC data, the overall economic results would be expected to be similar for the PEC service territory..


### 3.3 IDENTIFYING CUSTOMERS.FOR RIMS II ANALYSIS

### 3.3.1 LARGE CUSTOMER GENERAL INFORMATION ${ }^{36}$

The following Tables 3.1 and 3.2, reprinted from Duke's IRP dated Sept. I, 2011, provides some general data about the number and types of Duke's customers. These tables illustrate the general trend of increasing number and increasing level of kWh sales to both residential and commercial customers over the past decade, even through the 2008 recession. The tables also illustrate the declining electricity usage and declining number of industrial customers, which started before the 2008 recession. It is important that electricity policy makers recognize this latter trend, for if it continues, as the following sections of this report prove, it could eventually have significant negative economic as well as rate impacts on the remaining Duke for similarly PEC) customers.

[^13]
## TABLE 3.1

Retail Customers (1000s, Annual Average)

|  | $\mathbf{2 0 0 1}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Residential | 1,814 | 1,840 | 1,872 | 1,901 | 1,935 | 1,972 | 2,016 | 2,052 | 2,059 | 2,072 |
| Commercial | 295 | 300 | 307 | 313 | 319 | 325 | 331 | 334 | 333 | 334 |
| Industrial | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Other | 11 | 11 | 11 | 12 | 13 | 13 | 13 | 14 | 14 | 14 |
| Total | 2,128 | 2,159 | 2,198 | 2,234 | 2,275 | 2,317 | 2,368 | 2,407 | 2,413 | 2,427 |
|  |  |  |  |  |  |  |  |  |  |  |

## TABLE 3.2

Electricity Sales (GWh Sold - Years Ended December 31)

|  | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
| Residential |  |  |  |  |  |  |  |  |  |  |
|  | 23,272 | 24,466 | 23,947 | 25,150 | 26,108 | 25,816 | 27,459 | 27,335 | 27,273 | 30,049 |
| Commercial | 23,666 | 24,242 | 24,355 | 25,204 | 25,679 | 26,030 | 27,433 | 27,288. | 26,977 | 27,968 |
| Industrial | 26,902 | 26,259 | 24,764 | 25,209 | 25,495 | 24,535 | 23,948 | 22,634 | 19,204 | 20,618 |
| Other | 281 | 271 | 270 | 269 | 269 | 271 | 278 | 284 | 287 | $287{ }^{\circ}$. |
| Total Retail | 74,121 | 75,238 | 73,336 | 75,833 | 77,550 | 76,653 | 79,118 | 77,541 | 73,741 | 78,922 |
| Wholesale | $1,484$ | 1,530 | 1,448 | 1,542 | 1,580 | 1,694 | 2,454 | 3,525 | 3,788 | 5,166 |
| Total GWH | 75,605 | 76,769 | 74,784 | 77,374 | 79,130 | 78,347 | 81,572 | 81,066 | 77,528 | 84,088 |
|  |  | . . |  |  |  |  |  |  |  |  |

Note: Wholesale sales will vary over time due to new contract agreements.

To gain a more detailed picture of Duke's larger customer data, refer to TABLE 3.3, which provides data extracted from the Company's most recent FERC Form 1 .

| TABLE 3.3: DUKE LARGE CUSTOMER DATA |  |  |
| :--- | :---: | :---: |
| Rate Schedule | Average Number of <br> Customers | kWh of Sales per <br> Customer per year |
| RS - Residential | $1,198,597$ | 13,796 |
| OPT- General Service | 20,310 | 795,837 |
| LG- (Gen)General Service | 21 | 647,476 |
| LGS - General Service | 9,833 | 528,934 |
| LG-(IND) - Large General Service | 1 | $5,272,000$ |
| I - Industrial Service | 5,377 | 460,830 |
| IT - Industrial Service | 1 | 176,000 |
| ITN - Industrial Service | 1 | $3,854,000$ |
| OPT - Industrial Service | 1,743 | $10,401,230$ |
| Source: FERC Form 1, Q4, 2010, p. 304 |  |  |

Table 3.3 illustrates the the variation in the per-customer electricity consumption between the residential customers and the larger industrial customers. While not surprising, the average OPT industrial customers uses, on average, approximately the same kWh of electricity per year as 750 households and are almost twenty times larger than large general service customers (LGS). Moreover, between 2010-2030 the Company's non-textile commercial and industrial base is expected to grow at an annual rate of $2.0 \%$ and $1.1 \%$ respectively. ${ }^{37}$ This data helps put into focus the importance of maintaining these larger customers on the system. Simply put, if one of the average size OPT industrial customers shuts down or otherwise leaves, it is roughly equivalent to the loss of energy sales to 750 homes. While not an economic analysis, this comparison does provide a perspective as to the significance of these larger customers from an economic perspective.

### 3.3.2 INPUT-OUTPUT MODELING DATA

In order to use an input-output model like RIMS II to more precisely estimate the economic impact of a large customer either building or shutting a facility

[^14]down more specific information about the proposed facility is required. However, trying to define a specific facility that may either open or shut down is problematic simply due to the fact that customers' names and customer-specific data is confidential. Moreover, it is impossible to get publicly available, plant specific, electricity consumption data that could be used to identify the electricity usage and load characteristics of a particular facility, and thereby know precisely if that facility is an average size industrial customer, larger than average, or smaller. In addition, many larger facilities have multiple meters and firms will often combine their bills into one bill, making it difficult, if not impossible, to find site-specific publicly available electric usage data.

A related data issue to overcome is the fact that a private industry manufacturing facility that is currently operating may not publicize the facilities dollar level output figures or the number of employees currently working at the facility - data necessary for the RIMS il modeling analysis. To overcome this issue, there are numerous facilities that do use public forums to announce their firm's opening (or closing) activities and this is usually a part of a region's economic development public relations activities. Moreover, often in these announcements a firm's estimated overall development or expansion costs and proposed future employment levels are also announced. While these public announcements do not represent what may be called accounting-based data, it should nevertheless be sufficient for this study's purposes by providing a reasonably accurate source of public data sufficient for this modeling effort. Furthermore, to provide a clearer understanding as to how the expansion or contraction of different types of industries might impact the economy, several different types of facilities were studied.

In all cases, the facilities studied were assumed to be located, or locating to, the Charlotte, NC greater metropolitan area. ${ }^{38}$ While it is true that a facility located in another area may have regional economic impacts that differ. from the same facility in Charlotte, Charlotte was chosen for several reasons. First, it is a large, major metropolitan region. Second, it is an area in the Carolinas that has generally been a focal point for growth and new facility. relocation. Third, it is a region served by Duke making the appropriate modeling data publically available. And fourth, using a single regional model on several types of firms is sufficient to provide a range of results that will provide reliable information for the questions being studied in this research.

[^15]The specific facilities examined in this study are listed in Table 3.4 below. Note that the sample contains both new facilities that are expanding operations and facilities that are closing.

## TABLE 3.4

FACILITIES CHOSEN TO ESTIMATE ECONOMIC IMPACT

| FACILITY <br> CHOSEN | LOCATION | TYPE <br> INDUSTRY | ECONOMIC <br> DATA <br> AVAILABLE | REASON FOR <br> SELECTING |
| :--- | :--- | :--- | :--- | :--- |
| AT\&T | Kings <br> Mountain, <br> NC, opening <br> 2014 | Data Center | CREATING: <br> 100 FT jobs, <br> construction to cost <br> $\$ 200$ million | This is a data center which <br> is a focus of the economic <br> development activity in the <br> Carolinas, as discussed in <br> Section 2.2. |
| Caterpillar | Johnston <br> County, <br> expansion of <br> facility | Manufacture <br> of Building <br> Construction <br> Heavy <br> equipment | CREATING: <br> 199 FT jobs, \$33 <br> million construction <br> expansion | Heavy equipment <br> manufacturing, Carolinas <br> has attracted vehicle and <br> airplane manufacturing in <br> recent past |
| Zimmer <br> Holdings | Statesville, <br> NC, closing <br> Qtr. 1,2012 | Surgical <br> products | LOSING: | 124 FT jobs |

### 3.4 ESTIMATION OF ECONOMIC IMPACTS RELATED TO A FIRM'S EXPANSION OR CONTRACTION

Because the focus of this study is customer retention, the economic stimulus estimates presented in this section only relates to anticipated changes in
employment levels for the particular facility being examined. Furthermore, it is assumed that these levels of employment would be maintained on an annual basis, thus the estimated economic data is presented as annual estimates (in $\$ 2008$ ). Any economic stimulus related to a new facility's construction was not included in these estimate. The complete data tables are provided in Appendix $\mathbf{C}$, with the overall results summarized below.

Table 3.5 provides the estimated direct and indirect economic impacts should a facility like the ones in this study be opened or closed in the Charlotte metropolitan area. Recall the direct effects are the economic effects related to the purchase of additional inputs (both labor and material inputs) to meet the proposed increased level of operations. The indirect effect is when other local firms increase their purchase of inputs and increase hiring to provide goods and services to a new facility. The resulting direct and indirect economic results are expressed in several ways in Table 3.5 and these results are summarized below:

- The dollar value each new employee adds to the region's economy (if the employee is laid off, it's a decrease) is approximately $\$ 200 \mathrm{~K}$ - $\$ 350 \mathrm{~K}$ annually, depending on the type of industry. This dollar amount consists of the employee's salary and benefits, the other goods and services the firm purchases per employee locally, and the other annual capital and ongoing expenses and investments the firm makes per employee.
- The total dollar value in demand for the entire facility is simply the dollar value per employee times the number of new employees. For AT\&T's facility, this is approximately $\$ 35$ million, for Caterpillar approximately $\$ 56$ million.
- The direct and indirect multiplier effect, that is the increase (decrease) in regional employment and dollars in regional output due to increases (decreases) in employment and spending by the new (or closing) facility. For example, the AT\&T and Caterpillar facilities result in an additional 272 and 386 new jobs in the region, respectively.
- And finally, the estimated regional direct and indirect increase (decrease) in employee earnings. For the AT\&T facility, this is approximately $\$ 20 \mathrm{M}$ in new payroll region-wide for the 272 additional jobs (including AT\&T's 100 jobs) that were a direct and indirect result of the AT\&T expansion.

| TABLE 3.5: ESTIMATED ANNUAL DIRECT AND INDIRECT |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FACILITY | CHANGE IN NUMBER OF EMPLOYEES FOR NEW (CLOSED) FACILITY | INCREASE <br> (OR <br> DECREASE) <br> IN FINAL $\$$. <br> DEMAND PER <br> EMPLOYEE <br> FOR NEW <br> (CLOSED) <br> FACILITY | INCREASE (OR <br> DECREASE) IN \$ OUTPUT <br> FOR ALL NEW (OR <br> DECREASED) \# OF <br> EMPLOYEES | INCREASE <br> (OR <br> DECREASE) \# <br> OF JOBS FOR <br> ALL <br> INDUSTRIES | INCREASE <br> (OR <br> DECREASE) <br> IN ALL <br> INDUSTRIES <br> FINAL <br> REGIONAL <br> OUTPUT IN \$ | (INCREASE OR <br> DECREASE) <br> IN \$ IN <br> EMPLOYEE <br> EARNINGS <br> FOR ALL <br> INDUSTRIES |
| AT\&T | 100 | \$351,219 | \$35,121,869 | 272 | \$55,699,773 | \$20,057,488 |
| Caterpillar | 199 | \$282,972 | \$56,311,493 | 386 | \$88,099,331 | \$29,328,267 |
| Zimmer Holdings* | 124 | \$179,795 | \$22,294,629 | 192 | \$33,346,077 | \$12,007,922 |
| Berry <br> Plastic | 314 | \$339,716 | \$106,670,886 | 592 | \$160,518,349 | \$40,723,505 |
| *note that Zimmer is designated a "misc." manufacturer. |  |  |  |  |  |  |

There are additional induced effects that must be added to the Table 3.5 direct and indirect effects, Table 3.6. Recall that induced effects are related to the increase in local employment due to direct and indirect effects that result in increases in the incomes of non-facility related households in the region. These households, in turn, spend a portion of this additional income in the local area (on groceries, dry cleaning, gasoline, etc.). Their spending stimulates even more demand for output and creates additional employment opportunities in the region. This regional increase in household spending by non-facility employees is an increase in economic activity is called the induced effect, shown below in Table 3.6.

\left.| TABLE 3.6: TOTAL ESTIMATED ANNUAL INDUCED ECONOMIC |  |
| :--- | :---: | :---: | :---: | :--- |
| IMPACT |  |$\right]$| INCREASE |
| :--- |

The sum of the direct, indirect, and induced effects yields the total economic changes in terms of employment and output from establishing (or closing) a manufacturing type facility (or large electric consumer) within a community. These total impacts are shown in Table 3.7.

| TABLE 3.7: TOTAL ESTIMATED ANNUAL ECONOMIC IMPACT (DIRECT, INDIRECT, INDUCED) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FACILITY | CHANGE IN NUMBER OF EMPLOYEES FOR NEW (CLOSED) FACILITY | INCREASE <br> (OR <br> DECREASE) <br> IN FINAL $\$$ <br> DEMAND <br> PER <br> EMPLOYEE <br> FOR NEW <br> (CLOSED) <br> FACILITY | INCREASE (OR DECREASE) IN \$ OUTPUT FOR ALL NEW (OR DECREASED) \# OF EMPLOYEES | INCREASE <br> (OR <br> DECREASE) <br> \# OF JOBS <br> FOR ALL <br> INDUSTRIES | INCREASE (OR DECREASE) IN ALL INDUSTRIES FINAL REGIONAL OUTPUT IN \$ | INCREASE OR DECREASE) IN \$ IN EMPLOYEE EARNINGS FOR ALL INDUSTRIES |
| AT\& $T$ | 100 | \$351,220 | \$35,122,018 | 412 | \$71,434,672 | \$34,438,655 |
| Caterpillar | 199 | \$282,972 | \$56,311,502 | 594 | \$111,417,938 | \$49,647,833 |
| Zimmer Holdings | 124 | \$179,794 | \$22,294,401 | 281 | \$43,333,627 | \$20,886,808 |
| Berry Plastic | 314 | \$339,729 | \$106,674,867 | 892 | \$194,190,928 | \$65,947,239 |

Table 3.8 summarizes the overall impact on a per job basis for the four different facilities examined in this analysis. As this table shows, depending on the type of facility, on an annual basis within the Charlotte region, for each new (lost) employee there are generally 1-2 (sometimes more with high tech jobs like the AT\&T data center) additional new jobs created usually in excess of $\$ 500 \mathrm{~K}$ in total additional regional dollars output and around $\$ 200 \mathrm{~K}-\$ 350 \mathrm{~K}$ in region-wide new employee earnings. These levels of employment and dollar impacts serve to illustrate the importance to a region's economy of attracting and maintaining its larger employment facilities. These results also support the proposition that customer retention and customer growth should be important considerations in policy makers various deliberations regarding the provision of electric service to these larger customers.

| TABLE 3.8: SUMMARY OF THE TOTAL ESTIMATED ANNUAL |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: | :---: |
| ECONOMIC IMPACT |  |  |  |  |  |  |  |

### 3.5 ADDITIONAL ECONOMIC IMPACTS

There are additional economic impacts, both positive and negative related to the development of new large employment facilities within a region. For example, there can be an increased demand for local government services which result in higher local government costs. These increased services are usually offset by increases in local taxes and fees. The RIM II model used in this analysis does not provide an analytical framework to estimate these tax affects. However, the data from the RIMS II analysis can provide some estimates of regional tax impacts. For example, assuming total regional earnings increase approximately $\$ 300 \mathrm{~K}$ per new AT\&T employee shown in Table 3.8, this would translate into both local sales and state income taxes of approximately $\$ 30 \mathrm{~K}$ (assume $5 \%$ average sales and $5 \%$ state income tax rates on the total increase in earnings per employee). This estimate does not include any estimate of increased property taxes, fees such as auto fees, nor is it offset by any increases in local services cost.

However, this simple tax revenue calculation again demonstrates the multiplier effect on the local economy from the creation or retention of a large employer facility. Conversely, absent the retention of such a facility and its employees, any government services that had been provided to this particular facility and its employees may no longer be needed, yet many of these services and their ongoing expenses will remain even after the large employee facility is closed and/or moved. The remaining costs would theoretically be recovered in taxes and fees from the regions remaining population base. Therefore, retaining a large employee type firm not only provides tangible and quantifiable economic benefits to a region, but it also helps prevent adverse economic consequences to the region's taxpayers should the facility close or move.

### 3.5 SUMMARY

This Chapter applied an econometric input-output model using BEA RIMS II Chartotte regional multipliers to estimate the quantitative economic impact resulting from the closing (or opening) of a large employee electricconsuming facility. In this analysis, the following four different types of facilifies were examined:

- At\&t Data Center
- Caterpillar Heavy Equipment factory
- Zimmer Surgical Products manufacturer
- Berry Plastics manufacturer

All four companies had either announced the opening or closing of a facility in North Carolina. Also, while the economic analysis was developed using the Charlotte metropolitan area input-output economic multipliers, the estimates of economic impacts would be similar for essentially any location and any electric utility service teritory in North Carolina.

As the analysis indicated, once a new facility is operational, a business will spend money directly on certain items such as payroll and purchases of other goods and services. These various initial expenditures set in motion additional spending creating a ripple effect through a region's economy (called multiplier effect). As a consequence, this study indicated that for every new (or lost) employee at the targeted facility, an additional $1-3$ employees are created in the region along with increased economic activity and payrolls.

In Chapter 2 this study found that electric prices had a strong influence, over the long-run, on large customer behavior, up to and including the closing of a facility. This earlier finding, along with the substantial economic benefits that arise from retaining or attracting large employee facilities to a region, should provide electric rate-setting policy-makers sufficient justification to
strongly consider the economic consequences of their rate-setting decisions

### 4.0 THE IMPACT ON REMAINING CUSTOMERS' ELECTRIC RATES FROM THE LOSS OF_LARGE ELECTRIC CUSTOMERS

### 4.1 INTRODUCTION

The preceding Chapter provided an analysis of the region-wide economic impacts of a large electric customer either expanding or leaving the Duke for similarly PEC) service ternitory, specifically in the Charlotte, NC metropolitan area. These economic impacts included estimates of the regional effects on employment levels, dollars in economic output, payroll earnings, and taxes. Beyond these more region-wide effects there could also be an impact on the remaining customers' rates when large electric users depart a regulated electric utility's system.

A regulated utility's rates are established based on what is fermed a revenue requirement. The revenue requirement is essentially the annual revenues that a particular regulated utility needs to recover from its customers in order for that utility to recover its costs (which includes a regulated level of profits). Just and reasonable ratemaking principles require that a utility's rates are established for each of the utility's customer classes in such a manner as to "mathematically" allow the utility to recover its total revenue requirement.

This revenue requirement, therefore the rates, can be segregated into two distinct components. One component is termed "fixed costs." These are costs that do not vary in the short run regardless of the amount of electricity used on the system or regardless of whether a customer uses less electricity or even leaves the system. Examples would be existing investments in generating stations, distribution systems, and transmission lines. The second component is termed "variable costs," which are costs that do vary in the short run as the amount of electricity sold varies. An example would be fuel costs.

These two cost categories influence fair and equitable rate pricing in a straightforward fashion. If a customer leaves a utility's system, because the "fixed costs" do not vanish when that customer leaves, the fixed costs no longer being recovered from the departing customers would theoretically be recovered from the remaining customers through higher rates. This is the basic financial impact on remaining customers' rates should a large customer leave a regulated electric utility's system. The purpose of this chapter is to
model and estimate the impact on rates from such an event. For purposes of this study it is assumed the customer or customers that leave the system are North Carolina based customers, that the rate impacts are reflected in North Carolina in either Duke' Industrial or OPT class of customers or in PEC's LGS class of customers.

### 4.2 METHODOLOGY

As discussed in the introduction, in order to estimate the impact on rates should a large electric customer leave a utility's system an initial requirement is to segregate that utility's rates, also called costs in this report, into fixed and variable cost categories. To evaluate which of Duke's costs are variable in the short run, this study relied upon the Summer Coincident Peak ("SCP") cost-of-service study that was submitted in Docket No. E-7, Sub 989.39 For segregation of PEC's cost a similar SCP cost-of-service study was used from Docket No. E-2, Sub 1023. The cost-of-service studies are attached in
Appendix D . This study relied upon the SCP cost-of-service study because the North Carolina Utility Commission has allowed that methodology in the [Duke] proceeding as a means "for allocation among jurisdictions and among customer classes under the provisions of the Stipulation and that this methodology is just and reasonable to all parties." ${ }^{3}$.00 Note in the Duke proceeding the final revenue requirement approved by the North Carolina Utility Commission differed from the originally filed SCP cost-of-service study. because the parties stipulated to a lesser amount.

In addition, because public information was not available identifying the exact electric usage of large customers, this study examined the impact on remaining customers for a range of potential load losses. This included load losses ranging from the loss of an average customer size in each class up to a $5.0 \%$ loss in each large customer class. The study examined load losses for Duke classes I (Industrial), and OPT (both Industrial and General OPT combined) ${ }^{41}$ and PEC's LGS. ${ }^{42}$ in order to establish the estimated impact on rates from these load losses, the projected lost non-energy related revenue was spread to all classes in proportion to the total fixed cost percentages the original SCP cost-of-service study determined. The results from this analysis are discussed in the following sections.

[^16]
### 4.3 ESTIMATED RATE IMPACTS FROM THE LOSS OF A LARGE LOAD CUSTOMER

### 4.3.1 "LOST" FIXED REVENUE ESTIMATE

The following Table 4.1 shows the total retail "fixed" revenue loss for varying amounts (percentages) of Duke's Industrial (I) class load. As this table indicates, a loss of $5 \%$ of the load in the "I" customer class will result in a $\$ 4.383$ million loss in fixed cost revenues. This loss in fixed cost revenues would theoretically be recovered from Duke's remaining customers. Similarly, a 3\% load loss will result in $\$ 2.63$ million in "unrecovered" fixed cost that would be recovered from the remaining customers.

TABLE 4.1: FIXED REVENUE LOSS FROM "I" CLASS CUSTOMER LOAD LOSS

| Lost Industrial (I) Load (\%) | \$ Fixed Revenue Loss (\$1000) |
| :---: | :---: |
| $1 \%$ | $\$ 877$ |
| $3 \%$ | $\$ 2,630$ |
| $5 \%$ | $\$ 4,383$ |

A similar analysis was developed from the Duke SCP cost-of-service data for loss of load in the OPT classes (both industrial and general service). The results are shown in Table 4.2 below. As this table illustrates, a loss of $5 \%$ of the load in the OPT classes will result in a fixed cost revenue loss of $\$ 38$ million, which theoretically should be recovered from Duke's remaining customers. A 3\% loss of load would result in $\$ 22.8$ million to be recovered from the remaining customers.

# TABLE 4.2: FIXED REVENUE LOSS FROM "OPT" CLASS CUSTOMER LOAD LOSS 

| Lost of OPT Load (\%) | Fixed Revenue Loss (\$1000) |
| :---: | :---: |
| $1 \%$ | $\$ 7,606$ |
| $3 \%$ | $\$ 22,817$ |
| $5 \%$ | $\$ 38,029$ |

For PEC this study analyzed the large customer class, LGS. The fixed revenue loss from various percentage losses of customer load in that class are shown in Table 4.3, below.

| TABLE 4.3:FIXED REVENUE LOSS FROM PEC "LGS" CLASS <br> CUSTOMER LOAD LOSS |  |
| :---: | :---: |
| Lost of LGS Load (\%) | Fixed Revenue Loss (\$1000) |
| $1 \%$ | $\$ 2,345$ |
| $3 \%$ | $\$ 7,035$ |
| $5 \%$ | $\$ 11,274$ |

### 4.3.2 ALLOCATION OF LOST FIXED REVENUE TO REMAINING CUSTOMERS

The lost fixed cost revenues developed in Table 4.1 through Table 4.3 assume that the loss of a customer only results in the loss of that particular customer's load. However, as discussed in Chapter 3, the closing (or expanding) of a large customer has other impacts on a region's economy referred to as "multiplier" effects. These multiplier effects and how these can translate into rate impacts on other customers will be further discussed in Section 4.3.3. For
the remainder of this section, assume the rate impacts are only those resulting from the loss of a large customer which theoretically results in the non-energy related costs (also called fixed costs), formerly recovered from that particular lost customer, being re-allocated and recovered from a utility's remaining customers. For this analysis, this allocation of costs was carried out in accordance with the percentages of fixed costs developed in the SCP cost of service study. Table 4.4 indicates how the SCP cost-of-service study allocated the fixed costs to the various Duke customer classes.

\left.| TABLE 4.4: ALLOCATION OF FIXED COSTS PER DUKE SCP - |
| :--- | :---: |
| NORTH CAROLINA |$\right]$

Table 4.5 shows the allocation of fixed costs derived from the PEC SCP cost-of-service study for North Carolina.

\left.| TABLE 4.5: ALLOCATION OF FIXED COSTS PER PEC SCP - |
| :--- | :--- |
| NORTH CAROLINA |$\right]$

Applying the percentage of fixed costs allocated to the various customer classes by the SCP cost of service study, coupled with the amounts of fixed cost lost revenue developed for rate class "I" in Table 4.1, provides sufficient
data to estimate the rate impact on remaining customers should a larger customer leave (absent consideration of the multiplier effect, which is estimated in Section 4.3.3). Table 4.6 indicates these rate impact estimates for various percentages of Duke's Industrial (I) load losses. This table indicates that for a $1 \%$ loss in the Duke Industrial Class (I) load, the Residential customers would theoretically experience an increase in their rates of $\$ 450,000$ or $0.012 \%$, while the OPT class would experience an increase of $\$ 219,000$ or $0.0164 \%$. For a $5 \%$ load loss in the Duke Industrial class, the resulting rate increase would be $\$ 2.249$ million or $0.1059 \%$, and $\$ 1.095$ million or $0.0821 \%$, respectively.

Table 4.6 also illustrates the level of rate increase with the loss of one average size Duke industrial customer. In this situation the increase in Residential rates would be $\$ 11,000$ or $0.0005 \%$. Obviously, if the Industrial customer were much larger than average size or the cost allocation were different then the resulting increase in the remaining customers' rates would be different. However, the more interesting point of this exercise is the simple fact that the allocation of fixed costs resulting from as much as a $5 \%$ loss in Industrial Class load results in less than a $1 \%$ increase in the remaining customers' rates.

| TABLE 4.6: RATE INCREASE RESULTING FROM FIXED COST ALLOCATED TO REMAINING DUKE CLASSES FOR INDUSTRIAL <br> (I) LOAD LOSS (NORTH CAROLINA) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & 1 \% \\ & \text { Lost } \\ & \text { Load } \end{aligned}$ | 3\% <br> Lost <br> Load | $\begin{gathered} 5 \% \\ \text { Lost Load } \end{gathered}$ | Loss of One Average Size Customer in Industrial (I) Class |
| Residential | \$ Increase in rates <br> (\$1000) | \$450 | \$1,349 | \$2,249 | \$11 |
|  | \% Increase in rates | 0.0212\% | 0.0636\% | 0.1059\% | 0.0005\% |
| General Service | S Increase in rates <br> (\$1000) | \$154 | \$461 | \$768 | \$4 |
|  | \% Increase in rates | 0.0206\% | 0.0618\% | 0.1031\% | 0.0005\% |
| Lighting | $\$$ Increase in rates $(\$ 1000)$ | \$29 | \$87 | \$145 | \$1 |
|  | \% Increase in rates | 0.0244\% | 0.0732\% | 0.1219\% | 0.0006\% |
| Industrial (I) | \$ Increase in rates <br> (\$1000) | \$25 | \$76 | \$126 | \$1 |
|  | \% Increase in rates | 0.0191\% | 0.0573\% | 0.0954\% | 0.0005\% |
| $\begin{aligned} & \text { OPT.(I \& } \\ & \text { GS) } \end{aligned}$ | \$ Increase in rates <br> (\$1000) | \$219 | \$657 | \$1095 | \$5 |
|  | \% Increase in rates | 0.0164\% | 0.0493\% | 0.0821\% | 0.0004\% |

Similarly, using the percentage of fixed costs allocated to the various customer classes by the SCP cost of service study, coupled with the amounts of fixed cost lost revenue developed for Duke's rate class "OPT" in Table 4.2, Table 4.7 indicates the estimated revenues, or rate impacts, on the remaining customers for various percentages of Duke OPT load losses. For example, this table indicates that the Residential Class would have a rate increase of approximately $\$ 3.9$ million or $0.1838 \%$ for the loss of $1 \%$ of the load in the OPT class, while the remaining OPT customers would have rate increases of approximately $\$ 1.9$ million or $0.1425 \%$. This table also illustrates the level of rate increase with the loss of one average size OPT Class customer. In this situation the increase in Residential rates would be $\$ 23,000$ or $0.0011 \%$. Obviously, if the Industrial customer were much larger than average size, or if
the lost fixed cost revenues were allocated in a different manner, the estimated rate impacts on each customer class would change.

Again, as with the Industrial Class Customer analysis presented in Table 4.6. the more interesting point of this exercise is the simple fact that the allocation of fixed costs resulting from as much as a $5 \%$ loss in Duke's OPT Class load results in less than a $1.1 \%$ increase in the remaining customers' rates. Another way to consider this analysis is to assume that a large customer was given a discount in order to retain that customer on the system. To the extent that this discount was less than that customer's SCP cost-of-service estimated fixed costs (usually a customer must always pay their marginal cost plus some contribution to fixed costs), then the rate impacts on the remaining ratepayers would be slightly less than the rate impacts indicated in either Tables 4.6 or 4.7.

| TABLE 4.7: FIXED COST ALLOCATED TO REMAINING DUKE CLASSES FOR OPT LOAD LOSS (\$1000 AND \% RATE INCREASE) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $1 \%$ <br> Lost Load | $\begin{gathered} 3 \% \\ \text { Lost Load } \end{gathered}$ | $\begin{aligned} & \hline \mathbf{5 \%} \\ & \text { Lost } \\ & \text { Load } \end{aligned}$ | Loss of One Average Size Customer in OPT Class |
| Residential | \$ Increase in rates <br> (\$1000) | \$3,903 | \$11,708 | \$19,514 | \$23 |
|  | \% Increase in rates | 0.1838\% | 0.5515\% | 0.9192\% | 0.0011\% |
| General Service | \$ Increase in rates <br> (\$1000) | \$1,332 | \$3,996 | \$6,660 | \$18 |
|  | \% Increase in rates | 0.1789\% | 0.5366\% | 0.8943\% | 0.0010\% |
| Lighting | \$ Increase in rates <br> (\$1000) | \$251 | \$754 | \$1,257 | \$1 |
|  | \% Increase in rates | 0.0212\% | 0.6349\% | 1.0581\% | 0.0012\% |
| Industrial (I) | \$ Increase in rates $(\$ 1000)$ | \$219 | \$657 | \$1,095 | \$1 |
|  | \% Increase in rates | 0.1656\% | 0.4968\% | 0.828\% | 0.0010\% |
| $\begin{aligned} & \text { OPT (I \& } \\ & \text { GS) } \end{aligned}$ | \$ Increase in rates <br> (\$1000) | \$1,900 | \$5,701 | \$9,502 | \$11 |
|  | \% Increase in rates | 0.1425\% | 0.4276\% | 0.7126\% | 0.0008\% |

The corresponding results for PEC for a loss of large customers in the LGS class are shown below in Table 4.8. Using the percentage of fixed costs allocated to the various customer classes by the SCP cost of service study, coupled with the amounts of fixed cost lost revenue developed for rate class "LGS" in Table 4.3, Table 4.8 indicates the estimated revenues, or rate impacts, on the remaining customers for various percentages of PEC LGS load losses. For example, this table indicates that the Residential Class would have a rate increase of approximately $\$ 1.242$ million or $0.08 \%$ for the loss of $1 \%$ of the load in the LGS class, while the remaining LGS customers would have rate increases of approximately $\$ 300,000$ or $.054 \%$. This table also illustrates the level of rate increase with the loss of one average size LGS Class customer. In this sifuation the increase in Residential rates would be $\$ 453,000$ or $0.00003 \%$. Obviously, if the industrial customer were much larger than average size, or if the lost fixed cost revenues were allocated in a different manner, the estimated rate impacts on each customer class would change.

| TABLE 4.8: FIXED COST ALLOCATED TO REMAINING PEC <br> LGS CLASSES FOR LOAD LOSS <br> (\$1000 AND \% RATE INCREASE) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $1 \%$ <br> Lost <br> Load | 3\% <br> Lost <br> Load | $\begin{gathered} 5 \% \\ \text { Lost Load } \end{gathered}$ | Loss of One <br> Average <br> Size <br> Customer in <br> LGS Class |
| Residential | \$ Increase in rates <br> (\$1000) | \$ 1,242 | \$3,726 | \$ 6,209 | \$ 453 |
|  | \% Increase in rates | 0.0804\% | 0.2413\% | 0.4022\% | 0.00003\% |
| Small <br> General <br> Service | \$ Increase in rates $(\$ 1000)$ | \$ 192 | \$576 | \$ 961 | \$ 70 |
|  | \% Increase in rates | 0.0771\% | 0.2313\% | 0.3854\% | 0.00003\% |
| Medium General Service | \$ Increase in rates <br> (\$1000) | \$505 | \$1,514 | \$ 2,523 | \$ 184 |
|  | \% Increase in rates | 0.0649\% | 0.1948\% | 0.3247\% | 0.00002\% |
| Large General Service (LGS) | \$ Increase in rates <br> (\$1000) | \$300 | \$902 | \$ 1,503 | \$ 110 |
|  | \% Increase in rates | 0.0544\% | 0.1633\% | .272\% | 0.00002\% |

### 4.3.3 ALLOCATION OF MULTIPLIER EFFECT LOST FIXED REVENUE TO REMAINING CUSTOMERS

The forgoing exercise (Section 4.3.2) indicated the rate impact on remaining customers that would result directly from the loss of load in the Industrial and OPT classes of Duke's customers or the LGS class of PEC customers. However, as discussed in Chapter 3, there is what may be termed "indirect" rate impacts that result from the economic multiplier effect should a large load customer leave with the resulting region-wide economic losses that result from the changes in the lost customer's economic output and employment. This Section estimates these indirect, or economic multiplier rate impacts on remaining customers resulting from the loss of a large load customer.

Recall that Chapter 3 developed estimates of the total economic impacts resulting from the closing (or expanding) of four different large load customers. Reproduced below is Table 3.7 from Chapter 3 that provides these economic impact estimates in terms of employment, employee earnings, and output from closing (or expanding) four specific facilities in the Charlotte metropolitan area. Based on this economic data the task at hand is to determine the fixed costs related to the multiplier effect that is associated with the loss (or gain) of load from these four facilities. Once these multiplier effect related fixed costs are determined it will be possible to estimate the eiectric rate impact resulting from this economic multiplier effect on other customers' rates, assuming that any "lost" fixed cost revenues will be recoverable from remaining customers. To estimate the fixed cost related to the multiplier effect requires knowledge or estimates of both the electric rates, the level of fixed costs associated with the electric rates, and usage levels related to each of these four facilities and any other regional entities that are effected by the closing (or expansion) of these specific facilities. While it can be assumed that these four facilities would likely be served under the 1 or OPT schedules, these facilities electric usage, and the related electric usage of other impacted regional entities, must be estimated using the data available in Table 3.7.

| TABLE 3.7: TOTAL ESTIMATED ANNUAL ECONOMIC IMPACT |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FACILITY | CHANGE IN NUMBER OF EMPLOYEES FOR NEW (CLOSED) FACILITY | INCREASE (OR <br> DECREASE) <br> IN FINAL \$ <br> DEMAND PER EMPLOYEE FOR NEW (ClOSED) FACILITY | INCREASE (OR DECREASE) IN \$ OUTPUT FOR ALL NEW (OR DECREASED) \# OF EMPLOYEES | increase (OR DECREASE) <br> \# OF JOBS FOR ALL INDUSTRIES | INCREASE (OR DECREASE) IN ALL <br> INDUSTRIES FINAL REGIONAL OUTPUT IN \$ | INCREASE OR DECREASE) IN \$ IN EMPLOYEE EARNINGS FOR All INDUSTRIES |
| AT\&T | 100 | \$351,220 | \$35,122,018 | 412 | \$71,434,672 | \$34,438,655 |
| Caterpillar | 199 | \$282,972 | \$56,311,502 | 594 | \$111,417,938 | \$49,647,833 |
| Zimmer Holdings | 124 | \$179,794 | \$22,294,401 | 281 | \$43,333,627 | \$20,886,808 |
| Berry Plastic | 314 | \$339,729 | \$106,674,867 | 892 | \$194,190,928 | \$65,947,239 |

Estimating electric usage or revenues associated with the four facilities identified in Table 3.7 requires some means of associating this table's economic impact data with electricity usage. The economic data from Table 3.7 that is available to use in developing such an estimate is:

- Change in the number of facility specific and region-wide employment levels
- Change in employee earnings levels
- Change in total economic output

Generally, electricity usage by a facility is estimated based on appliance load and other engineering and demographic data. This is not available in this case, but it is reasonable to assume that there could be a valid and measureable relationship between economic activity and electricity usage levels. For example, as discussed in Chapter 2, a study of the US economy from 1950-1984 indicated "Growth in electric power consumption accounts for $79 \%$ of the growth of manufacturing value-added [during this period of time] ${ }^{143}$ and a more recent study of $99 \%$ of the world's global economy

[^17]found a highly statistically-significant correlation between electricity consumption per capita and GDP per capita. ${ }^{44}$ These findings provide validation of the assumption that the impact on the direct and indirect level of electricity usage should be related in a statistically measureable way to the economic changes identified in Table 3.7.

To analyze this relationship several linear and non-linear regression models were developed using North Carolina retail electric sales (in MWh) ${ }^{45}$ regressed against North Carolina total wages. ${ }^{46}$ The results from two of these, a straight line and a log-linear model are found in Appendix E, Table A. The results in this table indicate that a linear regression model using MWh usage as the independent variable and wages as the dependent variable resulted in a linear regression model with an $r^{2}$ value of 0.948 , indicating a very positive correlation. Further analysis indicated this model had an average prediction error of $\pm 6.36 \%$. This model provides sufficient evidence to assume that a reasonable estimate of North Carolina's or a particular facility's electric usage can be estimated using state-level or facility-level employee wage data. Note that this is not meant to imply that there is any causational relationship (such as end-use load forecasting models) nor significant ability to use this relationship in any load forecasting technique, but rather that the relationship between wage data and electricity usage is sufficient to provide reasonable estimates of electricity consumption for the facilities examined in this study. Based on this analysis, a model was developed to use the facility employee wage economic impact data, shown in Table 3.7, to predict the level of electric sales associated with these wage-level changes.

Specifically, Table 4.9 illustrates the relationship, used in this analysis, between MWh sales and total wages (note: a more detailed table is found in Appendix E). As this table indicates, the ratio of MWh sales to wage income in North Carolina has been decreasing gradually since 1990, but over the past five years of available data (2006-2010) this ratio has only varied slightly, from $0.00059-0.00063$, with an average of .00061 .

[^18]| TABLE 4.9: DATA USED TO PROVIDE |  |  |  |
| :---: | :---: | :---: | :---: |
| METHOD FOR ESTIMATING ELECTRICITY |  |  |  |
| USAGETO EMPLOYEE WAGES |  |  |  |
| YEAR | Total Wages \$000s* | Total Electric Sales MWh ** | MWh Sales/\$ per Wage Income |
| 1990 | 81,836,057 | 89,924,487 | 0.00110 |
| 1991 | 84,713,599 | 92,316,483 | 0.00109 |
| 1992 | 92,692,160 | 94,195,331 | 0.00102 |
| 1993 | 97,999,331 | 99,777,554 | 0.00102 |
| 1994 | 104,482,055 | 99,789,182 | 0.00096 |
| 1995 | 110,820,401 | 104,672,756 | 0.00094 |
| 1996 | 117,035,500 | 108,296,394 | 0.00093 |
| 1997 | 125,695,985 | 109,050,025 | 0.00087 |
| 1998 | 135,307,744 | 113,596,306 | 0.00084 |
| 1999 | 144,907,973 | 115,015,125 | 0.00079 |
| 2000 | 155,160,985 | 119,855,456 | 0.00077 |
| 2001 | 159,495,682 | 119,026,943 | 0.00075 |
| 2002 | 163,348,035 | 122,686,468 | 0.00075 |
| 2003 | 169,602,852 | 121,335,121 | 0.00072 |
| 2004 | 179,222,933 | 125,656,807 | 0.00070 |
| 2005 | 189,451,825 | 128,335,377 | 0.00068 |
| 2006 | 202,140,469 | 126,698,979 | 0.00063 |
| 2007 | 215,144,707 | 131,880,754 | 0.00061 |
| $2008{ }^{\text {r }}$ | 221,590,306 | 130,054,113 | 0.00059 |
| $2009{ }^{\text {r }}$ | 213,910,915 | 127,657,979 | 0.00060 |
| $2010^{\text {r }}$ | 219,208,239 | 136,414,947 | 0.00062 |
| $2011{ }^{\text {P }}$ | 227,400,854 | NA | NA |

Using this ratio of 0.00061 MWh sales per wage income dollars (000s) provides a reasonable mathematical relationship between wage income and electricity sales, which can be used as a methodology to translate the wage impacts shown in Table 3.7 to impacts on electricity usage and eventually, electricity rates. For the four facilities listed in Tables 3.7, this calculation of energy usage based on wage changes is shown in Table 4.10 below (a more detailed table of these calculations and results is shown in Appendix E). For example, for the AT\&T facility, the analysis of economic impacts (Chapter 3) using an input-output model indicated the change in total regional wages would be $\$ 34.4$ million. As shown in Table 4.10, this translates to a change in

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the region's MWh sales of $21,008 \mathrm{MWhs}$. To determine how much of this change in MWHs is related directly to the AT\&T expanded facility's electricity usage or related to impacts on non-AT\&T region-wide entities, the multiplier effect, the ratio of new AT\&T jobs to new total regional jobs (from Table 3.7) is multiplied by the estimated total change in MWhs. The results are shown in Table 4.10, which indicates that for the AT\&T facility, of the 21,008 change in MWhs usage, 15,909 is due to the multiplier effect on the regions economy and not to AT\&T's change in electricity usage.

Once the change in electricity MWhs usage has been determined for the specific facility and the region-wide multiplier effect, these MWhs are converted to dollars using Duke's average electric costs (7.51 cents/kWHr s reported by the EIA, 2011, also note the ATT facility is in Duke's service territory, thus using Duke's rates). The reason the average electric costs, and not specific Duke Tariff rates are used, is simply due to the fact that it is not possible to determine either AT\&T's tariffed rate nor the rates paid by various entities whose electricity usage is affected by the region-wide multiplier effects. The estimated changes in revenues are then converted to nonenergy (or fixed costs) using the fixed costs ratio (68.4\%) from Duke's 2011 Cost of Service Study. The results, shown in Table 4.7, indicate that the nonenergy indirect (or multiplier related) costs that could impact other customers' rates from the AT\&T facility are some $312 \%$ larger than the rate impacts resulting from changes in electricity usage directly due to the AT\&T facility's electricity usage.

Table 410 shows the results of the foregoing analysis on all four of the facilities studied in Chapter 3. Several points about these results need to be emphasized:

1. Based on Duke's 2011 Cost of Service Study, the average I, OPT-G, and OPT-I customers' annual bills are $\$ 31,987$ and $\$ 49,780$ and $\$ 443,521$ respectively. This translates into annual non-energy costs of $\$ 21,879$ and $\$ 34,049$ and $\$ 303,368$ respectively. The direct non-energy costs attributable to the four facilities in this study (see Table 4.10) range from a low of $\$ 261,926$ to a high of $\$ 727,421$. This indicates two things. First, this study's estimates of these four facilities' electricity costs is generally consistent with average size OPT-I customer's annual electric bills, therefore these estimates seem reasonable. Second, that the facilities examined, (with direct total new employees numbering from 100 to 314) are larger load customers.
2. The multiplier effect non-energy related rate impacts range from 1.27 to 3.12 times as large as the rate impacts directly resulting from a new or closed facility's energy usage. The average multiplier effect rate impact was 2.05 times as large as the direct impact.
3. Assuming the four facilities in Table 3.7 are generally representative of the large customer classes of Duke, then the average large customer
rate impacted related to the multiplier effect would be approximately 2.05 times as large as the direct impact.

## TABLE 4.10: ESTIMATE OF CHANGE IN DUKE'S "NON-ENERGY" related revenues as a result of the multiplier effect

|  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Point numbers two and three can be used to further develop the analysis illustrate in tables 4.6,4.7 and 4.8. These tables illustrated the estimated rate impacts on remaining customers assuming the loss of load from Duke's I or OPT classes or PEC's LGS class, and that the fixed (or non-energy) costs from this loss of load would be spread to the remaining customers. However, the analysis shown in these tables did not assume any additional rate impact resulting from related changes in the regions economy via the multiplier effect.

Tables 4.11 and 4.12 below, illustrate the estimated rate impacts resulting from the loss of Duke's I or OPT customers of varying sizes, and these tables include the rate impacts related to multiplier effect (the multiplier effect rate impacts were estimated to be on average $205 \%$ of the direct, facility-related estimated rate impacts).


The estimated rate impacts shown in Table 4.11 indicate that the loss of $1 . \%$ of the Industrial load would theoretically result in an increase in Residential rates of $0.0212 \%$ via fixed cost recovery that was directly attributable to the industrial facility's $1 \%$ lost load. In addition, there would be other electric revenues that declined due to the economic multiplier effect from the $1 \%$ lost industrial load and this would translate into additional fixed costs being theoretically recovered from other customer classes yielding an additional
residential rate increase of $0.0435 \%$. The total estimated impact from the loss of $1 \%$ of the Duke Industrial load would be an average estimated residential rate increase of $0.0647 \%$. As table 4.11 indicates, the loss of $5 \%$ of the industrial load or the loss of an average size industrial customer results in an estimated total residential rate increase of $0.32 \%$ and $.0015 \%$ respectively. with fully two thirds of this rate impact due to the multiplier effect.

In a similar analysis shown in Table 4.12, the loss of $1 \%$ of the Duke OPT load would theoretically result in an increase in Residential rates of $0.18 \%$ from fixed costs that were directly attributable to the OPT facility's $1 \%$ lost load. In addition, there would be other electric revenues that declined due to the economic multiplier effect from the $1 \%$ lost OPT load and this would translate into additional fixed costs being theoretically recovered from other customer classes yielding an additional residential rate increase of $0.38 \%$. The total estimated impact from the loss of $1 \%$ of the OPT load would be an average estimated residential rate increase of $0.56 \%$. As Table 4.12 indicates, the loss of $5 \%$ of the OPT load results in an estimated residential rate increase of $2.8 \%$, while the residential rate impact from the loss of one average size OPT customer is only $0.34 \%$. Again, $2 / 3$ of these residential rate impacts are due to the multiplier effect.

| TABLE 4.12: RATE INCREASE RESULTING FROM BOTH DIRECT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| AND INDIRECT (MULTIPLIER EFFECT) FIXED COST |  |  |  |  |  |
| ALLOCATED TO REMAINING CLASSES FOR DUKE OPT LOAD |  |  |  |  |  |
| LOSS (NORTH CAROLINA) |  |  |  |  |  |
|  |  | $1 \%$ <br> Lost <br> Load | $\begin{gathered} 3 \% \\ \text { Lost Load } \end{gathered}$ | $\begin{gathered} 5 \% \\ \text { Lost Load } \end{gathered}$ | Loss of One Average Size Customer in OPT Class |
| Residential | FACILITY specific \% increase in rates (direct costs) | 0.1838\% | 0.5515\% | 0.9192\% | 0.0011\% |
|  | FACILITY \% increase in costs from multiplier effect | 0.3768\% | 1.1306\% | 1.8844\% | 0.0023\% |
|  | TOTAL rate impacts from direct plus multiplier effect | 0.5606\% | 1.6821\% | 2.8036\% | 0.0034\% |
| General Service | FACILITY specific \% increase in rates (direct costs) | 0.1789\% | 0.5366\% | 0.8943\% | 0.0010\% |
|  | NON-FACILITY \% increase in costs from multiplier effect | 0.3667\% | 1.1000\% | 1.8333\% | 0.0021\% |
|  | TOTAL rate impacts from direct plus multiplier effect | 0.5456\% | 1.6366\% | 2.7276\% | 0.0031\% |
| Lighting | FACILITY specific \% increase in rates (direct costs) | 0.0212\% | 0.6349\% | 1.0581\% | 0.0012\% |
|  | NON-FACILITY \% increase in costs from multiplier effect | 0.0435\% | 1.3015\% | 2.1691\% | 0.0025\% |
|  | TOTAL rate impacts from direct plus multiplier effect | 0.0647\% | 1.9364\% | 3.2272\% | 0.0037\% |
| Industrial (I) | FACILITY specific \% increase in rates (direct costs) | 0.1656\% | 0.4968\% | 0.8280\% | 0.0010\% |
|  | NON-FACILITY \% increase in costs from multiplier effect | 0.3395\% | 1.0184\% | 1.6974\% | 0.0021\% |
|  | TOTAL rate impacts from direct plus multiplier effect | 0.5051\% | 1.5152\% | 2.5254\% | 0.0031\% |
| $\begin{aligned} & \text { OPT (I \& } \\ & \text { GS) } \end{aligned}$ | FACILITY specific \% increase in rates (direct costs) | 0.1425\% | 0.4276\% | 0.7126\% | 0.0008\% |
|  | NON-FACILITY \% increase in costs from multiplier effect | 0.2921\% | 0.8766\% | 1.4608\% | 0.0016\% |
|  | TOTAL rate impacts from direct plus multiplier effect | 0.4346\% | 1.3042\% | 2.1734\% | 0.0024\% |

Table 4.13 shows the impact on electric rates resulting from the economic multiplier effect for the loss of large load customers in PEC's LGS class. The rate impacts are generally similar in magnitude to the rate impacts estimated in the foregoing analysis of the rate impacts from losses of Duke's large
customers. For example, a $5 \%$ loss of PEC's LGS load translates, using this analysis, into an overall estimated Residential rate increase of $1.23 \%$.

| TABLE 4.13: Rate Increase Resulting From Both Direct and Indirect (multiplier effect) Fixed Cost Allocated to Remaining Classes for PEC LGS Load Loss (North Carolina) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & 1 \% \\ & \text { Load } \\ & \text { Loss } \end{aligned}$ | 3\% Load Loss | 5\% <br> Load Loss | Loss of One <br> Average Size <br> Customer in LGS <br> Class |
| Residential | FACILITY specific \% increase in rates (direct costs) | .0804\% | .2413\% | .4022\% | .02936\% |
|  | -FACILITY \% increase in costs from multiplier effect | .1648\% | 0.4900\% | .8245\% | .0602\% |
|  | TOTAL rate impacts from direct plus multiplier effect | . $2452 \%$ | 0.7313\% | 1.2267\% | .0895\% |
| Small <br> General <br> Service | FACILITY specific \% increase in rates (direct costs) | . $0771 \%$ | .2313\% | .3854\% | .02813\% |
|  | NON-FACILITY \% increase in costs from multiplier effect | .1581\% | .4742\% | .790\% | .0577\% |
|  | TOTAL rate impacts from direct plus multiplier effect | . $2352 \%$ | .7055\% | 1.175\% | .0858\% |
| Medium <br> General Service | FACILITY specific \% increase in rates (direct costs) | .0649\% | .1948\% | . $3247 \%$ | .0237\% |
|  | NON-FACILITY \% increase in costs from multiplier effect | .1330\% | . $399 \%$ | .6656\% | .0486\% |
|  | TOTAL rate impacts from direct plus multiplier effect | .1979\% | .5938\% | .9903\% | .0723\% |
| Large <br> General <br> Service (LGS | FACILITY specific \% increase in rates (direct costs) | . $0544 \%$ | .1633\% | . $2721 \%$ | .01986\% |
|  | NON-FACILITY \% increase in costs from multiplier effect | .1115\% | .3348\% | . $5578 \%$ | . $0407 \%$ |
|  | TOTAL rate impacts from direct plus multiplier effect | .1659\% | .4980\% | .8299\% | .0606\% |

### 4.4 CONCLUSIONS

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When electric load is lost from customers severely cutting back on load, moving out of an electric utility's service territory, or by going out of business entirely, the remaining customers will theoretically have to pay the fixed costs portion of revenues no longer being recovered from the "lost" customer. These "lost" customer revenues were considered what this report termed "direct" lost revenues, or revenues that were directly due to the change in electricity sales to the lost customer. However, not only is there a change in electric usage directly related to a large customer closing (or expanding) into a region, but there are additional changes in electricity usage in other areas of that customer's geographic region, and these changes are related to the economic multiplier effects discussed in Chapter 3. Theoretically, the lost fixed costs attributed to the change in electricity usage related to this multiplier effect will also have to be recovered from the remaining customers when a large load customer leaves an electric system. Based on these premises, data from North Carolina SCP cost-service-studies, ${ }^{47}$ from the BEA, and from the EIA was used to analyze and calculate the dollar amounts of fixed costs that would be recoverable from the remaining classes of customers assuming varying percentages of load lost in Duke's "I" and "OPT" customer classes and PEC's LGS customer class.

The overall results from this analysis indicated several things. First, that the - economic multiplier effect on a region's electricity consumption (and revenues) are larger than are the changes in electricity consumption resulting directly from a large customer's usage when that customer exits or expands. The results also indicated that the loss of an average size Duke. OPT class of customer would result; theoretically, in residential rate increases of less than $1 \%$. On the other hand, the loss (or gain) of a larger or several Duke OPT customers (assume $3 \%$ to $5 \%$ of the OPT load), would theoretically result in Residential and General Service rate increases (or decrease) ranging from as high as $2 \%$ to $3 \%$ (when the economic multiplier effect is included). This latter finding also illustrates how the loss, or attrition over time, of very large, or several large customers, such as the loss of textile manufacturers over the last score of years, can begin to have significant rate and economic impacts on the remaining customers.

For PEC Energy, we see slightly smaller rate increases on residential customers resulting from the loss of their large customer class, LGS. The theoretical residential rate increases range $0.24 \%$ to $1.2 \%$ as a result of LGS losses of $1 \%$ and $5 \%$, respectively.

Overall, the results from this Chapter's analysis of rate impacts, coupled with the regional economic impacts developed in Chapter 3, indicates that the

[^19]positive economic impacts that accrue from the attraction of new, expanded, or just retained large load customers are likely far larger in economic value than the negative rate impacts should these customers leave Duke's or PEC's system. Consequently, to the extent electric rate setting decisions have the potential for retaining or attracting large customers to a region, it would seem appropriate for policy makers to consider both the rate impacts and the economic consequences resulting from such decisions.

## CHAPTER 5: RETENTION RATES

### 5.1 INTRODUCTION

This report has focused on three specific issues dealing with large electric customers: the impact that electric pricing can have on these customers relative to these customers' pricing elasticity, the regional economic impacts related to retaining or attracting a large electric customer to a region, and the impact on other customers' rates should Duke or PEC experience the loss of one or several of its larger electric customers. While several conclusions could be drawn from these earlier chapters, the single most obvious conclusion is that the ability to attract and retain large electric customers provides significant economic benefits to a region while the loss of these type customers could result in some level of rate increases for the remaining customers.

Given these conclusions and acknowledging the fact that a number of large electric load customers have either closed or left the US and the Duke and PEC service teritories (particularly textile plants), a reasonable question to consider is whether policy makers and electric utilities have routinely adjusted their electric rates to respond to the potential loss of large customers and the subsequent loss of load? Generally speaking, the answer is yes, electric utilities have responded to the potential loss of large loads with what is termed retention, economic development, or special contract rates. 4849 As will be explained in the following section, though retention or special contracts would generally be the type of tariff adopted to retain large customers, many states have combined these type tariffs with economic development tariffs or they have used the terms interchangeably. This chapter investigates these types of rates, providing samples of the terms and conditions imposed on these rates and examples of where these rates are currently being applied.

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### 5.2 DEFINITION OF RETENTION AND ECONOMIC DEVELOPMENT RATES

First, it should be made clear that retention rates (also called tariffs) should be defined differently from economic development rates, although some states have treated the two as essentially the same. Specifically, a "retention rate" would be a rate lower than a customer's normal tariff-based rate, with the retention rate being set at a price that provides an economic incentive to a large commercial or industrial customer to maintain a facility within a utility's service territory. Usually, the economic incentive is a discount from the utility's standard tariff rate. Consequently, retention rates are used to keep existing companies in business or from moving out of the utility's service area.

Some states apply the terms retention and economic development rates in the same tariff. However, a strict definition would indicate that "economic development rates" are rates designed with a discount from the standard' tariff rate and are used to induce firms to locate new or expanded businesses within a utility's service area. Therefore, economic development rates would generally be related to a new customer, while a retention rate would be related to an existing customer.

There are also "special" or "experimental contract rates." These are discounted rates generally used by policy maker's and utilities for a particular customer, such as a car manufacturing facility. Often the terms and conditions of these special contracts are not public information.

With respect to all three types of discounted rates, retention, economic development, and special contracts, theoretically there are several criteria that each rate would generally have to meet to obtain regulatory approval. These criteria include:

- The proposed discount is believed to be important in the retention or attraction of the targeted customers,
- Any associated lost revenues or cost recovery will generally be adjudicated in a rate case, assuming the special tariff is adopted outside of a general rate case, and
- The proposed discount is expected to provide overall economic benefits to the general public.

While it seems almost self evident that the various discounted rate options discussed above would have universal economic appeal, these types of rates have met opposition from several parties. For example, some residential ratepayer advocates have claimed that such discounts merely raise residential customers' rates without clear evidence that the discounted rate was necessary to retain or attract the targeted customer. This argument is offered notwithstanding the basic ratemaking paradigm that should a large
customer leave an electric utility's system, eventually the fixed costs formerly paid by that customer will eventually be paid by the remaining ratepayers. In addition, so long as the retained customer pays their marginal energy costs, plus some portion of fixed costs, every other customers' rates are lower than they would be if the customer left.

Conservation groups and renewable energy proponents have also sometimes opposed these discounted rates claiming that such rates promote the generation of more expensive and more polluting generation resources. Independent power generators ("IPPs") have opposed such rates based on the argument that such rates may prevent the sale of their electricity to potential end users and they claim that their generation resource is less costly and less polluting than the generation resources that the electric utility would use to serve the targeted load. Other groups may oppose these types of discounted rates on the grounds that such rates result in smaller customers subsidizing larger customers, regardless of the usual condition that such rates must cover their marginal costs plus a contribution towards fixed costs. Consequently, while basic economic implications would often support retention and economic development rates, the proposed adoption of such rates should not be expected to be universally supported.

### 5.3 SAMPLES OF CUSTOMER RETENTION AND ECONOMIC DEVELOPMENT RATES

A nationwide survey and a literature search was conducted to determine which states and which utilities currently have retention, economic development, and special contract tariffs. Of the respondents to date, almost every state allows some type of special contracts for the retention or attraction of large customers. The terms and conditions of these special contracts are usually established for a single customer and are not public information. Beyond these special contracts, a number of states have both Retention and Economic Development tariffs, and, as stated earlier, some states addressed these two seemingly different customers in the same tariff. Given these findings, Tables 5.1 and $\mathbf{5 . 2}$ provide a listing of some of the states and utilities (including some municipal utilities) that offer retention (Table 5.1) and economic development (Table 5.2) tariffs. These tables also provide some conditions required of customers in order for that customer to be placed on the particular tariff.

Referring to Table 5.1, Retention Tariffs, common requirements in these tariffs include:

- Available to an existing or new customer (it would seem a contradiction that a retention tariff would be considered for a new customer, but this is simply reflective of the fact that some utilities have combined a retention and an economic development tariff),
- Rate concessions vary, sometimes stated in the tariff, other times the tariff indicates rates will be negotiated,
- Some tariffs state the minimum rate will be the utility's marginal cost plus some contribution,
- A customer's minimum peak demand varies from as low as 150 kW to as high as 1500 kW ,
- Some utilities require that the company receiving the new rate participate in an energy audit or in other energy conservation measures,
- In some cases, the customer receiving the new rate must provide an affidavit affirming the need for the rate to remain viable. In other cases the company receiving the new rate must provide documentation the utility considers sufficient to affirm that the rate is justified for that particular customer, and in some states no affidavit or documentation from the customer is required, and
- Sometimes there is a contract limit, and if so, it is usually no more than 5 year contract limit.

Table 5.2 provides a listing of states and utilities that offer an economic development tariff. Referring to Table 5.2, common requirements in these Economic Development tariffs include:

- It must be a new customer or in some cases new incremental load,
- Rate concessions vary, many are stated in the tariff as discounts usually ranging from $15-25 \%$ the first year and declining after that time,
- Some tariffs state the minimum rate is marginal cost plus some contribution,
- Peak demand varies from as low as 200 kW to as high as 1000 kW .
- Often there is a minimum number of full time employees,
- Some utilities require that the company receiving the new rate participate in an energy audit or in other energy conservation measures,
- In some cases, the customer receiving the new rate must provide an affidavit affirming the need for the rate to remain viable. In other cases the company receiving the new rate must provide documentation the utility considers sufficient to affirm that the rate is justified or simply affirm employment levels for that particular customer, and in some states no affidavit or documentation from the customer is required, and
- Usually there is a 5 year contract limit.

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| State | Company | Must customer be an existing cusfomer? | Load <br> factor | Peak slze? | Is an affldavit required stating customer financlal condlition and option to leave? | Maximum term | Maximum discount | Is Some <br> Type of <br> Energy <br> Audit or <br> Energy <br> Conserva <br> fion <br> Required | Other Terms <br> \& Conditions | Torlf \# |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California | So. Cal. Edison | Yes |  | 200 kw | Yes |  |  | Yes |  | EDR-R |
| California | Sacremento muni. | No |  | 299 kw | Yes | 5 yrs | . |  |  | GS-TDP |
| California | Riverside muni. | Yes |  | 150 kw | Yes | 2 yrs | $\begin{aligned} & 25 \% \text { yr } 1 . \\ & 15 \% \text { yr } 2 \end{aligned}$ |  |  | BR |
| California | PG\&E | No |  | 200 kw | Yes | 5 yrs |  | Yes |  | 79-1122 |
| Colorado | PSC of CO | No |  |  | No |  |  | . | Special railroad contract | SCS-7 |
| Florida | Gulf Power | No |  | 500 kw | Documents sufficient to satisfy utility |  | negotiated | Yes |  | CIS |
| Florida | Progress | No |  | 500 kw | Yes |  | negotiated |  |  | CISR-1 |

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| New York | Rochester G\&E | Yes |  |  | Yes | 5 yrs | Minimum rate is Mar. cost plus contribution |  |  | $\begin{aligned} & \text { Class } 10, \\ & \text { leaf } 215 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ohio | No retention rates but do allow special contracts, no tariff |  |  |  |  |  |  |  |  |  |
| SD | No retention tariffs |  |  |  |  |  |  |  |  |  |
| Texas | El Paso muni | Yes |  | $\begin{aligned} & 1500 \\ & \mathrm{kw} \end{aligned}$ | Yes |  |  |  |  | Rate 30 |
| Texas | Austin | No | No | 1000 ke | No | 5 yrs |  | Yes |  | Econ Dev |
| Utah | No retention rates but do allow special contracts, no tariff |  |  |  |  |  |  |  |  |  |
| Wisconsin | Alliant <br> Energy | Must be new or new increm. load |  |  | Yes | 5 yrs | Rate $=105 \%$ of mar. cost | Yes | For both new or incrementa I load only | CP-ED |

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TABLE 5.2: ECONOMIC DEVELOPMENT RATES

| State | Company | Must customer be a new customer? | Load factor requiremen $\dagger$ | Peak size | Is an affidavit required stating customer qualifications, need for this special rate, or stating customer optlon to leave? | Maximu m ferm | Maximum discount? | Is Some Type of Energy <br> Audit or <br> Energy <br> Conservation <br> Required | Other Terms \& Conditions | Tariff \# |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | Alabama <br> Power | Varies, can be new or new incremental load |  | Varies, depends on tariff | Not aiways | Minimum 5 yrs | Varies, up to $15 \%$ |  |  | CRI, <br> CTD. <br> EDI |
| California | So. Cal. Edison | Yes |  | 200 kw | Yes |  |  | Yes |  | $\begin{aligned} & \text { EDR- } \\ & \text { A } \end{aligned}$ |
| California | PG\&E | no, but must at least be new incremental load | . | 200 kw | Yes | 5 yrs |  | Yes |  | $\begin{aligned} & \text { Form } \\ & 79- \\ & 1122 \end{aligned}$ |
| California | Sacreme nto muni. | No |  | 299 kW | Yes | 5 yrs |  |  |  | $\begin{aligned} & \text { GS- } \\ & \text { TDP } \end{aligned}$ |

Docket No. E-7, Sub 1276 CIGFUR III witness Collins Direct Exhibit 1

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| Florida | Gulf <br> Power | No | 500 kw | Yes |  | negotiate <br> d | Yes |  | CIS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Florida | FP\&L | Yes, or new incremental load | 350 kw | Documents sufficient to satisfy utility | 5 yrs | 20\% ls yr , <br> then declining |  | Only for new load with employment of 25 FTEs per 350 kw | EDR, <br> EFER <br> D |
| Indiana | Duke <br> Energy | Yes | 500 kw | Documents sufficient to satisfy utility | 5 yrs | 50\% load charge reduction yr 1, then declining |  | Only for new load with employment of 25 FTEs per 1000 kw | Rider <br> 59 |
| Indiana | Vectrin | No, but must at least be new incremental load |  | Yes |  |  |  | , |  |
| Kansas | Westar | No, but must at least be new incremental load | 200 kw |  | 5 yrs | $25 \% \text { ism. }$ <br> then declining |  | - | EDR |
| Maine | Allow individual negotiated special use contracts to attract new customers |  |  |  |  |  |  |  | $\begin{aligned} & E D \\ & A D \end{aligned}$ |
| Mississippi | MPCo | Yes |  | No - but must provide | 3 yrs | $20 \% 1^{5 t} \mathrm{yr}$ <br> then |  | Employment minimum of | LBR |

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|  |  |  |  |  | Company employment verification |  | declining |  | 20 ftes |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mississippi | Entergy | No, but must at least be new incremental load | 50\% | . | No - but must provide <br> Company employment verification | 5 yrs | $\begin{aligned} & \$ 0.005 / \mathrm{kW} \\ & \mathrm{~h} \end{aligned}$ |  | Employment minimum of 20 ftes | ED-2 |
| Missour | Ameren | No, but must at least be incremental load | >55\% | 500 kw | Documents sufficient to satisfy utility | 5 yrs | 15\% |  |  | 122.6 |
| New York | NYSE\&G | No |  | Max load 750 kw | Yes |  | Minimum rate is Mar. cost plus | Yes |  | Rider J |
| New York | Com Ed | Yes |  |  |  | 15 yrs $\max$ | $32-40 \% \text { off }$ <br> delivery fees | Yes |  | BIR |
| North Carolina | Duke <br> Energy | No, but must at least be new incremental load | . | $\begin{aligned} & 1000 \mathrm{~kW}, \\ & 500 \mathrm{~kW} \end{aligned}$ | Yes | 4 yrs | $20 \%$ yr 1 . <br> declining |  | Only for new load with employment of 75 FTEs per 1000 kw | $\mathrm{EC} \text {, }$ ER |
| North Carolina | Progress Energy | No, but must at least be incremental | >40\% | 1000 kw | Yes | 5 yrs (minimum |  |  | Only for new load with employment | ED-9 |

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|  |  | load |  |  |  | 1 |  | of 75 FTEs |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| South <br> Carolina | Progress <br> Energy | No, but must at least be incremental load | >40\% | 1000 kw | No - but must affirm to utility that rate was a factor in location decision | 5 yrs <br> (minimum <br> ) |  | Only for new load with employment of 75 FTEs | ED-10 |
| South <br> Carolina | Duke <br> Energy | No, but must at least be new incremental load |  | $\begin{aligned} & 1000 \mathrm{kw}, \\ & 500 \mathrm{KW} \end{aligned}$ | Yes | 4 yrs | $20 \% \text { yr } 1 \text {. }$ <br> declining | Only for new load with employment of 75 FTEs per 1000 kw | $\begin{aligned} & \mathrm{EC}, \\ & \mathrm{ER} \end{aligned}$ |
| Wisconsin | Alliant <br> Energy | No, but must at least be incremental load |  | . | Yes | 5 yrs | $\begin{aligned} & \text { Rate }= \\ & 105 \% \text { of } \\ & \text { mar. cost } \end{aligned}$ | For both new and incremental load only | $\begin{aligned} & \mathrm{CP}- \\ & \mathrm{ED} \end{aligned}$ |
| Austin, $\mathrm{TX}^{\text {P }}$ | City muni. | No, but must be new or incremental load |  | 3000 kw | No | 5 yrs |  | Only for new load with employment of 300 FTES | Econ. Dev. |

### 5.3 SUMMARY

This Chapter reviewed current electric utility tariffs designed to respond to the potential loss of large load customers. Based on the research conducted in this study there are a number of states and utilities which offer tariffs whose goal is to either help keep or attract large customers to a particular electric service teritory. Technically, these types of tariffs would be called retention tariffs, however many states have combined such tariffs with economic development tariffs. In either case, both tariffs, along with special use contracts, provide the customer a discounted rate off the utility's standard tariff rate. To qualify for these rates customers are usually required to file an affidavit with proof of economic hardship or an intention to leave the utility's serve, or both. In addition, these tariffs often have minimum load demand requirements, employment level criteria, limits on the number of years the tariff is available, and other conditions.

Notwithstanding the substantial economic benefits (identified in Chapter 3) from attracting or retaining larger customers on an electric system, there has been opposition to the establishment of customer retention and economic development tariffs. Specifically, various groups have claimed these types of tariffs increase residential rates, provide subsidies from smaller customers to larger customers, and hinder the development of renewable and/or less expensive non-utility-owned resources. Given these various considerations, it would not be precedential should PEC or Duke seek to obtain a Customer Retention Tariff. While such a tariff could face some opposition, the analysis in this report indicated that such a tariff, to the extent large electric loads were retained on the system, provides substantial positive economic benefits to a region with potentially minor increases in remaining customers' rates.

## APPENDIX A:

## RIMS II BACKGROUND

## ABOUT BUREAU OF ECONOMIC ANALYSIS RIMS II MODELING

## (REPRINTED FROM RIMS II ELECTRONIC HANDBOOK)

Effective planning for public- and private-sector projects and programs at the State and local levels requires a systematic analysis of the economic impacts of these projects and programs on affected regions. In turn, systematic analysis of economic impacts must account for the interindustry relationships within regions because these relationships largely determine how regional economies are likely to respond to project and program changes. Thus, regional inputoutput (I-O) multipliers, which account for interindustry relationships within regions, are useful tools for conducting regional economic impact analysis.

In the 1970s, the Bureau of Economic Analysis (BEA) developed a method for estimating regional I-O multipliers known as RIMS (Regional Industrial Multiplier System), which was based on the work of Garnick and Drake. 1 In the 1980s, BEA completed an enhancement of RIMS, known as RIMS II (Regional Input-Output Modeling System), and published a handbook for RIMS II users. 2 1992, BEA published a second edition of the handbook in which the multipliers were based on more recent data and improved methodology. In 1997, BEA published a third edition of the handbook (PDF $\cdot 677 \mathrm{~KB}$ ) that provides more detail on the use of the multipliers and the data sources and methods for estimating them.

RIMS II is based on an accounting framework called an I-O table. For each industry, an I-O table shows the industrial distribution of inputs purchased and outputs sold. A typical I-O table in RIMS II is derived mainly from two data sources: BEA's national I-O table (PDF • 824 KB ), which shows the input and output structure of nearly 500 U.S. industries, and BEA's regional economic accounts, which are used to adjust the national I-O table to show a region's industrial structure and trading patterns. 3

Using RIMS II for impact analysis has several advantages. RIMS II multipliers can be estimated for any region composed of one or more counties and for any industry, or group of industries, in the national I-O table. The accessibility of the main data sources for RIMS II keeps the cost of estimating regional multipliers relatively low. Empirical tests show that estimates based on relatively expensive surveys and RIMS II-based estimates are similar in magnitude. 4

BEA's RIMS multipliers can be a cost-effective way for analysts to estimate the economic impacts of changes in a regional economy. However, it is important to keep in mind that, like all economic impact models, RIMS provides approximate order-of-magnitude estimates of impacts. RIMS multipliers are best suited for estimating the impacts of small changes on a regional economy. For some applications, users may want to supplement RIMS estimates with information they gather from the region undergoing the potential change. Examples of case studies where it is appropriate to use RIMS multipliers appear in the RIMS II User Handbook. (PDF • 677 KB )

To effectively use the multipliers for impact analysis, users must provide geographically and industrially detailed information on the initial changes in output, earnings, or employment that are associated with the project or program under study. The multipliers can then be used to estimate the total impact of the project or program on regional output, earnings, and employment.

RIMS II is widely used in both the public and private sector. In the public sector, for example, the Department of Defense uses RIMS II to estimate the regional impacts of military base closings. State transportation departments use RIMS II to estimate the regional impacts of airport construction and expansion. In the private-sector, analysts and consultants use RIMS II to estimate the regional impacts of a variety of projects, such as the development of shopping malls and sports stadiums.

## RIMS II Methodology

RIMS II uses BEA's benchmark and annual I-O tables for the nation. Since a particular region may not contain all the industries found at the national level, some direct input requirements cannot be supplied by that region's industries. Input requirements that are not produced in a study region are identified using BEA's regional economic accounts.

The RIMS II method for estimating regional I-O multipliers can be viewed as a three-step process. In the first step, the producer portion of the national I-O table is made region-specific by using six-digit NAICS location quotients (LQs). The LQs estimate the extent to which input requirements are supplied by firms within the region. RIMS II uses LQs based on two types of data: BEA's personal income data (by place of residence) are used to calculate LQs in the service industries; and BEA's wage-and-salary data (by place of work) are used to calculate LQs in the nonservice industries.

In the second step, the household row and the household column from the national I-O table are made region-specific. The household row coefficients, which are derived from the value-added row of the national I-O table, are adjusted to reflect regional earnings leakages resulting from individuals working in the region but residing outside the region. The household column coefficients, which are based on the personal consumption expenditure column of the national I-O table, are adjusted to account for regional consumption leakages stemming from personal taxes and savings.

In the last step, the Leontief inversion approach is used to estimate multipliers. This inversion approach produces output, earnings, and employment multipliers, which can be used to trace the impacts of changes in final demand on directly and indirectly affected industries.

## Accuracy of RIMS II

Empirical evidence suggests that RIMS II commonly yields multipliers that are not substantially different in magnitude from those generated by regional I-O models based on relatively expensive surveys. For example, a comparison of 224 industry-specific multipliers from survey-based tables for Texas, Washington, and West Virginia indicates that the RIMS II average multipliers overestimate the average multipliers from the survey-based tables by approximately 5 percent. For the majority of individual industry-specific multipliers within these states, the difference between RIMS II and survey-based multipliers is less than 10 percent. In addition, RIMS II and survey multipliers show statistically similar distributions of affected industries. 4

## Advantages of RIMS II

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There are numerous advantages to using RIMS II. First, the accessibility of the main data sources makes it possible to estimate regional multipliers without conducting relatively expensive surveys. Second, the level of industrial detail used in RIMS II helps avoid aggregation errors, which often occur when industries are combined. Third, RIMS II multipliers can be compared across areas because they are based on a consistent set of estimating procedures nationwide. Fourth, RIMS II multipliers are updated to reflect the most recent local-area wage-and-salary and personal income data.

## Applications of RIMS II

RIMS II multipliers can be used in a wide variety of regional impact studies. For example, the U.S. Nuclear Regulatory Commission has used RIMS II multipliers in environmental impact statements required for licensing nuclear electricity- generating facilities. The U.S. Department of Housing and Urban Development has used RIMS II multipliers to estimate the impacts of various types of urban redevelopment expenditures. RIMS II multipliers have also been used to estimate the regional economic and industrial impacts of: opening or closing military bases, tourist expenditures, new energy facilities, energy conservation, offshore drilling, opening or closing manufacturing plants, shopping malls, new sports stadiums, and new airport or port facilities.

## APPENDIX B:

 RIMS II MULTIPLIER
## TABLES

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RIMS II Multipliers (2008/2008)
Table 2.5 Total Muftipliars for Output, Earnings, Employment, and Valua Added by Industry Aggrogation Charlotto-Gastonla-Rock Hill, NC-SC Metropolitan Statlatical Area (Type i)

| nNDUETTY | Mumpram |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Finel Demend |  |  |  | Dract Emmeat |  |
|  | $\begin{aligned} & \text { Ontputy } \\ & \text { (dodirs) } \end{aligned}$ |  | $\begin{gathered} \text { Enploymenty } \\ (000 \mathrm{n}) \end{gathered}$ | $\begin{gathered} \text { Vahue-sdderw } \\ \text { (dothera) } \end{gathered}$ | $\begin{array}{\|c\|c\|} \hline \text { Emingery } \\ \text { (dolidra) } \end{array}$ | $\begin{gathered} \text { Employmertach } \\ \text { Ooba) } \end{gathered}$ |
| 1. Crap and arbina produmitan | 1.4778 | 0.3105 | 10.1731 | 0.6211 | ${ }^{18131}$ | 1.8107 |
| 2 Forwery, fiehling, end radeted ectivilue | 12362 | 0.9981 | 14.1020 | 0.8063 | 1.2100 | 1.1001 |
| 1200 and gen actimetion | 1.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 00000 |
| 4. Mering, except oft end gen | 1.5442 | 0.3010 | 07921 | 0.8145 | 1.8510 | 20081 |
| 6. Support mettrision for manhing | 1.6714 | 0.4511 | 11.058 | 0.6000 | 1.775 | 1.6567 |
| 1. Uumine | 1.1162 | 0.1640 | 26050 | 0.0400 | 12887 | 1.5031 |
| 7. Conatucition | 1.5000 | 0.448 | 13.5005 | 0.7708 | 1.4886 | 1.8020 |
| 4. Wood pratuci menutacturing | 1.800 | 0.3271 | 0.7005 | 0.5901 | 1.0767 | 1.4013 |
| 0. Monmetilite mineal proder manuflecturing | 1.6ess | 0.3429 | 7.8814 | 0.6704 | 1.7800 | 1.4632 |
|  | 1,4355 | 0.2200 | 4.7808 | 0.4500 | 1.8000 | 23509 |
|  | 1.59\%3 | 0.340 | 3.1657 | 0.0891 | 1.0535 | 1.6720 |
| 12 Unechinery menotueturing | 15645 | 0.3429 | 6.8512 | 0.438 | 1.7884 | 1.9387 |
|  | 1.4409 | 0.3000 | 5.0402 | 0.7501 | 1.4075 | 1.8347 |
|  | 1.4011 | 0.2824 | 5.715 | 0.027 | 1.5735 | 1.6876 |
|  | 1.0003 | 0.8872 | 5.4453 | 0.8012 | 20132 | 22021 |
| 12. Overer trampertation equponva memutheturing | 1.878 | 0.2730 | 5.0470 | 0.0803 | 2800 | 28017 |
| 17. Pumplare and rourtod prodyel memutactring | 1.5728 | 0.2004 | 10.0080 | 0.6001 | 1.657 | 1.5013 |
| 12. Miecelleneate menuutheturing | 1.4057 | 0.3001 | 8.0029 | 0.7720 | 1.5404 | 1.5460 |
|  | 1.5729 | 0.1803 | 4 492917 | 0.4312 | 1.9808 | 1.8114 |
| \%ns Tention and texime procuct onlls | 1.7819 | 0.3178 | 78730 | 0.0371 | 20098 | 1.48038 |
|  | 1.6448 | 0.4041 | 10.6238 | 0.7535 | 1.7438 | 1.6509 |
| E2. Paper menufacturing | 1.5000 | 0.2815 | 6, 3894 | 0.0000 | 21828 | 27000 |
|  | 1.428 | 0.4185 | 10.9848 | 0.7104 | 1.0720 | 1.7000 |
| 24. Pwroluen and coed producta nmantectartig | 1.0025 | 0.1285 | 2,aso | 0.2880 | 1.2439 | 1.3223 |
|  | 1.4534 | 0.2388 | $4.13 \% 3$ | 0.5550 | 1.8036 | 22030 |
|  | 1.5048 | 0.2517 | 6.5461 | 0.5678 | 1.8306 | 1.60011 |
| 27. Whomenime truch | 1.3085 | 0.4272 | 6.634 | 0.8030 | 1.304 | 1.5043 |
| 27. Andin trele | 1.5798 | 0.4451 | 17.2000 | 0.0038 | 1.244 | 1.1906 |
| 20. Als trenepertaion | 1.2818 | 0.2351 | 5.1805 | 0.510 | 1.5018 | 1.7119 |
| 30. Rasil rimaportation | 1.508 | 0.5287 | 0.6488 | 0.7005 | 1.944 | 27180 |
| 21. Water tromportation | 1.3334 | 0.2000 | 4.4048 | 0.5870 | 1.8154 | 2.4005 |
| ze. Truck trameportetion | 1.4720 | 0.5054 | 10.6077 | 0.7098 | 1.5929 | 1.8631 |
| 72, Trumble and ground peseenown trimpermetiort | 12951 | 0.504 | 20.0480 | 0.7008 | 1.1821 | 1.1008 |
| 34. Ppeline trumpertution | 1.4095 | 0.3425 | 0.2958 | 0.7215 | 1.5713 | 23180 |
| Sil Oover travapormition end wopport metivitive* | 12578 | 0.4048 | 12.2585 | 0.0501 | 1.1689 | 4.2248 |
|  | 1.3589 | 0.5000 | 15.7508 | 0.8114 | 125174 | 1.4400 |
|  | 1.0147 | 0.4118 | 3.5175 | 0.7500 | 1.7800 | 2.1450 |
|  | 1.4216 | 0.3294 | 12.8015 | 0.8461 | 1.5040 | 1,3069 |
|  | 1.562: | 0.6517 | . 408 | 0.7460 | 1.5155 | 2004 |

##  <br> (Contruma)












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RIMS II Muftipllers (200:/2008)
Table 25 Total Muitipllers for Output, Earninge, Employment, and Value Added by Induetry Aggregation Charlotto-Gastonia-Rock HIII, NC-SC Metropolitan Statlatlcai Area (Type I)

| ImDUstity | Muntiper |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Final Demand |  |  |  | Direct Efther |  |
|  | Outperivi/ <br> (denlera) | Earnkingy (dotiara) |  | $\begin{array}{\|c\|} \hline \text { Valup-added/4 } \\ \text { (doders) } \end{array}$ | $\begin{array}{\|c\|} \hline \text { Eqmingew } \\ \text { (dollara) } \\ \hline \end{array}$ | $\begin{gathered} \text { Employmentive } \\ \text { (00ba) } \end{gathered}$ |
| 40.7 Tecomminilcemana | 1.4674 | 0.2500 | 5.6043 | 0.0164 | 1.0003 | 23582 |
| 41. Interivet mind other informeition mevilows | 1.5050 | 0.3001 | 7.7418 | 0.017 | 1.0776 | 2.7191 |
|  | 1.8560 | 0.8073 | 0.7434 | 0.0884 | 2.0914 | 2.7840 |
|  | 1.5447 | 0.0470 | 18.4437 | 0.0504 | 1.3820 | 1.3000 |
| 44. Inaurimion ceriere and releted metitition | 1.4287 | 0.3838 | 7.5074 | 0.8378 | 1.4737 | 1.5810 |
| 45. Funden trutth, And other finamatal wehkelen | 1.8401 | 0.5067 | 17.0675 | 0.9140 | 2.0455 | 2.0541 |
| 40. Reper entut | 1.4280 | 0.1558 | 4.5305 | 0.959 | 2.6500 | 1.5107 |
|  | 1.4610 | 0.3168 | 6.0507 | 0.8306 | 1.7748 | 1.7180 |
|  | 1.3680 | 0.6812 | 12.9209 | 0.8063 | 1.2353 | 1.3404 |
| 42. Menegoment of comperive and ertmprimee | 1.3080 | 0.6707 | 0.7206 | 0.8401 | 1.2888 | 1.5880 |
|  | 1.3878 | 0.5461 | 25.3708 | 0.8607 | 1.2708 | 1.1085 |
| 51. Weato mencoement and remediation marvioce | 1.4557 | 0.3500 | 7.0168 | 0.777 | 1.6004 | 1.7940 |
| E5. Eduoational mervoes | 1,3404 | 0.6638 | 20.7428 | 0.8508 | 1.1601 | 1.1370 |
| ES. Ambumeory herth cers eervices | 1.3882 | 0.5671 | 12.7801 | 0.6005 | 1.2398 | 1.3533 |
| 54. Nompitula | 1.5161 | 0.5177 | 123483 | 0.0477 | 1.3308 | 1.4788 |
| 55. Nuraing and realderitad cars teclitios | 1.2542 | 0.5578 | 22.1404 | 0.0438 | 1.2000 | 1.1501 |
| Sa, eoelal meveranion | 1.2041 | 0.5428 | 27.1706 | 0.6009 | 1.2417 | 1.1392 |
|  | 1.4654 | 0.5733 | 24.2241 | 0.9724 | 1.3423 | 1.2515 |
|  | 1.3729 | 0.4348 | 24.0008 | 0.8723 | 1.2837 | 1.1280 |
| Es. Aceommentiton | 1.6030 | 0.4148 | 15.0836 | 0.9432 | 1.6508 | 1.3423 |
| E0. Food emervoene end driniding places | 1.4613 | 0.4211 | 23.5405 | 0.7003 | 1.3616 | 1.1457 |
| 81. Othere mervosep ${ }^{\text {a }}$ | 1.4791 | 0.8590 | 16.0273 | 0.6560 | 1.2340 | 1.3136 |
| E. Hewemote | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |



[^21]
## RIMS II Multipllers (2008/2008)

Table 2.5 Total Multipllers for Output, Earnings, Employment, and Valuc Added by Industry Aggregation Charlotte-Gastonla-Rock Hill, NC-SC Metropolitan Statiatical Area (Type II)

| Industay | Multiplier |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Final Demmand |  |  |  | Dirset Efluct |  |
|  | $\begin{aligned} & \text { Outputh1 } \\ & \text { (dolitard) } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { Enmingand } \\ \text { (dodhens) } \\ \hline \end{array}$ | $\begin{gathered} \text { Employmentas } \\ \text { (0obal } \end{gathered}$ | Vahue-added/4/ (dolitart) |  | $\begin{gathered} \text { Employmmente } \\ \text { (fobes) } \end{gathered}$ |
| 1. Crop and ardmat production | 1.8638 | 0.4158 | 13.6234 | 0.8518 | 2.0255 | 1.8480 |
| 2 Forastry, flahing, and ralated sectrutios | 1.727 | 0.5280 | 18.5438 | 1.0087 | 1.6288 | 1.6295 |
| 3. Oll and gas artruction | 1.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 4. Mining, ercept ofi and get | 1.9198 | 0.4042 | 10.1178 | 1.0387 | 26117 | 3.0058 |
| B. Bupport activitiee for mining | 2.2938 | 0.6039 | 16.6008 | 1.0249 | 23749 | 2.3679 |
| 6. Unditias* | 1.3802 | 0.2196 | 4.4180 | 0.7623 | 1.6984 | 2.7115 |
| 7. Construction | 2.0868 | 0.8219 | 18.5293 | 1.1158 | 1.8250 | 1.0150 |
| I. Wood proctuot mennutucturing | 2.0148 | 0.4378 | 12.3432 | 0.8419 | 2.6448 | 2.6949 |
| Q. Monmutellic minvela product menutacturing | 1.9897 | 0.4590 | 11.4818 | 0.8310 | 23439 | 2.7725 |
| 10. Primary metel manutacturtig | 1.7102 | 0.3053 | 7.2738 | 0.8287 | 20852 | 3.8070 |
| 11. Fibbricated metal product manutacturing | 1.9716 | 0.4870 | 12.0428 | 0.8231 | 2.1790 | 2.4688 |
| 12. Hectinery memutucturing | 1.8786 | 0.4458 | 10.5505 | 0.8797 | 2.3592 | 2.9856 |
| 13. Computar and alectronic product manutacturing | 1.8893 | 0.4031 | 9.6007 | 1.0041 | 1.8644 | 3.1280 |
| 14. Elcotical equipment and applisnce manutacturing | 1.7626 | 0.3781 | 0.0302 | 0.8594 | 2.1083 | 2.5408 |
| 15. Motor valkile, body, truiler, and perte menufacturing | 1.0657 | 0.3545 | 0.0275 | 0.7145 | 20050 | 3.4007 |
| 13. Other trenaportation equipment menuticturting | 2.0181 | 0.3667 | 0.8913 | 0.8696 | 3.3471 | 4.3074 |
| 17. Fumiture and romated product manutacturing | 2.0249 | 0.4864 | 14.1271 | 0.9599 | 2.2103 | 2.1882 |
| 17. Mlecomlaneous manuftecturing | 1.0457 | 0.4820 | 12.8039 | 1.0303 | 2.0620 | 2.2881 |
| 12. Food, beviruje, and tobeceo produret manutacturing | - 1.5972 | 0.2413 | 0.5251 | 0.5851 | 2.5848 | 2.8139 |
| 20. Taxtio end taxtio product mills | 2.1770 | 0.4231 | 11.5028 | 0.8729 | 28100 | 2.7345 |
| 21. Apporel, menthar, and allied product manutacturing | 2.1873 | 0.5409 | 15.3141 | 1.0558 | 2.9340 | 2.3152 |
| 22. Paper manufucturing | 1.0123 | 0.3501 | 8.2057 | 0.8540 | 28219 | 4.1592 |
| 29. Primind and reluted aupport activitioe | 2.1633 | 0.5603 | 15.0350 | 1.0211 | 2.2382 | 2.4714 |
| 24. Potrowum and coed producte manutacturing | 1,2524 | 0.1721 | 3.7663 | 0.3514 | 1.6051 | 2.1350 |
| 25. Chemical menuthcturing | 1.7318 | 0.3210 | 6.7976 | 0.7311 | 2.4546 | 3.7208 |
| 20. Plestice and rubber produtas minutacturing | 1.8204 | 0.3300 | 8.3652 | 0.7581 | 24544 | 2.8419 |
| 97. Whodotale truct | 1.0271 | 0.5719 | 13.5822 | 1.2002 | 1.8683 | 2.4710 |
| 22. Rateril trade | 1.18338 | 0.5050 | 22.1772 | 1.2297 | 1.7103 | 1.5440 |
| 23. Als tramaportation | 1.5418 | 0.3014 | 7.0050 | 0.0854 | 20507 | 2.5388 |
| 30. Fall transportation | 1.9670 | 0.4413 | 10.3123 | 0.9513 | 2.5033 | 4.2173 |
| 31. Water treneportaition | 1.6570 | 0.3492 | 7.3636 | 0.7610 | 2.1624 | 4.0713 |
| 32. Truck tranaportation | 1.9639 | 0.6292 | 15.0312 | 1.0028 | 21188 | 2.3503 |
| 32. Transit and ground peasenger tremportition* | 2.0371 | 0.7083 | 27.4744 | 1.1464 | 1.5558 | 1.4623 |
| SA. Plpaline trenaportation | 1.8290 | 0.4585 | 10.1019 | 0.9758 | 2.1034 | 3.7214 |
| 25. Other trasaportation and eupport metwilept | 1.8544 | 0.0484 | 17.7378 | 1.1897 | 1.5015 | 1.7008 |
| Sa. Werehousing and etorice | 1.9884 | 0.0501 | 21,4054 | 1.2889 | 1.0584 | 1.6050 |
| 37. Publleting induntriea, axempe internet | 2.1271 | 0.5513 | 14.0041 | 1.0954 | 2.4002 | 3.1734 |
| 23. Motion pleturs and mound recoriting induetrien | 1.8314 | 0.4410 | 19.0827 | 1.0897 | 2.1538 | 1.0046 |
| 3i, Broedeasting, except Intieriet | 2.2492 | 0.7385 | 10.0238 | 1.1559 | 20887 | 2.3763 |

## 33. Broedcosing, except intiment

Fegtion Defin

1. Exch ontry th column 1 representas the totel doller chian
inal dernand by the hadustry correspondting to the entrynge in output that occure in all industries for ench additional dolar of output delivered to

output delvered to final demend by the industry corresponding to the entry.
 dellivered to frial demend ashould be in 2000 doliara.







RiMS il Muftipllers (2008/2008)
Table 2.6 Total Multipliers for Output, Egringe, Employment, and Value Added by Industry Aggregation Charlotto-Gastonla-Rock HIII, NC-SC Metropoliten Statiatical Area (Type II)

| DNDUETHY | matpla |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | From Dompra |  |  |  | Ormeat Eneat |  |
|  | $\begin{aligned} & \text { Ontury } \\ & \text { (dolling } \\ & \hline \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { Enoingery } \\ \text { (dolimin) } \\ \hline \end{array}$ |  | $\begin{gathered} \text { Valup-tideder } \\ \text { (doniura) } \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { Piminger } \\ \text { (dinderon) } \end{array}$ | $\begin{gathered} \text { Employmenter } \\ \text { Dotal } \end{gathered}$ |
| 40. Telecommantestione | 1.789 | 0.3887 | 8.4517 | 1.0027 | 20510 | 3.4700 |
|  | 2.0330 | 0.4521 | 11.742 | 1.0051 | 25136 | 4.1248 |
| 42. Fuderal Reverve berke, creill intermedietion and Filated anrices | 2.1520 | 0.6015 | 13.1563 | 1.1834 | 27198 | 4.1506 |
|  | 2.3500 | 0.0473 | 25.044 | 1.3315 | 1.7as1 | 1.8190 |
|  | 1.873: | 0.4807 | 11.8078 | 1.2035 | 1.9728 | 24200 |
| 45.5 | 2.4784 | 0.8782 | 22.8083 | 1.2910 | 3.5414 | 2.7316 |
| 48. | 1.6219 | 0.2000 | 10.2883 | 1.0551 | 3825a | 1.8280 |
|  cuenta | 1.8748 | 0.4236 | 121770 | 1.1058 | 23750 | 24150 |
|  | 20017 | 0.7701 | 18.3458 | 1.3080 | 1.8537 | 20100 |
| 4s. Menegement of compenies end entmpriese | 2.1087 | 0.7830 | 15.0005 | 1.3038 | 1.0040 | 27040 |
|  | 20807 | 0.7237 | 31.4816 | 1.2708 | 1.7002 | 1.4498 |
|  | 1.8409 | 0.477 | 11.4430 | 1.043 | 21009 | 2092\% |
| [2. Ederational mervas | 2.0418 | 0.7545 | 27.0002 | 1.2882 | 1.5010 | 1.4018 |
|  | 2.1185 | 0.750 | 19.2927 | 1.3025 | 1.4583 | 2045 |
| M. Hospetale | 2.1001 | 0.0090 | 10.1013 | 1.2580 | 1.7814 | 21670 |
|  | 2.0478 | 0.7404 | 23.2370 | 1.2970 | 1.0004 | 1.4720 |
|  | 2.0001 | 0.7208 | 20.2092 | 1.2720 | 1.0621 | 1.3019 |
|  paro | 2.1817 | 0.7675 | 30.6057 | 12801 | 1.7020 | 1,5007 |
| 54. | 1.9128 | 0.5614 | 28.8336 | 1.194 | 1.7184 | 1.3558 |
| Fe Accommedition | 2.0197 | 0.5555 | 20.4959 | 1.1513 | 20004 | 1.7519 |
| co. Food esmbese end ditheng plocen | 1.975 | 0.5654 | 23,2007 | 1.1050 | 1.8278 | 1.1734 |
| 91. Other emervoso | 2.1500 | 0.7238 | 22.1258 | 1.2309 | 1.707\% | 1.7819 |
| 02. Hovedrotis | 12441 | 0.1380 | 11.1132 | 0.7425 | 0.0000 | 0.0000 |

[^22]
## APPENDIX C:

## ECONOMIC MODELING RESULTS

JAW EXHIBIT-2
Rebuttal Testimony Exhibit of Julius A Wrigh
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JAW EXHIBIT-2
Rebuttal Testimony Exhibit of Julius A. Wright
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|  |  |  |  | Direct Effect | Final Demand |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FACIUTY | Employee change | RIMS II INDUSTRY CODE | RIMS ॥ INDUSTRY TYPE | Employment multiplier | Employment multiplier | Final \$ Demand Per. employee Annually | DIRECT EFFECT FINAL DEMAND OUTPUT | Final Demand Employment Multiplier | total <br> increase <br> OR <br> decrease <br> IN FINAL <br> JOBS | Final Regional Output Multilier | Final Demand Earnings Multiplier | INCREASE OR DECREASE IN REGIONAL OUTPUT |
| AT\&T | 100 | 41 | Internet \& other information services | na | na | na | na | na | 141 | na | na | \$15,734,899 |
| Caterpillar | 199 | 12 | Machinery manuf. | na | na | na | na | na | 208 | na | na | \$23,318,607 |
| Zimmer Holdings | 124 | 25 | mfg surgical products | na | na | na | na | na | 89 | na | na | \$9,987,550 |
| Berry Plastlc | 314 | 26 | Plastic product mfg. | na | na | na | na | na | 301 | na | na | \$33,672,579 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |


\left.| TOTAL ESTIMATED ANNUAL INDUCED ECONOMIC IMPACT USING RIMS TYPE I \& II |  |  |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- |
| MULTIPLIERS |  |  |$\right]$| ( |
| :--- |

TOTAL ESTIMATED ANNUAL ECONOMIC IMPACT USING RIMS TYPE II MULTIPLIERS

Docket No. E-7, Sub 1276 CIGFUR III witness Collins Direct Exhibit 1

Rebuttal Testimony Exhibit JAW EXHIBIT-2
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|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| FACILITY | CHANGE IN NUMBER OF EMPLOYEES | FINAL \$ DEMAND PER EMPLOYEE | DIRECT EFFECT <br> FINAL DEMAND OUTPUT | INCREASE OR DECREASE IN FINAL JOBS | increase OR DECREASE IN REGIONAL OUTPUT | INCREASE OR DECREASE IN EARNINGS |
|  |  |  |  |  |  |  |
| AT\&T | 100 | \$351,220 | \$35,122,018 | 412 | \$71,434,672 | \$34,438,655 |
| Caterpillar | 199 | \$282,972 | \$56,311,502 | 594 | \$111,417,938 | \$49,647,833 |
| Zimmer Holdings | 124 | \$179,794 | \$22,294,401 | 281 | \$43,333,627 | \$20,886,808 |
| Berry <br> Plastic | 314 | \$339,729 | \$106,674,867 | 892 | \$194,190,928 | \$65,947,239 |

Docket No. E-7, Sub 1276 CIGFUR III witness Collins Direct Exhibit 1

JAW EXHIBIT-2
Rebuttal Testimony Exhibit of Julius A. Wrigh

| TOTAL ESTIMATED ANNUAL ECONOMIC IMPACT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FACILITY | CHANGE IN NUMBER OF EMPLOYEES | FINAL \$ DEMAND PER EMPLOYEE | NUMBER OF JOBS GREATED (LOST) IN REGION PER <br> NEW (LOST) JOB | $\$$ INCREASE <br> (DECREASE) <br> IN TOTAL <br> OUTPUTIN <br> REGION <br> PER NEW <br> (LOST) <br> EMPLOYEE | \$ INCREASE (DECREASE) IN EARNINGS IN REGION PER NEW (LOST) EMPLOYEE |
| AT\&T | 100 | \$351,220 | 3 | \$714,347 | \$344,387 |
| Caterpillar | 199 | \$282,972 | 2 | \$559,889 | \$249,487 |
| Zimmer Holdings | 124 | \$179,794 | 1 | \$349,465 | \$168,442 |
| Berry Plastic | 314 | \$339,729 | 2 | \$618,442 | \$210,023 |

# APPENDIX D: 

## APPENDIX E

| APPENDIX E TABLE A: REGRESSION ANALYSIS FOR DEVELOPING RATE IMPACTS FROM LOSS OF LARGE CUSTOMERS: NORTH CAROLINA DATA |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - | Wages 4 Salary $\$ 0003$ | Other Suplements to Income $\$ 000 \mathrm{~s}$ | Total Wages \$000s (note 1) | Total Electric Sales MWh (note 2) | In MWh sales |  |  | Estimate of Total income from Linear Regression Model \$ 000s | Error in Estimate VS Actual Total Income \$ 000s | $\begin{array}{\|l} \text { W Error } \\ \text { in } \\ \text { Estumate } \end{array}$ | \% Error Absolute Value |
| 1990 | 67,737,154 | 14,098,903 | 81.836,057 | 89,924.467 | 18.314 |  | . | \$69,266,119 | \$12,569,939 | 15.36\% | 15.36\% |
| 1991 | 69,752,189 | 14,961,410 | 84,713.599 | 92.316 .483 | 18.341 |  |  | \$77,102,448 | \$7,611,151 | 8.98\% | 8.98\% |
| 1992 | 75,742,205 | 16,949,955 | 92,692,160 | 94,195,331 | 18.361 |  |  | \$83,257,673 | 59,434,487 | 10.18\% | 10.18\% |
| 4993 | 79,796,075 | 18,203,256 | 97,999,331 | 99,777.554 | 18.418 | linear equation ${ }^{\text {so }}$ |  | \$101,545,386 | -\$3,546,05s | -3.62\% | 3.62\% |
| 1894 | 85,208,962 | 19,273,093 | 104,482,055 | 99,789,182 | 18.419 | Slope | 3.2760629 | \$101,583,480 | \$2898,575 | 2.77x | 27\% |
| 1895 | 91,097,636 | 19,722,765 | 110,820,401 | 104,672,756 | 18.466 | intercept | 225332156.5 | \$117,582,376 | \$ $\$ 6,761,975$. | -6.10\% | 6.10\% |
| 1996 | 96,687,395 | 20,348,105 | 117,035,500 | 108,296,394 | 18.500 | rsquare | 0.948534829 | \$129,453,642 | - $512.418,142$ | -10.61\% | 20.61\% |
| 1997 | 104,481,312 | 21,214,673 | 125,695,985 | 109.050,025 | 18.507 | In equation |  | \$131,922,585 | -\$6,226,600 | -4.95\% | 4.95\% |
| 1998 | 112,589,936 | 22,717,808 | 135,307.744 | 113.596,306 | 18548 | Stope | 361437853.6 | S146,816,487 | -511,508,743 | 8.51\% | 8.51\% |
| 1899 | 120,566,354 | 24,341,619 | 144,907,973 | 115,015.125 | 18.561 | Intercept | -6554359611 | \$151,464,627 | -56,556,654 | -4.52\% | 4.52\% |
| 2000 | 129,050,556 | 26,110,429 | 155,160,985 | 119,855,456 | 18.602 | square | 0.930870745 | \$167,321,856 | -\$12,160,871 | -7.84\% | 7.84\% |
| 2001 | 131,971,981 | 27,523,701 | 159.495,682 | 119,026,943 | 18.595 |  |  | \$164,607,596 | -\$5,111,914 | -3.21\% | 3.21\% |
| 2002 | 133,684,258 | 29,663,777 | 163,348.035 | 122,686,468 | 18.625 |  |  | \$176,596,430 | -513,248,395 | -8.11\% | 811\% |

so Linear equation is of the form:
Total Income $(\$ 1000)=$ Sales $(\mathrm{MWh}) * 3.2760629-225.332,157$


| APPENDIX E TABLE B: ESTIMATION FORMULAS FOR DEVELOPING RATE IMPACTS FROM LOSS OF LARGE CUSTOMERS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| North Carolina |  |  |  |  |  |
| YEAR | Wages 8 Salary $\$ 000 \mathbf{s}^{*}$ | Other <br> Supplements <br> to Income <br> $\$ 000 s^{*}$ | Total Wages \$000s* | Total Electric Sales MWh ** | MWh Sales/\$ per Income |
| 1990 | 67,737,154 | 14,098,903 | 81.836.057 | 89,924,487 | 0.00110 |
| 1991 | 69,752,189 | 14,961,410 | 84,713.589 | 92,316,483 | 0.00109 |
| 1982 | 75,742,205 | 16,949,955 | 92.692.160 | 94,195,331 | 0.00102 |
| 1993 | 79,796,075 | 18,203,256 | 97,999,331 | 99,777,554 | 0.00102 |
| 1994 | 85,208,962 | 19,273,093 | 104,482,055 | 99,789, 182 | 0.00096 |
| 1985 | 91,097,636 | 19,722,765 | 110,820,401 | 104,672,756 | 0.00094 |
| 1898 | 96,687,395 | 20,348,105 | 117.035.800 | 108,298,394 | 0.00093 |
| 1997 | 104,481,312 | 21,214,673 | 125,695,985 | 109,050,025 | 0.00087 |
| 1998 | 112,589,936 | 22,717,808 | 135,307.744 | 113,596,308 | 0.00084 |
| 1999 | 120,566,354 | 24,341,619 | 144,907.973 | 115,015,125 | 0.00079 |
| 2000 | 129,050,556 | 26,110,429 | 155.160.985 | 119,855,456 | 0.00077 |
| 2001 | 131,971,981 | 27,523,701 | 159,495,682 | 118,026,943 | 0.00075 |
| 2002 | 133,684,258 | 29,663,777 | 163.348.035 | 122,686,468 | 0.00075 |
| 2003 | 136,859,282 | 32,743,570 | 169,602,852 | 121,335,121 | 0.00072 |
| 2004 | 144,888,293 | 34,334,640 | 179,222,933 | 125,656,807 | 0.00070 |
| 2005 | 152,586,870 | 36,864,955 | 189,451,825 | 128,335,377 | 0.00068 |
| 2006 | 163,569,947 | 38,570,522 | 202,140,469 | 126,698,979 | 0.00063 |
| 2007 | 174,483,397 | 40,661,310 | 215.144.707 | 131,880,754 | 0.00061 |
| 2008 ${ }^{\text {' }}$ | 178,300,526 | 43,289,780 | 221,590.306 | 130,054,113 | 0.00059 |


| $2009^{\prime}$ $170,269,336$ $43,641,579$ $213,910,915$ $127,657,979$ 0.00060 <br> $2010^{\prime}$ $174,550,158$ $44,658,081$ $219,208,239$ $136,414,947$ 0.00062 <br> $2014^{\text {P }}$ $181,584,190$ $45,816,664$ $227,400,854$ NA NA |
| :--- |


| APPENDIX E TABLE C: ESTIMATION OF DUKE RESIDENTIAL CUSTOMER LOST REVENUE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TARGT company | gaploye OUNCEAT TABEGET COMPAN | -ad <br> Total <br> 102 <br> Losse <br> L | mCriasta <br> number <br> of <br> EMFIOTE <br> 8 Reatrib <br> TO <br> MIHTIPL <br> REFECT |  |  |  |  | TOTALS IM Dinit Lors bisctiac arcis and vaniague USNG DUE: AvEREE mitak mict 21/3/2011) | swdure LOST <br> cevorue <br> crown and achate tMact COMPANY | sonduri LOST enectave ayyburss (Frad ANO vachatis sinatio maltaras | smoure LOST RXES altive - Vene | $\$$ m ourt LOST FIXPD aEcrict R.VENuts minated TO TANGET company | S WhDUXE LOST FDido rictinc envenurs CHATED To Linatid to mantita | -TIEMATP <br>  exvenal oipact OW REMANIDG castomess FRCN MLITTMIE errat |
| ATET | 100 | 412 | 312 | 533,439 | \$26080 | 21,008 | 25,909 |  |  | 51,294,752 | \$1,079,137 | 5261.926 | 5817,210 | 312\% |
| ${ }^{\text {caterplilar }}$ | 199 | 59 | 395 | S49,648 | 933,025 | 30,285 | 20,139 |  |  | 51,512,454 | 51,555,706 | \$522,188 | 51,034,519 | 298x |
| zimmer Holdinqs | 124 | 281 | 157 | 520.887 | \$11.670 | 22,741 | 7.119 |  |  | 5534.613 | \$654,488 | 5288813 | \$365,675 | 127\% |
| Berry Ptastic | 314 | 892 | 578 | 565,987 | \$42,732 | 40,228 | 26,067 |  |  | \$1,957,617 | \$2,065,431 | 5727A21 | 51,339,010 | 284\% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| - Usinge erimation from Appendix E Tabie $\theta$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| - Usins Duke merage retal pnice (source: EA 11/3/2011) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| -F. Besed on Duke North Caraltha 2010 Cost of Semixe Study |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# DUKE ENERGY CAROLINAS, LLC 

Docket No. E-7, Sub 1276

MYRP Year 1<br>Rate of Return, Index and Subsidy under Current Rates and<br>DEC Proposed 10\% Subsidy Reduction Twelve Months Ended December 31, 2021

| Line | Rate Class | Present Rates |  |  |  | DEC Proposed 10\% Subsidy Reduction |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rate of Return | $\frac{\text { Index }}{(2)}$ | $\begin{gathered} \text { Subsidy } \\ (\$ 000) \\ \hline \end{gathered}$ |  | Rate of Return <br> (4) | $\frac{\text { Index }}{(5)}$ | $\begin{gathered} \text { Subsidy } \\ (\$ 000) \\ \hline \end{gathered}$ |  |
|  |  | (1) |  |  | (3) |  |  |  | (6) |
| 1 | RES | 5.3\% | 96 | \$ | $(33,170)$ | 7.3\% | 97 | \$ | $(29,853)$ |
| 2 | GS | 6.5\% | 117 |  | 40,350 | 8.4\% | 112 |  | 36,315 |
| 3 | LT | -0.4\% | (8) |  | $(86,334)$ | 2.1\% | 28 |  | $(77,701)$ |
| 4 | 1 | 4.8\% | 86 |  | $(6,243)$ | 6.8\% | 91 |  | $(5,619)$ |
| 5 | OPT | 7.0\% | 126 |  | 85,397 | 8.9\% | 119 |  | 76,857 |
| 6 | NC-Retail | 5.6\% | 100 | \$ | - | 7.5\% | 100 | \$ | - |

## DUKE ENERGY CAROLINAS, LLC

Docket No. E-7, Sub 1276

## MYRP Year 1 <br> DEC Proposed Increase Compared to <br> Cost of Service Based Increase

Twelve Months Ended December 31, 2021

| Line | Rate Class | Current Revenue (\$000) | Increase to Cost of Service |  |  | DEC Proposed Increase 10\% Subsidy Reduction |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \text { Amount } \\ (\$ 000) \end{gathered}$ | \% <br> Increase |  | $\begin{aligned} & \text { Amount } \\ & (\$ 000) \\ & \hline \end{aligned}$ | $\%$ <br> Increase |
|  |  | (1) |  | (2) | (3) |  | (4) | (5) |
| 1 | RES | \$ 2,486,186 | \$ | 302,528 | 12.2\% | \$ | 272,675 | 11.0\% |
| 2 | GS | 854,548 |  | 43,128 | 5.0\% |  | 79,443 | 9.3\% |
| 3 | LT | 134,411 |  | 114,321 | 85.1\% |  | 36,620 | 27.2\% |
| 4 | 1 | 153,644 |  | 22,164 | 14.4\% |  | 16,545 | 10.8\% |
| 5 | OPT | 1,364,785 |  | 29,199 | 2.1\% |  | 106,056 | 7.8\% |
| 6 | NC-Retail | \$ 4,993,574 | \$ | 511,340 | 10.2\% | \$ | 511,340 | 10.2\% |

## DUKE ENERGY CAROLINAS, LLC

Docket No. E-7, Sub 1276

MYRP Year 1
Rate of Return, Index and Subsidy
Based on Alternate Increase to
Achieve a 25\% Subsidy Reduction
Twelve Months Ended December 31, 2021

Alternate

| Line | Rate Class | Present Rates |  |  | 25\% Subsidy Reduction |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rate of Return | Index | $\begin{gathered} \text { Subsidy } \\ (\$ 000) \\ \hline \end{gathered}$ | Rate of Return | Index |  | Subsidy <br> (\$000) |
|  |  | (1) | (2) | (3) | (4) | (5) |  | (6) |
| 1 | RES | 5.3\% | 96 | \$ $(33,170)$ | 7.3\% | 98 | \$ | $(24,878)$ |
| 2 | GS | 6.5\% | 117 | 40,350 | 8.2\% | 109 |  | 30,263 |
| 3 | LT | -0.4\% | (8) | $(86,334)$ | 3.0\% | 40 |  | $(64,751)$ |
| 4 | 1 | 4.8\% | 86 | $(6,243)$ | 6.9\% | 92 |  | $(4,682)$ |
| 5 | OPT | 7.0\% | 126 | 85,397 | 8.6\% | 115 |  | 64,048 |
| 6 | NC-Retail | 5.6\% | 100 | \$ | 7.5\% | 100 | \$ | - |

# DUKE ENERGY CAROLINAS, LLC <br> Docket No. E-7, Sub 1276 

## MYRP Year 1

Distribution of Increase to Achieve a 25\%, 50\% and 100\% Subsidy Reduction Twelve Months Ended December 31, 2021

| Line | Rate Class | Current Revenue (\$000) |  | 100 <br> Subsidy R to Cost of | eduction Service |  | Subsidy | duction | $\begin{gathered} 50 \% \\ \text { Subsidy Reduction } \\ \hline \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & \text { Amount } \\ & (\$ 000) \\ & \hline \end{aligned}$ | \% <br> Increase |  | $\begin{gathered} \text { Amount } \\ (\$ 000) \\ \hline \end{gathered}$ | $\begin{gathered} \text { \% } \\ \text { Increase } \end{gathered}$ |  | Amount (\$000) | $\begin{gathered} \text { \% } \\ \text { Increase } \end{gathered}$ |
|  |  | (1) |  | (2) | (3) |  | (4) | (5) |  | (6) | (7) |
| 1 | RES | \$ 2,486,186 | \$ | 302,528 | 12.2\% | \$ | 277,651 | 11.2\% | \$ | 285,943 | 11.5\% |
| 2 | GS | 854,548 |  | 43,128 | 5.0\% |  | 73,391 | 8.6\% |  | 63,303 | 7.4\% |
| 3 | LT | 134,411 |  | 114,321 | 85.1\% |  | 49,571 | 36.9\% |  | 71,154 | 52.9\% |
| 4 | 1 | 153,644 |  | 22,164 | 14.4\% |  | 17,482 | 11.4\% |  | 19,043 | 12.4\% |
| 5 | OPT | 1,364,785 |  | 29,199 | 2.1\% |  | 93,247 | 6.8\% |  | 71,898 | 5.3\% |
| 6 | NC-Retail | \$ 4,993,574 | \$ | 511,340 | 10.2\% | \$ | 511,340 | 10.2\% | \$ | 511,340 | 10.2\% |

# DUKE ENERGY CAROLINAS, LLC 

Docket No. E-7, Sub 1276

MYRP Year 2<br>Rate of Return, Index and Subsidy under Current Rates and<br>DEC Proposed 10\% Subsidy Reduction<br>Twelve Months Ended December 31, 2021

| Line | Rate Class | Present Rates |  |  |  | DEC Proposed 10\% Subsidy Reduction |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rate of Return (1) | $\frac{\text { Index }}{(2)}$ | Subsidy$(\$ 000)$ |  | Rate of Return <br> (4) | $\frac{\text { Index }}{(5)}$ | $\begin{gathered} \text { Subsidy } \\ (\$ 000) \\ \hline \end{gathered}$ |  |
|  |  |  |  |  | (3) |  |  |  | (6) |
| 1 | RES | 4.3\% | 92 | \$ | $(58,529)$ | 6.7\% | 94 | \$ | $(52,676)$ |
| 2 | GS | 5.0\% | 106 |  | 12,644 | 7.3\% | 103 |  | 11,380 |
| 3 | LT | -1.3\% | (29) |  | $(89,363)$ | 1.6\% | 23 |  | $(80,427)$ |
| 4 | 1 | 3.8\% | 80 |  | $(8,351)$ | 6.2\% | 87 |  | $(7,516)$ |
| 5 | OPT | 6.9\% | 147 |  | 143,599 | 9.1\% | 128 |  | 129,239 |
| 6 | NC-Retail | 4.7\% | 100 | \$ | - | 7.1\% | 100 | \$ | - |

## DUKE ENERGY CAROLINAS, LLC

Docket No. E-7, Sub 1276

## MYRP Year 2 <br> DEC Proposed Increase Compared to <br> Cost of Service Based Increase

Twelve Months Ended December 31, 2021

| Line | Rate Class | Current Revenue (\$000) | Increase to Cost of Service |  |  | DEC Proposed Increase 10\% Subsidy Reduction |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Amount (\$000) | \% Increase |  | $\begin{aligned} & \text { Amount } \\ & (\$ 000) \end{aligned}$ | \% <br> Increase |
|  |  | (1) |  | (2) | (3) |  | (4) | (5) |
| 1 | RES | \$ 2,486,186 | \$ | 423,688 | 17.0\% | \$ | 371,012 | 14.9\% |
| 2 | GS | 854,548 |  | 99,091 | 11.6\% |  | 110,471 | 12.9\% |
| 3 | LT | 134,411 |  | 123,807 | 92.1\% |  | 43,380 | 32.3\% |
| 4 | 1 | 153,644 |  | 29,365 | 19.1\% |  | 21,849 | 14.2\% |
| 5 | OPT | 1,364,785 |  | 6,933 | 0.5\% |  | 136,172 | 10.0\% |
| 6 | NC-Retail | \$ 4,993,574 | \$ | 682,884 | 13.7\% | \$ | 682,884 | 13.7\% |

## DUKE ENERGY CAROLINAS, LLC

Docket No. E-7, Sub 1276

## MYRP Year 2

Rate of Return, Index and Subsidy
Based on Alternate Increase to
Achieve a 25\% Subsidy Reduction
Twelve Months Ended December 31, 2021

Alternate

| Line | Rate Class | Present Rates |  |  |  | 25\% Subsidy Reduction |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rate of Return | Index |  | Subsidy (\$000) | Rate of Return | Index |  | $\begin{aligned} & \hline \text { Subsidy } \\ & (\$ 000) \\ & \hline \end{aligned}$ |
|  |  | (1) | (2) |  | (3) | (4) | (5) |  | (6) |
| 1 | RES | 4.3\% | 92 | \$ | $(58,529)$ | 6.7\% | 96 | \$ | $(43,897)$ |
| 2 | GS | 5.0\% | 106 |  | 12,644 | 7.2\% | 103 |  | 9,483 |
| 3 | LT | -1.3\% | (29) |  | $(89,363)$ | 2.5\% | 35 |  | $(67,022)$ |
| 4 | 1 | 3.8\% | 80 |  | $(8,351)$ | 6.3\% | 90 |  | $(6,263)$ |
| 5 | OPT | 6.9\% | 147 |  | 143,599 | 8.7\% | 124 |  | 107,699 |
| 6 | NC-Retail | 4.7\% | 100 | \$ | - | 7.0\% | 100 | \$ | - |

# DUKE ENERGY CAROLINAS, LLC 

Docket No. E-7, Sub 1276

## MYRP Year 2

Distribution of Increase to Achieve a 25\%, 50\% and 100\% Subsidy Reduction Twelve Months Ended December 31, 2021

| Line | Rate Class | Current <br> Revenue <br> $(\$ 000)$ <br> $(1)$ | to cost of | Reduction <br> Service | $\begin{gathered} 25 \% \\ \text { Subsidy Reduction } \\ \hline \end{gathered}$ |  | $50 \%$Subsidy Reduction |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} \text { Amount } \\ (\$ 000) \end{gathered}$ | \% <br> Increase | Amount (\$000) | \% <br> Increase | $\begin{gathered} \text { Amount } \\ (\$ 000) \end{gathered}$ | $\begin{gathered} \hline \% \\ \text { Increase } \end{gathered}$ |
|  |  |  | (2) | (3) | (4) | (5) | (6) | (7) |
| 1 | RES | \$ 2,486,186 | \$ 423,688 | 17.0\% | \$ 379,791 | 15.3\% | \$ 394,424 | 15.9\% |
| 2 | GS | 854,548 | 99,091 | 11.6\% | 108,574 | 12.7\% | 105,413 | 12.3\% |
| 3 | LT | 134,411 | 123,807 | 92.1\% | 56,785 | 42.2\% | 79,126 | 58.9\% |
| 4 | 1 | 153,644 | 29,365 | 19.1\% | 23,102 | 15.0\% | 25,190 | 16.4\% |
| 5 | OPT | 1,364,785 | 6,933 | 0.5\% | 114,632 | 8.4\% | 78,733 | 5.8\% |
| 6 | NC-Retail | \$ 4,993,574 | \$ 682,884 | 13.7\% | \$ 682,884 | 13.7\% | \$ 682,884 | 13.7\% |

# DUKE ENERGY CAROLINAS, LLC 

Docket No. E-7, Sub 1276

MYRP Year 3<br>Rate of Return, Index and Subsidy under Current Rates and<br>DEC Proposed 10\% Subsidy Reduction Twelve Months Ended December 31, 2021

| Line | Rate Class | Present Rates |  |  |  | DEC Proposed 10\% Subsidy Reduction |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rate of Return | $\frac{\text { Index }}{(2)}$ | $\begin{gathered} \text { Subsidy } \\ (\$ 000) \\ \hline \end{gathered}$ |  | Rate of Return <br> (4) | $\frac{\text { Index }}{(5)}$ | $\begin{gathered} \text { Subsidy } \\ (\$ 000) \\ \hline \end{gathered}$ |  |
|  |  | (1) |  |  | (3) |  |  |  | (6) |
| 1 | RES | 3.3\% | 87 | \$ | $(87,518)$ | 5.8\% | 94 | \$ | $(78,766)$ |
| 2 | GS | 3.2\% | 87 |  | $(27,893)$ | 5.8\% | 94 |  | $(25,104)$ |
| 3 | LT | -2.6\% | (68) |  | $(96,761)$ | 0.5\% | 8 |  | $(87,085)$ |
| 4 | 1 | 2.6\% | 69 |  | $(11,934)$ | 5.2\% | 84 |  | $(10,741)$ |
| 5 | OPT | 6.8\% | 181 |  | 224,106 | 9.0\% | 145 |  | 201,695 |
| 6 | NC-Retail | 3.7\% | 100 | \$ | - | 6.2\% | 100 | \$ | - |

## DUKE ENERGY CAROLINAS, LLC

Docket No. E-7, Sub 1276

## MYRP Year 3 <br> DEC Proposed Increase Compared to <br> Cost of Service Based Increase

Twelve Months Ended December 31, 2021

| Line | Rate Class | Current Revenue (\$000) <br> (1) | Increase to Cost of Service |  |  | DEC Proposed Increase 10\% Subsidy Reduction |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Amount (\$000) | $\begin{gathered} \% \\ \text { Increase } \\ \hline \end{gathered}$ |  | Amount (\$000) | $\begin{gathered} \% \\ \text { Increase } \\ \hline \end{gathered}$ |
|  |  |  |  | (2) | (3) |  | (4) | (5) |
| 1 | RES | \$ 2,486,186 | \$ | 540,470 | 21.7\% | \$ | 461,704 | 18.6\% |
| 2 | GS | 854,548 |  | 164,658 | 19.3\% |  | 139,554 | 16.3\% |
| 3 | LT | 134,411 |  | 134,435 | 100.0\% |  | 47,350 | 35.2\% |
| 4 | 1 | 153,644 |  | 37,268 | 24.3\% |  | 26,527 | 17.3\% |
| 5 | OPT | 1,364,785 |  | $(43,618)$ | -3.2\% |  | 158,077 | 11.6\% |
| 6 | NC-Retail | \$ 4,993,574 | \$ | 833,213 | 16.7\% | \$ | 833,213 | 16.7\% |

# DUKE ENERGY CAROLINAS, LLC 

Docket No. E-7, Sub 1276

## MYRP Year 3

Rate of Return, Index and Subsidy
Based on Alternate Increase to
Achieve a 25\% Subsidy Reduction
Twelve Months Ended December 31, 2021

Alternate

| Line | Rate Class | Present Rates |  |  |  | 25\% Subsidy Reduction |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rate of Return | $\frac{\text { Index }}{(2)}$ | Subsidy (\$000) |  | Rate of Return | Index |  | Subsidy (\$000) |
|  |  | (1) |  |  | (3) | (4) | (5) |  | (6) |
| 1 | RES | 3.3\% | 87 | \$ | $(87,518)$ | 5.8\% | 94 | \$ | $(65,639)$ |
| 2 | GS | 3.2\% | 87 |  | $(27,893)$ | 5.8\% | 94 |  | $(20,920)$ |
| 3 | LT | -2.6\% | (68) |  | $(96,761)$ | 1.4\% | 23 |  | $(72,571)$ |
| 4 | 1 | 2.6\% | 69 |  | $(11,934)$ | 5.3\% | 86 |  | $(8,951)$ |
| 5 | OPT | 6.8\% | 181 |  | 224,106 | 8.5\% | 137 |  | 168,080 |
| 6 | NC-Retail | 3.7\% | 100 | \$ | - | 6.2\% | 100 | \$ | - |

# DUKE ENERGY CAROLINAS, LLC <br> Docket No. E-7, Sub 1276 

## MYRP Year 3

Distribution of Increase to Achieve a 25\%, 50\% and 100\% Subsidy Reduction Twelve Months Ended December 31, 2021

| Line | Rate Class | Current Revenue (\$000) <br> (1) | Subsidy Reduction to Cost of Service |  |  | Subsidy Reduction |  |  | 50\%Subsidy Reduction |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & \text { Amount } \\ & (\$ 000) \end{aligned}$ | \% <br> Increase |  | $\begin{gathered} \text { Amount } \\ (\$ 000) \\ \hline \end{gathered}$ | \% Increase |  | $\begin{aligned} & \text { Amount } \\ & (\$ 000) \\ & \hline \end{aligned}$ | \% Increase |
|  |  |  |  | (2) | (3) |  | (4) | (5) |  | (6) | (7) |
| 1 | RES | \$ 2,486,186 | \$ | 540,470 | 21.7\% | \$ | 474,832 | 19.1\% | \$ | 496,711 | 20.0\% |
| 2 | GS | 854,548 |  | 164,658 | 19.3\% |  | 143,738 | 16.8\% |  | 150,712 | 17.6\% |
| 3 | LT | 134,411 |  | 134,435 | 100.0\% |  | 61,864 | 46.0\% |  | 86,055 | 64.0\% |
| 4 | 1 | 153,644 |  | 37,268 | 24.3\% |  | 28,318 | 18.4\% |  | 31,301 | 20.4\% |
| 5 | OPT | 1,364,785 |  | $(43,618)$ | -3.2\% |  | 124,462 | 9.1\% |  | 68,435 | 5.0\% |
| 6 | NC-Retail | \$ 4,993,574 | \$ | 833,213 | 16.7\% | \$ | 833,213 | 16.7\% | \$ | 833,213 | 16.7\% |

# STATE OF NORTH CAROLINA UTILITIES COMMISSION RALEIGH 

DOCKET NO. E-100, Sub 179
BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of
) DIRECT TESTIMONY ) AND EXHIBITS OF
Duke Energy Progress, LLC, and Duke MICHAEL P. GORMAN

ON BEHALF OF
Energy Carolinas, LLC, 2022 Biennial CIGFUR II \& III

Direct Testimony and Exhibits of
Michael P. Gorman

On behalf of

CIGFUR II \& III

September 2, 2022


Brubaker \& Associates, Inc.

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 179

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

## Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A: Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

## Q WHAT IS YOUR OCCUPATION?

A: I am a consultant in the field of public utility regulation and a Managing Principal with the firm of Brubaker \& Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A: This information is included in Appendix A to this testimony.

## Q: ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A: I am testifying on behalf of a group of intervenors designated as the Carolina Industrial Group for Fair Utility Rates II ("CIGFUR II") and the Carolina Industrial Group for Fair Utility Rates III ("CIGFUR III") (collectively, "CIGFUR"). CIGFUR is a group of
industrial customers that purchase power from Duke Energy Progress, LLC ("DEP") and Duke Energy Carolinas, LLC ("DEC") (collectively, "Duke" or the "Companies").

## Q: IN SETTING THE HEARING CONCERNING THE COMPANIES’ CARBON PLAN, DID THE COMMISSION OUTLINE SPECIFIC ISSUES FOR EXPERT WITNESSES TO ADDRESS IN THIS PROCEEDING?

A: Yes. In its July 29, 2022 order issued in this docket, the Commission outlined specific topics and sub-issues based on the Issues Report Duke filed after consultation with other parties. In its July 29, 2022 order, the Commission directed expert witnesses to organize their pre-filed direct testimony in accordance with these issues lists. As a result, the remaining portion of my testimony addresses specific Commission-identified topics and sub-issues, which are identified in accordance with the topical categories set forth in the Commission's July 29, 2022 Order Scheduling Expert Witness Hearing, Requiring Filing of Testimony, and Establishing Discovery Guidelines ("Order").

Q: DID DUKE OFFER POLICY OBJECTIVES IN THE DEVELOPMENT OF ITS CARBON PLAN?

A: This response corresponds to Ordering Paragraphs 1.a.i., 1.b., 1.i., and 1.j. of the Commission's Order.

Yes. Duke has offered a proposed Carbon Plan ("Plan") that outlines its next major step in an ongoing energy transition. Duke maintains that its Plan to transition to net-zero carbon emissions:

1. Reflects a diverse portfolio of technologies with lower carbon intensity;
2. Continues to support system reliability at or better than current levels;
3. Permits the Companies access to capital at reasonable costs for the benefit of their customers; and
4. Continues to target affordable and competitive utility rates for their customers.

The Companies opine that the foundation of their Plan is based on decades of reasonable and prudent utility planning practices that have been jointly overseen by the North Carolina Utilities Commission ("NCUC" or "Commission") and the Public Service Commission of South Carolina ("PSCSC"). They maintain that Duke's dual-state approach to least-cost resource planning has benefitted customers in the two Duke Carolinas jurisdictions and supported the provision of reliable and affordable electric service.

Duke maintains that its combined carbon dioxide (" $\mathrm{CO}_{2}$ ") emissions between DEC and DEP are already lower than the national average among all privately held and investor-owned utilities. Duke plans to continue this modernization of its Carolinas systems by further reducing $\mathrm{CO}_{2}$ emissions based on what Duke contends will be prudent, orderly, and cost-effective infrastructure planning and investments.

Based on its Carbon Plan proposal in this case, Duke has proposed four portfolios which are designed to achieve an interim $70 \%$ carbon reduction goal projected to be achieved in years ranging from 2030 up through 2034. A summary of the four plans is outlined on Exhibit MPG-1. A critical component of all four plans is the anticipated early retirement of North Carolina located coal-fired generation capacity: 4,900 MW planned to be retired by 2030 and increasing to $6,300 \mathrm{MW}$ retired by 2034 .

Q: DO YOU BELIEVE THE POLICY GOALS SET OUT BY DUKE CONCERNING THE DEVELOPMENT OF A CARBON REDUCTION PLAN ARE REASONABLE AND PRUDENT?

A: This response corresponds to Ordering Paragraph 1.j. of the Commission's Order.

Generally, for the reasons outlined below, I find the Companies' proposed Plan fails to meet many of the objectives set forth in House Bill 951 ("HB 951") as well as some of the Companies' own policy objectives, by failing to propose a Plan that:

1. Would facilitate joint implementation by the NCUC and PSCSC in an orderly and controlled manner, with reliability being assessed on the system in terms of both adequate capacity to maintain system resources during constrained peak period conditions and ensuring an ability to support reliability, particularly in light of the "new risk of energy adequacy," which Duke states will impair reliability due to limited dispatchable generation resources if not planned for and managed effectively. ${ }^{1}$
2. Requires dispatchable resources that do not emit carbon which will be fundamental to the power system reliability, including load-following capabilities as well as adequate resources for constrained period deliveries. The Company acknowledges limited known technology available to operate under the zero-emission load-following resource ("ZELFR") criteria, even though new technologies and new sources were considered in modeling the various resource portfolio options supporting the carbon reduction goals.
3. Will rely on proven technology.
4. Ensures the financial integrity and credit standing of the utility, but at least-cost and competitive tariff rates.

These limitations in Duke's Plan support a careful, systematic, and slow progression toward transitioning to carbon-free generating resources in a manner that meets the multi-prong objectives of carbon emissions reductions, maintaining or improving system reliability, and maintaining competitive and least-cost electric service rates.

[^23]
## Q: PLEASE COMMENT ON ISSUES FALLING UNDER SECTION 1.a., "MODELING—METHODOLOGY, ASSUMPTIONS AND OTHER MODELING ISSUES" INCLUDED IN THE COMMISSION'S ORDER. <br> A: My responses to each of the topics and sub-issues set forth in the Commission's Order follow: <br> Alternative Modeling Needed - North Carolina Ratepayers Should be Held Harmless if South Carolina Jurisdictional Allocable Carbon Plan Costs Are Disallowed by the PSCSC

Duke's proposed Carbon Plan fails to address cost recovery and likewise fails to produce a systematic plan that ensures least-cost, competitive rates in North Carolina. This limitation is due to, among other things:

1. Uncertainties with respect to multi-jurisdictional cost recovery, more specifically related to joint jurisdictional resource planning.
2. Use of emerging zero carbon technology and fuel sources which may hold promise but are not currently known to be viable resource options.
3. Political and economic limitations on expanding natural gas pipeline delivery systems, which are critical in relying on planned new gas-fired generation to be available during constrained peak period conditions.

Duke has acknowledged that the Companies’ Integrated Resource Plan is based on its dual system serving jurisdictional operations in both North Carolina and South Carolina. Under current ratemaking protocols, this dual system allocates the cost of common infrastructure (transmission and production) across both jurisdictions using a load share methodology. Specifically, production and bulk transmission costs are allocated across jurisdictions using a coincident peak methodology. The load share allocation of this common infrastructure investment methodology emulates the load
included in a resource plan, which is ostensibly used to determine the amount and most economic structure of infrastructure investments needed to provide reliable service in the two jurisdictions combined.

The jurisdictional allocation of costs to each jurisdiction for their load share benefits of the dual infrastructure for production and transmission ensures that all customers are allocated a fair and reasonable share of the total system common infrastructure costs based on the load demands they placed on the system. This jurisdictional allocation methodology is a critical element in ensuring that customers' rates in North Carolina are responsible for no more than a fair allocation of dual system common costs of production and transmission infrastructure. Moreover, this jurisdictional cost allocation methodology is a critical element in ensuring that Duke's North Carolina rates remain competitive, low-cost rates that support Duke's financial integrity and ability to continue supplying high quality and reliable service.

To the extent a resource plan moves forward that is not approved by both the NCUC and the PSCSC, and/or to the extent otherwise recoverable costs of the infrastructure under the Carbon Plan are uncertain in one or both jurisdictions, then the NCUC should be clear that any infrastructure costs that would be allocated to the South Carolina jurisdiction under a load share methodology will not be borne by customers in North Carolina if disallowed in South Carolina. In other words, the decades-long benefit of the dual system planning and rate-setting methodology should be a requirement for moving forward with the Carbon Plan, and Duke's North Carolina customers' responsibility for Carbon Plan compliance costs should be limited to only
the North Carolina load ratio share of the dual system common production and transmission infrastructure costs.

If South Carolina rejects cost recovery in its jurisdiction, those costs not allowed to be recovered in South Carolina should not be reallocated to the North Carolina jurisdiction or otherwise included in retail rates in North Carolina. In this instance, the Commission should require Duke to explain its back-up plan to limit investments in the joint jurisdictional Carbon Plan to only those that will reasonably be reflected in ratesat least unless and until the regulatory risk of disallowance in South Carolina is resolved-and not restrict Duke's ability to maintain service quality and reliability to customers in North Carolina.

## Design of Curtailable or Interruptible Rates

Duke's proposed Carbon Plan assumes increased energy efficiency and demand-side management program participation from Duke's customers. However, to maximize the amount of viable customer participation in such programs, the outline and design of curtailment rates and interruptible rates, and the associated benefits to customers of participating in these programs, need to be carefully considered. CIGFUR appreciates the continued dialogue with the Companies regarding the potential design of a new demand response program, but CIGFUR maintains that without an emergency demand response program similar to that offered by Southern California Edison through its Base Interruptible Program ("BIP") and corresponding Emergency Load Reduction Program ("ELRP"), flexible industrial load will continue to be an under-leveraged demand-side resource.

## Power Quality Issues Not Adequately Modeled - Metrics Required to Ensure Carbon Plan is Maintaining or Improving Reliability of Existing Grid

The energy transition is changing Duke's system for both planning purposes and operational purposes. If the Carbon Plan transition is not carefully implemented, significant deficiencies can impact Duke's ability to provide high quality and reliable power. Indeed, Duke recognizes the need for evolving planning and operating procedures, as well as the need to carefully and critically manage the movement toward the carbon emissions reductions goals. Specifically, Duke witnesses John Holeman and Roberts state, in pertinent part that:

Resource adequacy has traditionally been assumed through verifying capacity with appropriate planning reserves to serve peak demand in the long-term resource planning. However, recent industry events have highlighted that the changing resource mix performing in real- world situations can result in energy inadequacy. ${ }^{2}$

They go on to explain that the North American Electric Reliability Corporation ("NERC") has noted concerns about the changing planning and operational protocols for electric utilities who transition to low carbon resources and away from dispatchable coal and dispatchable nuclear generating facilities.

The witnesses outline NERC's concern about providing adequate frequency support in the Eastern Interconnection which in turn impairs the potential for maintaining demand and resource balancing within the Balancing Authority Areas. ${ }^{3}$ They state that a Balancing Authority must purposefully plan and dispatch its generating fleet in order to ensure compliance with NERC BAL Standards and thus, cannot rely on unscheduled power flow from neighboring Balancing Authorities to satisfy the
${ }^{2}$ Direct Testimony of Duke witnesses Holeman and Roberts, at 23-24.
${ }^{3} I d$. at 6 .
obligation to maintain operating reliability. They state that these Balancing Authority Standards are important Reliability Standards because they regulate a Balancing Authority's real-time performance with respect to maintaining proper reserves to balance resources and demand and to provide for proper frequency regulation, energy adequacy, or operating reliability. Failure to meet the NERC Reliability Standards could result in system emergencies and reliability failure such as unscheduled power flows, automatic firm load shedding, or in the worst case, cascading outages across the Interconnection. ${ }^{4}$ Just as importantly, however, these frequency variations and energy inadequacies can result in frequency variations and voltage sags which render sophisticated electronic and digital equipment in businesses and homes at risk of unreliable operation.

The witnesses state that maintaining reliability and operational resilience is outlined in Appendix Q to their proposed Carbon Plan. Key components for evaluating reliability risks and mitigating solutions include the following:

1. Resource and energy adequacy from renewables and storage;
2. Additional firm gas generation and transportation;
3. Coal generator reliability during the transition;
4. Zero emitting load-following resources to reach net zero;
5. Flexible generation needs for integrating renewables; and
6. Future system resilience to withstand extreme weather events.
[^24]However, each of the six items above illustrates why the Companies' Carbon Plan is, at best, at risk of failing to maintain or improve system reliability. Specifically, weaknesses in the Plan include:
a. Relying on unproven ZELFR and other zero carbon fuel to operate dispatchable generation to follow load for the purpose of ensuring energy adequacy and sufficient frequency control, to preserve customers' ability to operate sophisticated electronic equipment without interruption or damage to equipment.
b. Need for additional firm pipeline delivery capacity, which Duke acknowledges is currently not available, and is experiencing significant political and economic opposition to expanding delivery capacity into North Carolina. Without this firm delivery capacity, new gas-fired generation resources may not be available to operate during constrained peak demand periods.
c. The Companies' ability to produce dispatchable generation to operate along with intermittent resources, to preserve system resilience and to withstand extreme weather events is not captured well in the Companies' Plan.

## Compliance in 2032 or 2034 is Reasonable for Planning Purposes and Consistent with Least-Cost Planning Principles

HB 951 delegates broad discretion to the Commission in developing and implementing the Carbon Plan in accordance with certain parameters, including that the Plan must comply with least-cost principles and must maintain or improve the reliability of the electric grid. The time frames for compliance are goals, not mandates. Moreover, the legislation delegates to the Commission the flexibility to extend the 2030 compliance target until 2032 for any reason, and then to delay it further-until 2034 or potentially even beyond-"in the event the Commission authorizes construction of a nuclear facility or wind energy facility that would require additional time for completion due to technical, legal, logistical, or other factors beyond the control of the electric public utility, or in the event necessary to maintain the adequacy and reliability of the existing grid." ${ }^{5}$ The Commission has been empowered with this discretion because the Legislature saw fit to delegate it; the Commission should use it in order to ensure that the least-cost and reliability mandates are satisfied.

## Carbon Baseline and Accounting Methodologies

The Carbon Baseline is the Companies' emission level at a specific point in time, 2005. DEC and DEP must demonstrate a reduction to their carbon emissions from this Carbon Baseline in accordance with the requirements set forth in House Bill 951. The Commission does have discretion to ensure that the plan is developed and implemented in accordance with North Carolina law, and House Bill 951 specifically provides for Commission flexibility with respect to extending compliance time frames by two years for any reason, or indefinitely thereafter if off-shore wind or new nuclear is selected as a Carbon Plan generation resource, or if the reliability of the existing grid would be compromised. ${ }^{6}$

In establishing these carbon reduction infrastructure investments, the design targets should consider a balance between achieving carbon emissions reduction targets when weighed against competing objectives, including least-cost planning, maintaining

[^25]or improving the reliability of the existing grid through investments in proven resources with demonstrated operating performance and which can provide high-quality power at competitive rates.

Duke is already ahead of the curve when it comes to its carbon emissions reductions baseline compared to the national average. In reducing carbon emissions, system benefits should be considered. However, CIGFUR encourages maximum flexibility in adopting an initial and subsequent iterations of a Carbon Plan. More specifically, a flexible Carbon Plan should be adopted that allows for Duke, the Commission, and other stakeholders to continuously evaluate, assess, and respond to new technology operational risk, needed infrastructure logistical constraints and risks, acceptable construction and development risks, least-cost planning, and reliability (i.e., both peak and operating) concerns.

Minimizing carbon emissions is the objective, but so too is designing a structured and systematic Plan that lowers emissions, while still maintaining service reliability, power quality, and competitive utility rates based on the least-cost set of investments necessary to comply with House Bill 951.

## Accounting Requirements for Emissions From New Out-of-State Resources

As a threshold matter, the carbon emissions reduction targets set forth in House Bill 951 apply only to emissions "emitted in the State[.]" House Bill 951 further clarifies this threshold criterion in its definition of "carbon neutrality" when it reiterates that it applies to carbon emissions emitted in North Carolina. ${ }^{8}$ As a result, emissions

[^26]that occur outside North Carolina should not count against achievement of the interim target or carbon neutrality by 2050 .

## Emissions Leakages Associated with Price-Induced Demand Erosion

A reduction in carbon emissions caused by reductions in sales should be reflected in the Plan as the Companies work toward the stated carbon reduction goals. "Shrinking the problem" via energy efficiency and demand-side management are important and economic options available to reduce carbon emissions. Existing empirical research tends to show evidence of a causal relationship between high electricity prices and premature deindustrialization. "[W]e find that higher electricity prices are associated with industry share turning downward at lower peaks and at lower levels of GDP per capita. Moreover, the downtrend tends to be steeper the higher are electricity prices." ${ }^{9}$

## Q: PLEASE COMMENT ON SECTION 1.b., "COAL UNIT RETIREMENT SCHEDULE; SECURITIZATION" INCLUDED IN THE COMMISSION ORDER.

A: Duke's outline of resource portfolios does not include the costs associated with early retirement of coal units. To the extent the early retirement of coal units results in significant amounts of abandoned plant costs that DEC and/or DEP may have a right to recover from customers, the cost of the early retirement should be reflected in the economic projections in the Plan. The timing of coal plant retirements, and the timing of replacement resources that are needed to maintain system reliability (both planning

[^27] reserves and operating quality) must be reasonably reflected in the Plan, and the resulting Present Value of Revenue Requirement ("PVRR") costs of the Plan can then reasonably reflect all costs to implement the Plan.

Importantly, if the Plan ignores significant background infrastructure costs and coal plant retirement costs, the full cost of the Plan cannot be known. Without knowing the full cost of the Plan, the Commission cannot determine whether or not plans need to be modified in order to maintain affordability for all customer rate classes as an important planning criteria in achieving the carbon emissions reductions goals. Specifically, timing of coal unit retirements, timing of installation and new gas-fired or alternative fuel dispatchable generating resources, and the time period it takes new demand-side management and curtailment tariff rate programs to gain acceptance and modify load consumptions are all dependent on a clear understanding of what the cost of each of the plans will be. Duke's representation that certain costs are common to all plans assumes no flexibility in these embedded common costs in terms of timing of occurrence, level of occurrence, or other means of modifying plans to accomplish the multi-prong objective of carbon reductions, maintaining or improving system reliability (both planning reserves and operating flexibility), and maintaining affordable rates for all classes of Duke's North Carolina customers.

Duke's proposed Carbon Plan simply ignores the likely cost to customers of coal retirements and understates rate impacts necessary to support the investments outlined in the Plan. Stated more directly, early retirements are an integral part of the Plan to reduce carbon emissions, and the retirement costs should be reflected in the cost estimates for the various Carbon Plan portfolio options.

Use of special financing mechanisms for reducing ratepayer costs for early coal plant retirements can also have economic benefits by supporting the Companies' financial integrity during the combined early retirement and development of replacement resources, as well as possibly helping to offset costs to ratepayers for the cost of such early retirement. For example, securitization bonds may be useful for reducing costs to customers for recovery of abandoned coal plant early retirement costs, and the securitization bond proceeds will enhance utility cash flows and support financial integrity during the development of low carbon replacement resources. Not only can this securitization pathway provide economic benefits for the benefit and protection of ratepayers, but it is required by House Bill 951. ${ }^{10}$

Reviewing potential ratemaking treatment of abandoned plant costs, use of special financing mechanisms such as securitization bonds, and the resulting impact on the utilities' financial integrity during development of replacement resources is necessary in order to both assess the cost of each of the various portfolio options to customers, and to assess the need, if any, for utility financial support during the development of new low- or zero- carbon resources and infrastructure transition.

This is particularly true for new resources with longer development times between the time the utility incurs costs to develop the resources and the time the resource is placed in-service and the cost recovered in the utility's tariff rates. Careful planning from the customer standpoint and the utility's financial standpoint is necessary to assess the benefits of each of the portfolios from a rate and financial integrity standpoint, and this analysis will ultimately improve planning.

[^28]
## Q: PLEASE COMMENT ON SECTION 1.c., "NEAR-TERM PROCUREMENT

 ACTIVITY—SOLAR, SOLAR+STORAGE, STANDALONE STORAGE, ONSHORE WIND, NATURAL GAS GENERATION" INCLUDED IN THE COMMISSION ORDER.A: There are several critical aspects of the Companies' Plan which diminish its ability to identify the least-cost resource portfolio over the planning period. These deficiencies relate to certain infrastructure necessary to reliably operate new generating facilities, uncertainty with respect to subsequent license renewals ("SLRs") for Duke's existing nuclear fleet, and the expected remaining operating lives of new pipeline infrastructure, and thoughtful consideration of use of carbon emission offsets to manage the selection of unproven resources while remaining in compliance with carbon reduction goals.

Duke's Proposal Fails to Provide Sufficient Guardrails, Spending Caps, and Other Parameters Around its Proposed Near-Term Supply-Side Activities.

Duke has essentially developed a lower-carbon Integrated Resource Plan which includes its best estimate of what the projected cost of the infrastructure investments will be, and the expected operating performance of those resources. However, many of these resources are unproven, or the infrastructure needed to operate the new resource as a resource capacity is at best highly uncertain. Further, the actual installed cost of these resources is also a best estimate which could vary significantly based on resource demands as the plan moves forward. These installed cost uncertainties and this need for resource capacity infrastructure expansion is problematic at this time. As a result, the Commission should require Duke to establish budgetary limits (i.e. not-to-exceed spending caps) that can act as pivot points as Duke moves forward with Carbon Plan implementation to continue to assess market factors, resource viability and adequacy, and technological improvements to resources and/or zero carbon fuel in a manner that addresses least-cost, high quality, reliable, and affordable rates to all classes of Duke's retail customers.

Duke's proposed Carbon Plan fails to ensure that Duke is bearing some of the risk in the event these investments do not result in assets that eventually become used and useful in the provision of electric service to ratepayers.

The ability to move forward with uncertain infrastructure investments, uncertain zero carbon fuels, and uncertain ZELFRs should be done carefully and systematically during initial development and implementation of the Carbon Plan. Competing objectives include competitive and affordable rates across customer classes, service quality, reliability, and the continued viability of the North Carolina economy.

To ensure risk of all the uncertain elements of Duke's proposed Carbon Plan are managed efficiently and economically, Duke should bear the risk that it has failed to fully consider certain elements or variables within the multi-pronged analysis of the Plan.

## Third-Party Owned Generation Should Be Considered if Available and Least-Cost.

Duke's proposed Carbon Plan is based entirely on the premise that only utility-owned investments in production and necessary transmission expansion may be made, and only by the utility. However, to the extent a merchant provider of transmission upgrades and/or production resources can develop resources at a much lower cost than Duke and sell that resource capacity to Duke under a supply contract, then those resources should be considered by Duke in selecting the best and least-cost resource available.

All utilities including Duke have a natural economic interest to select investments funded by the utility and included in rate base. These types of investments grow the utility and enhance shareholder value by growing rate base, which in turn increase utilities' earnings and dividend-paying ability. While financial integrity and strong credit standing are important for enabling efficient and economic investments in prudent utility infrastructure, that balance also requires selection of investments that produce the least possible costs borne by ratepayers while also achieving these financial protections for the utility. To the extent merchant development of production or transmission resources are lower cost than a utility's infrastructure developments, then the merchant developer should be considered and included in the resource plan. This same logic applies to the possibility of pursuing competitive procurement for the purpose of executing least-cost purchased power agreements ("PPAs") with the independent power producers ("IPPs") who submit the lowest bid in terms of total project cost or PPA cost that would then be recovered from ratepayers.

As a means of further protecting customers, the Commission can establish financial and technical qualifications for production and transmission investments supplied by merchant providers that will best assure such merchant providers are financially and technologically capable of developing the infrastructure to meet the needs of Duke's dual system planning criteria.

Reasonableness and prudency for purposes of future cost recovery should be deferred for decision in a future rate case.

Customer protections for paying rates which are just and reasonable while maintaining the utility's financial integrity and credit standing will be a critical aspect of implementing the Carbon Plan. Under traditional cost-of-service ratemaking principles, customers' rates reflect the cost of infrastructure that is currently in-service, and used and useful in providing service. Only under extraordinary circumstances should customers be asked to pay costs associated with infrastructure assets that have not yet been declared in commercial operation or in-service operation. Moreover, ratepayers should only be asked to pay such costs under extraordinary financial circumstances that justify this intergenerational constraint on customer rate protections.

The Commission should make it clear that establishment of just and reasonable rates will be a priority throughout the development and implementation of the Carbon Plan, and ratepayer support for long-term asset development will only be considered under the existence of extraordinary financial circumstances which prove that such departure from precedent is necessary and in the public interest to support the utilities' financial integrity and credit standing. In such extraordinary circumstances, customers should receive a quid pro quo deal by paying higher rates during construction to support the utility, but paying lower rates after the construction period is completed, and assets are placed in-service, and used and useful in the provision of electric service to customers.

New Combined Cycle Natural Gas Facilities' Need for New Firm Pipeline Delivery Capacity

All four preferred resource portfolios included in the Plan assume 2,400 MW of new natural gas-fired generation combined cycle ("CC") units will be placed in-service by 2030. However, the Companies acknowledge that developing new gas delivery pipeline infrastructure is a plan execution risk.

Recognizing the significant risks to developing new interstate natural gas pipeline delivery capacity, the Company stated:

## Execution and Risk Management

Pipelines: New gas interstate pipelines have been increasingly challenged through every permit approval required. The ability to bring additional gas supply to the Carolinas via pipelines is important to the success of the Companies' clean energy transition. ${ }^{11}$

The Companies note the uncertainty of new natural gas pipeline capacity to fuel existing and/or new natural gas-fired generation in the discussion of their intention to convert to hydrogen fuel over time:

> Currently, the Companies' natural gas generation stations rely on interstate pipeline firm transportation or on-site coal and diesel dual-fuel capability for fuel security; however, the Companies' combined cycle fleet is currently deficient of interstate pipeline firm transportation capacity due to the cancellation of Atlantic Coast Pipeline ("ACP"). Looking ahead, current and future gas turbines could transition to hydrogen or other low- or zero-carbon fuels. Although promising, hydrogen still requires additional production and generation technology development to be widely utilized as a utility fuel. As discussed in Appendix O (Low-Carbon Fuels and Hydrogen), the Companies will continue to closely follow hydrogen technology in preparation for its potential future use as a substitute for natural gas. Regardless of the future utilization of natural gas, renewable gas or hydrogen as the fuel, there is still a need for additional pipeline capacity in the Carolinas. ${ }^{12}$

The Company's Plan has significant risk about the increased use of combined cycle natural gas units because the Company's ability to secure adequate and reliable firm delivery capacity is a significant execution risk of the Plan.

Regarding firm pipeline delivery capacity, the Companies will not have firm capacity rights that can be expected to operate during system peaks and therefore cannot reliably be expected to contribute toward a reliable source of power from the Companies' system.

[^29]
## $\underline{\text { SLRs - Existing Nuclear Resources }}$

The Companies make several projections for increasing the operating lives of its nuclear facilities. However, in order to continue to operate the Companies' nuclear generation fleet, they will need SLRs approved by the Nuclear Regulatory Commission ("NRC").

The Companies' nuclear fleet and the existing NRC operating licenses are shown below in Table 1.

| TABLE 1 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Existing Nuclear Generating Units Operating License Renewal |  |  |  |  |  |  |  |  |
|  |  |  | Capacity (MW) |  | Original Operating |  |  | Extended Operating |
| Line | $\frac{\text { Utility }}{(1)}$ | Unit \& Plant Name <br> (2) | $\frac{\text { Winter }}{(3)}$ | $\frac{\text { Summer }}{(4)}$ | $\frac{\text { Location }}{(5)}$ | $\frac{\text { Expiration }}{(6)}$ | $\frac{\text { Approval }}{(7)}$ | $\frac{\text { Expiration }}{(8)}$ |
| 1 | DEC | Catawba Unit 1 | 1,199 | 1,160 | York, SC | 12/6/2024 | 12/5/2003 | 12/5/2043 |
| 2 | DEC | Catawba Unit 2 | 1,180 | 1,150 | York, SC | 2/24/2026 | 12/5/2003 | 12/5/2043 |
| 3 | DEC | McGuire Unit 1 | 1,199 | 1,158 | Huntersville, NC | 6/12/2021 | 12/5/2003 | 3/3/2041 |
| 4 | DEC | McGuire Unit 2 | 1,187 | 1,158 | Huntersville, NC | 3/3/2023 | 12/5/2003 | 3/3/2043 |
| 5 | DEC | Oconee Unit 1 | 865 | 847 | Seneca, SC | 2/6/2013 | 5/23/2000 | 2/6/2033 |
| 6 | DEC | Oconee Unit 2 | 872 | 848 | Seneca, SC | 10/6/2013 | 5/23/2000 | 10/6/2033 |
| 7 | DEC | Oconee Unit 3 | 881 | 859 | Seneca, SC | 7/19/2014 | 5/23/2000 | 7/19/2034 |
| 8 | DEP | Robinson 2 | 793 | 759 | Hartsville, SC | 7/31/2010 | 4/19/2004 | 7/31/2030 |
| 9 | DEP | Brunswick 2 | 953 | 932 | Southport, NC | 12/27/2014 | 6/26/2006 | 12/27/2034 |
| 10 | DEP | Brunswick 1 | 975 | 938 | Southport, NC | 9/8/2016 | 6/26/2006 | 9/8/2036 |
| 11 | DEP | Harris 1 | 1,009 | 964 | New Hill, NC | 10/24/2026 | 12/17/2008 | 10/24/2046 |
| 12 | Total |  | 11,113 | 10,773 |  |  |  |  |
|  | ources: | Table D-9 and Table D- |  |  |  |  |  |  |

As outlined in Table 1 above, total capacity of the nuclear fleet to meet Duke's demands is around $11,100 \mathrm{MW}$. These are non-carbon emitting resources. None of these plants have current operating licenses that extend beyond 2046, the time period preceding the target carbon emission limit of 2050. More significantly, a significant amount of this capacity may no longer be available to Duke if a nuclear operating license fails to be extended. Specifically, in 2030, Robinson 2 (793 MW) may no longer be available. By 2035, approximately 5,400 MW of nuclear operating license may expire

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Page 22 and would not be available without a license extension. However, and importantly, the Companies' four preferred portfolios do not anticipate the retirement of nuclear generation. Hence, the cost of SLRs-which was omitted from Duke's proposed Carbon Plan - must be included in the Plan and is likely a significant and material cost.

As outlined in Table 2 above, Duke Carolinas will have 11 facilities to seek relicensing for, and a total winter operating capacity of around 11,113 MW. Until shown otherwise, we should assume the cost of these SLRs is material, and should therefore be analyzed and considered in the Plan.

Q: PLEASE COMMENT ON SECTION 1.d., "NEAR-TERM DEVELOPMENT ACTIVITY—PRUDENCE OF DEVELOPMENT WORK AND NEED FOR LONG-LEAD TIME RESOURCES (BAD CREEK II, SMALL MODULAR REACTORS, OFFSHORE WIND)" INCLUDED IN THE COMMISSION ORDER.

A: Utilities are typically provided adequate engineering services, finance services and treasury services to execute any integrated resource planning process, and to stay current on new technologies. To the extent the overhead cost for this resource planning is already included in their tariff rate revenue (treasury, regulatory and engineering), then the utility should charge against current revenues, and deferrals are not justified.

Concerning investments in new and unproven technology, the Commission should clearly find that this function should be performed by unregulated major equipment manufacturing companies, and not utilities. To the extent new, innovative resources hold promise, major equipment manufacturers should be the ones making these technology investments, not regulated utility companies. To the extent Duke's corporate enterprises choose to take on this technology research and development and/or innovation function, they should do so through an unregulated affiliate with clear ring-fence separation and financial protections from its regulated utility companies generally, but DEC and DEP specifically.

From a financial integrity standpoint, the utilities' ability to support significant capital investments for transmission infrastructure needed to deliver low- or zero-carbon emitting generation resources requires a complete review of the investment development, duration of development, and impact on the utilities' access to capital and other financial considerations. To the extent the utilities' financial integrity and cash flow strength is adequate during the initial development stage, then customers should not be asked to pay any costs associated with assets under development unless and until they are placed in-service and used and useful in providing service.

The Commission may also consider financial tests to determine whether or not it is in the public interest to ask customers to provide financial protection to the utilities during the development of long lead time assets. For example, developing new nuclear generating stations can result in construction projects with almost a ten-year development period. In these instances, Public Utilities Commissions (PUCs) have considered providing financial support to the utility in the form of current return on construction work in progress, or other measures to enhance the utility's cash flows and financial strength during construction. But these should only be approved to the extent there is clear ratepayer support and public interest benefits by asking customers to pay a return on a long lead time asset development, where the asset is not providing any benefits to customers and the asset is simply not used and useful for ratemaking purposes.

Moreover, under all four portfolios of the Companies' current Plan, it will be in a major construction period but the utilities may benefit from the recovery of abandoned plant costs on an accelerated basis at the outset of the Carbon Plan. Providing accelerated recovery of early retirement cost of coal plants, particularly if DEC and DEP are refinanced using securitization bonds, will provide an immediate injection of cash to the utilities that may support any potentially weakened financial positions of the utilities as they move into major construction programs.

But importantly, customers' ratemaking protections must be preserved. Assets that are under development are not normally included in cost of service and should not be, absent extraordinary circumstances like extreme financial conditions.

The Commission should find that no extraordinary ratepayer support for major construction activities will be done absent extraordinary circumstances. Prior to asking for customers to pay a portion of development costs or construction period carrying charges, the Commission should instruct the utilities to outline plans that can be executed through traditional financial integrity constraints, without the need for extraordinary customer support, to appropriately balance the utilities' financial soundness against the competing consumer protection interest of ensuring that just and reasonable rates are maintained.

## Q: PLEASE COMMENT ON SECTION 1.e., "WORK ON EXISTING RESOURCES (NATURAL GAS AND SLR)" INCLUDED IN THE COMMISSION ORDER.

A: I have already outlined concerns with the utilities' ability to actually increase firm natural gas pipeline delivery capacity to fuel new combined cycle natural gas facilities. The Companies' own evidence suggests they face significant economic and political opposition to the development of new natural gas delivery capacity.

But significantly, to the extent new capacity is put in-service, the Companies' proposed Carbon Plan of converting natural gas-fueled facilities to hydrogen fuel facilities in the near term creates another economic restriction on the development of new firm natural gas pipeline capacity. A pipeline utility company would only be willing to invest in a new pipeline capacity to the extent it has a viable and stable marketplace for the pipeline capacity. If Duke's plan is to have temporary use of the pipeline capacity, only to later switch the fuel from natural gas to hydrogen, the viability of the new pipeline capacity may be placed in jeopardy. This may require an accelerated recovery of the firm pipeline capacity costs, or the refusal of a pipeline company to make the pipeline capacity upgrade in the first place.

SLRs are also a significant concern and likely will be a material cost which at present is not factored into Duke's projected Carbon Plan costs or rate impacts. Duke has not provided sufficient data or analysis to estimate a cost of upgrades to its existing facilities in order to receive approval from the NRC for SLRs.

Q: PLEASE COMMENT ON SECTION 1.f., "TRANSMISSION PLANNING, PROACTIVE TRANSMISSION, AND RZEP" INCLUDED IN THE COMMISSION ORDER.

A: Transmission planning is a key aspect of the Integrated Resource Plan. However, transmission planning should be done hand in hand with production resource planning.

Transmission investments can be used to mitigate costs of production resources, or conversely, location and size of production resources can be used to mitigate the need for increasing transmission infrastructure investments. The two should be combined together, and the resulting production and transmission plan should result in least-cost resource options available to the utility to ensure the utility's ability to be a competitive least-cost provider of electric service.

## Q: PLEASE COMMENT ON SECTION 1.g., "RATE DISPARITY / MERGER / STATE ALIGNMENT" INCLUDED IN THE COMMISSION ORDER.

A: DEP and DEC have operated across two jurisdictions for decades. The two utilities are currently operated on a joint dispatch basis, and in all other respects are operated as a single system. As such, dual-system integrated resource planning pursued by the utilities should continue to be approved by the regulatory commissions in both North Carolina and South Carolina, and a commitment by both Commissions for the continued costsharing of joint resources is needed to accurately estimate the Carbon Plan's costs and rate impacts to North Carolina customers.

To ensure the best and lowest risk estimate of the potential impact on customers, the following agreements between jurisdictions should be sought:

1. Approval on integrated resource plans transitioning to zero carbon.
2. Agreement among jurisdictions on maintaining common production and transmission cost allocations necessary to maintain system reliability, both with respect to planning reserves and adequate operating flexibility.
3. Agreement on continuation of existing inter-jurisdictional cost allocation methods for rate-setting purposes.
4. Commitment from both jurisdictions on agreement of above to ensure the financial integrity and ability of the Companies to continue to make necessary infrastructure investments to maintain reliable and high-quality electric service, at competitive and affordable electric rates.

## Q: PLEASE COMMENT ON SECTION 1.h., "EE/DSM ISSUES/GRID EDGE" INCLUDED IN THE COMMISSION ORDER.

A: CIGFUR is in strong agreement with the notion that conservation and demand-side management should be an important part of the carbon reduction plan. To realize the maximum benefits of energy efficiency and demand-side management requires a clear economic signal produced through tariff rate mechanisms to encourage customers to modify consumption, invest in new energy assets, or take operating procedures that will change load shape, shifting load from high-cost constrained periods to low-cost non-constrained periods, or to reduce consumption overall.

Designing interruptible and curtailment rates with interruptible credits that are aligned with the avoided costs of supply-side resources will create economic incentive for customers to pursue economic demand-side management and energy efficiency programs and actions. Duke's proposal fails to sufficiently leverage flexible load of certain non-residential customers through demand response and demand-side management programs. Duke's proposal further fails to sufficiently leverage nonresidential customers' interest in participating in new customer renewable energy programs.

Q: PLEASE COMMENT ON SECTION 1.i., "COST" INCLUDED IN THE COMMISSION ORDER.

A: As previously testified, Duke's proposal fails to provide an "all-in" total cost and projected rate impact for all planned spending both related and unrelated to the Carbon Plan. By excluding the all-in costs, the Commission cannot accurately gauge the affordability of each of the respective Carbon Plan portfolios on customers in North Carolina, and cannot determine whether or not refining the Plan to improve affordability is possible, consistent with the goals, or necessary to reflect uncertainty in the implementation of the Carbon Plan, such as ensuring technology evolves in a reliable and prudent manner, for both physical assets and zero carbon related fuel options.

## Q: PLEASE COMMENT ON SECTION 1.j., "RELIABILITY" INCLUDED IN THE COMMISSION ORDER.

Reliability is a concept that should ensure infrastructure that has the peak day demand resources to meet firm demand of the customers in a reliable and predictable manner. But reliability should also require the status quo of power quality, for example, voltage stability, phase or wave stability, and "energy adequacy." Power quality will ensure that customers are able to operate sensitive digital and electronic equipment and machinery in a safe, reliable, uninterrupted manner. The benefits of reliable service and minimizing unintended interruptions are critically important to customers that can avoid costs associated with unplanned outages, momentary interruptions in service, or electronic equipment failure due to power quality factors. Similarly, many customers that are highly dependent on power quality may experience outages and/or equipment failure even without a total power outage in the event of voltage or phase/wave intolerances. The Company's Plan outlines a need for capacity needed to maintain service on peak days but provides little to no assessments of the need to manage "operating" power quality: voltage stability, phasing/wave stability, energy adequacy, and other factors that impact power quality.

The need for power quality is particularly relevant to the North Carolina jurisdiction because this jurisdiction is where all 4,900 MW to 6,300 MW of coal-fired

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Page 29 capacity that is expected to be retired under the four proposed Carbon Plan portfolios is located. The locations of the Companies' retiring coal-fired units are shown below in Table 2.

| Line | TABLE 2 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Coal Unit Retirements |  |  |  |  |
|  | Unit | State | Utility | Winter Capacity (MW) | Effective <br> Year (Jan 1) |
|  | (1) | (2) | (3) | (4) | (5) |
| 1 | Allen 1 | North Carolina | DEC | 167 | 2024 |
| 2 | Allen 5 | North Carolina | DEC | 259 | 2024 |
| 3 | Cliffside 5 | North Carolina | DEC | 546 | 2026 |
| 4 | Marshall 1 | North Carolina | DEC | 380 | 2029 |
| 5 | Marshall 2 | North Carolina | DEC | 380 | 2029 |
| 6 | Mayo 1 | North Carolina | DEP | 713 | 2029 |
| 7 | Roxboro 1 | North Carolina | DEP | 380 | 2029 |
| 8 | Roxboro 2 | North Carolina | DEP | 673 | 2029 |
| 9 | Roxboro 3 | North Carolina | DEP | 698 | 2028-2034 |
| 10 | Roxboro 4 | North Carolina | DEP | 711 | 2028-2034 |
| 11 | Marshall 3 | North Carolina | DEC | 658 | 2033 |
| 12 | Marshall 4 | North Carolina | DEC | 660 | 2033 |
| 13 | Belews Creek 1 | North Carolina | DEC | 1,110 | 2036 |
| 14 | Belews Creek 2 | North Carolina | DEC | 1,110 | 2036 |
| Sources: |  |  |  |  | Chapter 3, Table 3-1, and Appendix C. |

As shown above, all of Duke's coal-fired capacity that is planned to be retired will be in the North Carolina jurisdiction. For this reason, North Carolina is particularly at risk for the Companies' continued ability to operate facilities within load/control areas in a manner that ensures adequate stability of voltage, phase/wave tolerance, and other power quality factors.
: PLEASE COMMENT ON SECTION 1.k., "EXECUTION RISKS" INCLUDED IN THE COMMISSION ORDER.

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A: In general, the execution risks of each proposed portfolio should be taken into consideration when deciding whether extending the time frames for compliance with
the carbon emissions reduction goals Execution risks are largely outlined in other parts
of this testimony, but are summarized here:

1. The Companies plans to develop $2,400 \mathrm{MW}$ of combined cycle natural gas generation by 2030. The Companies acknowledge that there is significant political and public opposition to installing the needed pipeline firm capacity necessary to operate these CC facilities as firm capacity. Without firm adequate natural gas pipeline capacity, the new CC capacity that will be replacing coal-fired resource capacity may render the system reliability unclear and uncertain at the very least. Hence, the Plan's assumption that the new combined cycle gas capacity will be available to meet system peak demands is an assumption that is at significant risk due to environmental, public and regulatory limitations to develop needed new pipeline capacity.
2. If pipeline capacity can be installed to serve the new combined cycle units, to support their ability to provide service during peak periods, the cost of that capacity should be carefully reviewed. Specifically, the Companies' Plan anticipates installing natural gas facilities and then converting them to hydrogen fueled generation during the Plan. After this conversion, the natural gas pipeline capacity previously used to operate the natural gas facilities will no longer be used by the Companies. As such, the revenue stream to the pipeline company could be impaired, which could be a significant economic factor in a pipeline utility's willingness to make capital investments to expand pipeline capacity in the Carolinas. One potential remedy to that would be allow for accelerated recovery of new pipeline capacity investment costs, which will have a material impact on the economics of the various portfolios for new gas generation.
3. The Companies' assumption that they will convert natural gas facilities to burn hydrogen rather than natural gas has not been fully developed. Green hydrogen is typically based on separating hydrogen from water. As such, the new gas units and existing gas units will have to have a source of hydrogen production which likely will require large sources of water. This would require either locating the new gas facilities near adequate water supply or the development of hydrogen pipelines from a source of hydrogen production to delivering hydrogen to the new generating facility. The Companies' Plan does not develop this detail.
4. The Companies' SLR assuming nuclear stations' lives will be extended is not based on detailed review of the individual nuclear stations needed to accomplish the objectives of the Carbon Plan. Further, the NRC likely will require significant retrofits of the existing nuclear stations in order to grant

## 6 Q: DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

7 A: Yes, it does.
an SLR, and this material cost has not been included by Duke Carolinas in their Carbon Plan. As such, a major source of carbon-free generation, the nuclear stations, has not been accurately modeled by the Companies, resulting in an inaccurate estimate of the economics of each of the four Carbon Plans.


## Qualifications of Michael P. Gorman

## Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A: Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q: PLEASE STATE YOUR OCCUPATION.
A: I am a consultant in the field of public utility regulation and a Managing Principal with the firm of Brubaker \& Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

Q: PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A: In 1983 I received a Bachelor of Science Degree in Electrical Engineering from Southern Illinois University, and in 1986, I received a Master's Degree in Business Administration with a concentration in Finance from the University of Illinois at Springfield. I have also completed several graduate level economics courses.

In August of 1983, I accepted an analyst position with the Illinois Commerce Commission ("ICC"). In this position, I performed a variety of analyses for both formal and informal investigations before the ICC, including: marginal cost of energy, central dispatch, avoided cost of energy, annual system production costs, and working capital. In October of 1986, I was promoted to the position of Senior Analyst. In this position, I assumed the additional responsibilities of technical leader on projects, and my areas of responsibility were expanded to include utility financial modeling and financial analyses.

In 1987, I was promoted to Director of the Financial Analysis Department. In this position, I was responsible for all financial analyses conducted by the Staff. Among other things, I conducted analyses and sponsored testimony before the ICC on rate of return, financial integrity, financial modeling and related issues. I also supervised the development of all Staff analyses and testimony on these same issues. In addition, I supervised the Staff's review and recommendations to the Commission concerning utility plans to issue debt and equity securities.

In August of 1989, I accepted a position with Merrill-Lynch as a financial consultant. After receiving all required securities licenses, I worked with individual investors and small businesses in evaluating and selecting investments suitable to their requirements.

In September of 1990, I accepted a position with Drazen-Brubaker \& Associates, Inc. ("DBA"). In April 1995, the firm of Brubaker \& Associates, Inc. was formed. It includes most of the former DBA principals and Staff. Since 1990, I have performed various analyses and sponsored testimony on cost of capital, cost/benefits of utility mergers and acquisitions, utility reorganizations, level of operating expenses and rate base, cost of service studies, and analyses relating to industrial jobs and economic development. I also participated in a study used to revise the financial policy for the municipal utility in Kansas City, Kansas.

At BAI, I also have extensive experience working with large energy users to distribute and critically evaluate responses to requests for proposals ("RFPs") for electric, steam, and gas energy supply from competitive energy suppliers. These analyses include the evaluation of gas supply and delivery charges, cogeneration and/or
combined cycle unit feasibility studies, and the evaluation of third-party asset/supply management agreements. I have participated in rate cases on rate design and class cost of service for electric, natural gas, water and wastewater utilities. I have also analyzed commodity pricing indices and forward pricing methods for third party supply agreements, and have also conducted regional electric market price forecasts.

In addition to our main office in St. Louis, the firm also has branch offices in

Corpus Christi, Texas; Detroit, Michigan; Louisville, Kentucky and Phoenix, Arizona.

## Q: HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of service and other issues before the Federal Energy Regulatory Commission and numerous state regulatory commissions including: Alaska, Arkansas, Arizona, California, Colorado, Delaware, the District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, and before the provincial regulatory boards in Alberta, Nova Scotia, and Quebec, Canada. I have also sponsored testimony before the Board of Public Utilities in Kansas City, Kansas; presented rate setting position reports to the regulatory board of the municipal utility in Austin, Texas, and Salt River Project, Arizona, on behalf of industrial customers; and negotiated rate disputes for industrial customers of the Municipal Electric Authority of Georgia in the LaGrange, Georgia district.

Q: PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR ORGANIZATIONS TO WHICH YOU BELONG.

A: I earned the designation of Chartered Financial Analyst ("CFA") from the CFA Institute. The CFA charter was awarded after successfully completing three examinations which covered the subject areas of financial accounting, economics, fixed income and equity valuation and professional and ethical conduct. I am a member of the CFA Institute's Financial Analyst Society.

## Duke Energy Progress

## Preliminary Resource Additions and Retirements

| Line | Utility | {f24030683-afe3-43a4-8280-5ed97f2e3db9} Coal  <br>  Retirements }$(1)$ | $\frac{\text { Solar }}{(2)}$ | Onshore Wind (3) | $\frac{\text { Battery }}{(4)}$ | $\frac{C C}{(5)}$ | $\frac{C T}{(6)}$ | Offshore Wind <br> (7) | Small Modular Reactor (8) | Pumped Storage Hydro (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Portfolio 1-Interim Target Achievement in 2030 |  |  |  |  |  |  |  |  |  |  |
| 1 | Duke Energy Carolinas | $(1,700)$ | 3,800 | 0 | 800 | 1,200 | 0 | 0 | 0 | 0 |
| 2 | Duke Energy Progress | $(3,200)$ | 3,400 | 600 | 2,400 | 1,200 | $\underline{0}$ | 800 | $\underline{0}$ | 0 |
| 3 | Total | $(4,900)$ | 7,200 | 600 | 3,200 | 2,400 | 0 | 800 | 0 | 0 |
| Portfolio 2-Interim Target Achievement in 2032 |  |  |  |  |  |  |  |  |  |  |
| 4 | Duke Energy Carolinas | $(1,700)$ | 4,100 | 0 | 1,100 | 1,200 | 0 | 0 | 0 | 0 |
| 5 | Duke Energy Progress | $(3,200)$ | 3,100 | 1,200 | 1,900 | 1,200 | $\underline{0}$ | $\underline{1,600}$ | $\underline{0}$ | $\underline{0}$ |
| 6 | Total | $(4,900)$ | 7,200 | 1,200 | 3,000 | 2,400 | 0 | 1,600 | 0 | 0 |
| Portfolio 3-Interim Target Achievement in 2034 |  |  |  |  |  |  |  |  |  |  |
| 7 | Duke Energy Carolinas | $(3,100)$ | 5,000 | 0 | 900 | 1,200 | 0 | 0 | 300 | 1,700 |
| 8 | Duke Energy Progress | $(3,200)$ | 4,600 | 1,200 | 2,600 | 1,200 | 0 | 0 | $\underline{0}$ | 0 |
| 9 | Total | $(6,300)$ | 9,600 | 1,200 | 3,500 | 2,400 | 0 | 0 | 300 | 1,700 |
| Portfolio 4-Interim Target Achievement in 2034 |  |  |  |  |  |  |  |  |  |  |
| 10 | Duke Energy Carolinas | $(3,100)$ | 5,000 | 0 | 900 | 1,200 | 0 | 0 | 300 | 1,700 |
| 11 | Duke Energy Progress | $(3,200)$ | 3,700 | 1,200 | 1,800 | 1,200 | 0 | 800 | $\underline{0}$ | 0 |
| 12 | Total | $(6,300)$ | 8,700 | 1,200 | 2,700 | 2,400 | 0 | 800 | 300 | 1,700 |

Source:
Appendix E, Tables E-48, E-49, E-50, and E-51.

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Working Paper No. 19-4<br>The Role of Electricity Prices in Structural Transformation: Evidence from the Philippines<br>By<br>Majah-Leah V. Ravago<br>Arlan Zandro I. Brucal<br>James Roumasset<br>Jan Carlo Punongbayan

February 2019

# The Role of Electricity Prices in Structural Transformation: <br> Evidence from the Philippines* 

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#### Abstract

The Philippines provides an extreme example of Rodrik's observation that late developing countries experience deindustrialization at lower levels of per capita income than more advanced economies. Previous studies point to the role of protectionist policies, financial crises, and currency overvaluation as explanations for the shrinking share of the industry sector. We complement this literature by examining the role of electricity prices in the trajectory of industry share. We make use of data at the country level for 33 countries over the period 1980-2014 and at the Philippine regional level for 16 regions over the period 1990-2014. We find that higher electricity prices tend to amplify deindustrialization, causing industry share to turn downward at a lower peak and a lower per capita income, and to decline more steeply than otherwise. In a twocountry comparison, we find that power-intensive manufacturing subsectors have expanded more rapidly in Indonesia, where electricity prices have been low, whereas Philippine manufacturing has shifted toward less power intensive and more laborintensive subsectors in the face of high electricity prices.


Keywords: electricity prices, structural transformation, deindustrialization
JEL codes: O10, O14, Q40, Q41

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## The Role of Electricity prices in Structural Transformation:

## Evidence from the Philippines

## 1. INTRODUCTION

One of the arguments for making power more affordable is that cheaper power may help to ameliorate premature deindustrialization, i.e. the peaking of industry's share in employment and value added at substantially lower levels of per capita income than historically observed in developed countries (Dasgupta and Singh 2007; Rodrik 2016). Premature deindustrialization can have adverse productivity effects and slow development generally. For example, deindustrialization in Latin American and African countries has been accompanied by growth of low productivity informal and non-traded goods sectors and increased rural-to-urban migration (Rodrik 2016).

While it is not difficult to imagine why high power-prices could be disadvantageous to manufacturing, empirical analysis of the relationship between electricity prices and industry is wanting, as is understanding of the mechanisms by which electricity prices influence structural change. The high cost of power may act as a deterrent to investment in power-intensive industries thereby biasing growth towards more labor-intensive sectors as well as industrial subsectors. Some manufacturing industries, e.g. electronics assembly lines, can also be sensitive to the quality of power. A few seconds of fluctuating electric current may waste a whole batch, substantially increasing costs.

From 1991 to 2000, the power industries in Indonesia, Malaysia, Thailand, and the Philippines were all vertically integrated and highly subsidized. With the Philippines' passage of the Electric Power Industry Reform Act (EPIRA) in 2001, the power industry went through a major restructuring. Generation was privatized and a transition to more competitive retailing was mandated. ${ }^{1}$ Transmission and distribution were left as regulated monopolies. Due to implementation delays and the loss of subsidies, however, industrial electricity prices remain high, although the rate of price increase has slowed significantly (Ravago et al. 2018c).

Electricity prices have been high in the Philippines relative to its ASEAN neighbors (International Energy Agency 2016). Philippine residential rates in 2015 were $\$ 0.19 / \mathrm{kWh}$ versus $\$ 0.16 / \mathrm{kWh}$ in Singapore, $\$ 0.13 / \mathrm{kWh}$ in Thailand, $\$ 0.12 / \mathrm{kWh}$ in Indonesia, and $\$ 0.08 / \mathrm{kWh}$ in Malaysia. Industrial rates were also higher in the Philippines ( $\$ 0.12 / \mathrm{kWh}$ ) than in the rest of ASEAN with the exception of Singapore (at $\$ 0.13 / \mathrm{kWh}$ ).

There are many reasons why electricity prices have been high in the Philippines, including governance failures in the form of red tape (Clarete 2018), onerous licensing requirements (Escresa 2018), and local-central government standoffs, e.g., the Redondo case (Fabella 2018). These have dampened the appetite of investors (Alonzo and Guanzon 2018) resulting in a paucity of new generation capacity in the face of growing demand (Abrenica 2014). Taxes and subsidies (Clarete 2018), sub-optimal fuel mix (Ravago et al. 2018a), feed-intariffs, and missionary charges also contribute to the high cost of electricity (Ravago and

[^31]Roumasset 2018). Lack of competitiveness and possible transfer pricing from generation companies to affiliated distribution utilities may also increase prices (Ravago et al 2018b, Abrenica 2014). While transmission costs are slightly higher in an archipelago, high prices persist even in large population clusters on the major islands, e.g., within the National Capital Region and surrounding areas.

In this paper, we seek to illuminate how high electricity prices can exacerbate premature deindustrialization. High prices of an input tend to discourage the growth of sectors that use that input more intensively. Specifically, we illustrate the role that electricity prices play in the growth and composition of industry in the Philippines. We show that the composition of Philippine manufacturing shifted in favor of subsectors that use power less intensively (e.g. machinery). This is in contrast to Indonesia's experience, where manufacturing growth has been largely driven by more power-intensive subsectors. We adapt Rodrik's (2016) analysis to capture the relationship between electricity prices and the share of industry in total output. We then simulate how industry's share changes with electricity prices.

In cross-country analysis, we find that higher electricity prices are associated with a downward shift in the share of industrial gross value added (GVA) and the peaking of industry shares at lower per capita incomes. In analysis of Philippine data at the regional level, we similarly find higher electricity prices being associated with the industry share in output peaking at substantially lower levels of per capita income and declining at a much faster rate. While data limitations constrain definitive conclusions about causality, it appears that structural transformation is not independent of electricity prices, particularly in the Philippines.

The paper is organized as follows: Section 2 documents some stylized facts about electricity prices and structural transformation in the Philippines and neighboring countries. The Philippine development path displays Rodrik's rule with a vengeance; the share of manufacturing turned downwards at a relatively low maximum and descended faster. Comparing the Philippines with its higher per-capita income Southeast Asian neighbors, the shares of the industrial sectors are inversely correlated with electricity prices. With the exception of Singapore, Philippine electricity prices are highest and industry shares lowest. Controlling for subsector, the electricity cost shares tend to be higher in the Philippines than in Indonesia. The descriptive analysis helps motivate further analysis of premature deindustrialization and its relationship to electricity prices. Section 3 outlines the empirical methodology adapted from Rodrik (2016) to examine the issue more formally. It then presents the estimation results of the cross-country analysis and for regions of the Philippines. Section 4 provides conclusions and policy implications.

## 2. STRUCTURAL TRANSFORMATION AND ELECTRICITY PRICES: STYLIZED FACTS

There are several mechanisms through which electricity prices can influence growth in industry and hence the structural development of an economy. One mechanism operates through business investment, since higher electricity prices increase the marginal cost of production according to the cost share of electric power. The demanded quantities of energy intensive goods will also decline. Using National Income and Product Account data from the U.S. Bureau of Economic Analysis, Edelstein and Kilian (2007) analyzed how energy price shocks influence
non-residential fixed investment and concluded that while the estimated negative response of business fixed investment to energy price shocks tends to be small, it satisfies conventional statistical significance criteria.

Abeberese (2017) looked at the impact of electricity prices on manufacturing productivity and found that firms switch to less power-intensive production in response to higher electricity prices. If less power-intensive industries involve lower technology products, then higher electricity prices could result in less product sophistication and consequently, lower productivity. Electricity rates can also influence national output. Alvarez and Valencia (2016) showed that in Mexico a $13 \%$ reduction in electricity prices due to substitution of fuel oil for natural gas could increase Mexico's manufacturing output by $1.4 \%$ to $3.6 \%$.

High electricity prices can also have a negative effect on foreign direct investment (FDI). The literature is replete with studies illustrating how FDI can increase productivity and growth of the manufacturing sector (e.g., Arnold and Javorcik 2009). Nonetheless, few have looked at the impact of energy prices on FDI inflows. Bilgili et al. (2012) is one of the rare examples, which found that high-energy prices deterred FDI entry into Turkey, particularly at times when FDI inflow was high in other countries.

The Philippine experience has long puzzled development scholars. In the early $19^{\text {th }}$ century, the Philippines was the third Asian country (and the first in Southeast Asia) to enter the so-called " $5 \%$ industrial growth club"-those countries that had experienced industrial growth rates of at least 5\% a year (De Dios and Williamson 2015). This continued until the early 1960s when the Philippines had the most developed manufacturing sector in Southeast Asia, albeit supported by import protection (Bautista and Power 1979; Power and Sicat 1971). However, industrialization stagnated from the late 1960s, with the Philippines thereby missing the East Asian Miracle which brought the dramatic ascent of newly industrialized economies across Asia in the 1970s through the 1990s (e.g., Vos and Yap 1996). With the relative decline of industry in the Philippines, in particular manufacturing, came the rise of services. Workers from rural and agricultural areas, in search of better living standards, often found themselves in low-skill, traditional service-oriented jobs or as contract workers overseas.

Daway and Fabella (2015) and de Dios and Williamson (2015) attribute the country's premature deindustrialization to decades of protectionism, political instability, insufficient export promotion, financial crises, and real exchange rate overvaluation. Recent anecdotal accounts, however, stress how higher electricity prices may have also stunted industrial growth. For instance, Rimando and Mercado (2013) and Deloitte (2014) assert that high power costs hampered the Philippines' ability to compete in the manufacturing sector. Philippine small and medium enterprises in particular are said to be hit hardest by high power costs (Remo 2014). For those manufacturing industries that did operate in the Philippines, the high cost of power is often cited as among the constraints to expansion. Unreliability of power supply further increases usage costs. Since 2006, the Philippines has ranked below Indonesia, Malaysia, and Thailand in terms of power quality according to the Global Competitiveness Report of the World Economic Forum (World Bank WEF 2018). In 2016-2017, out of the 138 countries surveyed, the

## Attachment MPG-2

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Philippines ranked 94th whereas Indonesia, Malaysia, and Thailand ranked 89th, 39th, 61st, respectively (World Bank WEF 2018). ${ }^{2}$

The Philippines is not unique in its industrial under-performance. Using data from the Groningen Growth and Development Center (Timmer et al. 2014) covering 42 countries, Rodrik (2016) observed that the vast majority of developing countries today are experiencing deindustrialization at lower levels of per-capita income. His analysis indicates that manufacturing employment shares in late peaking countries (after 1990) were about one-third that of earlier peaking countries.

To further motivate the discussion, we examine data on manufacturing output shares from the World Development Indicators (WDI) for China, Indonesia, South Korea, and the Philippines. Manufacturing is the largest component of the industrial sector, which also includes mining and quarrying, construction, and supply of electricity, gas, and water. Figure 1 shows the relationship between gross domestic product (GDP) per capita and the share of manufacturing gross value added (GVA) in GDP. Manufacturing share in the Philippines reached its peak at a low level of GDP per capita relative to its neighbors. As Figure 1 shows, the manufacturing share in the Philippines peaked at a lower level and at a lower GDP per capita compared to China, South Korea and Indonesia. The horizontal distance of each line reflects the growth of each economy from 1960 to 2015. For example, the percentage increase in South Korea's per capita GDP was an order of magnitude greater than that in the Philippines.

Figure 1. Manufacturing Share vs. GDP per capita, 1960-2015


Source: World Bank, 1960-2015.

Manufacturing share in the Philippines fell fast and from a relatively low level.
Data source: World Development Indicators .

[^32]
## Attachment MPG-2

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The Philippine growth path vis-à-vis its Asian neighbors is characterized by an early substitution away from manufacturing toward services at significantly lower levels of per capita income. With the Plaza Accord in 1985, Japanese firms sought to restore their competitive advantage by developing a regionally integrated supply chain of component and assembly plants. This impetus, and the competitive response of European and American firms, led countries in East and Southeast Asia to develop particular niches within their own manufacturing sectors according to their own comparative advantages. Thailand was the recipient of major Japanese investments and became a prime location for automotive manufacturing. South Korea and Taiwan became hubs of electronic and semiconductor production. Malaysia was able to boost its information technology industry, while Vietnam gained foreign attention as a promising new economy for low cost, labor intensive manufacturing. The Philippines, in contrast, seems to have failed to partake in this industrial renaissance, not only losing ground in manufacturing for much of the latter part of the $20^{\text {th }}$ century but doing so at a comparatively rapid rate. ${ }^{3}$

Have electricity prices played a significant role in hampering Philippine industrialization? Since the 1990 s, electricity rates in the Philippines have been consistently high relative to neighboring countries such as Indonesia, Malaysia, and Thailand, and this trend persisted throughout the 2000s (Figure 2).

Figure 2. Industrial electricity prices in Southeast Asian countries (constant 2010 USD/kWh)


Electricity rates in the Philippines have been high, especially relative to Indonesia, Malaysia, and Thailand. The pronounced price declines for the Philippines and Singapore in 2009 were primarily due to the global financial crisis, which depressed demand and lowered input costs (NEMS 2009). Data sources: Aldaba (2003), Enerdata (various years), Meralco (various years), MEIH Statistics (various years), Singapore National Library Board (various years), Singapore Statistics (various years).

[^33]High electricity rates in the Philippines date back to the 1980 to early 1990 period when FDI inflows to East Asia were at record high levels. Indonesia, with its low industrial rates, remained competitive, as did Thailand. Power industries in these countries are vertically integrated and highly subsidized. Figure 3 shows a strong negative correlation between FDI inflows and industrial rates. In Indonesia, where average national electricity prices remained fairly flat at low levels, FDI inflows increased from the late 1980s up to 1997 and again after recovery from the Asian Financial Crisis from 2004 to 2010. In contrast, electricity prices in the Philippines have risen continuously and the amount of net FDI inflows has remained low. Anecdotal accounts of foreign business leaders cite both the prices and the quality of electricity to be major deterrents to investing in the Philippines (Enerdata 2014).

Figure 3. Correlation between FDI inflow and industrial electricity rates, 1984-1992


FDI inflow (Balance of payments, current million USD) is negatively correlated with industrial electricity rates (in US cents/kWh).

As shown in Figure 4, the ordering of countries with respect to industry shares is opposite that of electricity prices. Indonesia, Malaysia, and Thailand have higher industry shares than the Philippines, even though they had higher per capita GDPs during the period. That Singapore's industrial share is even lower than that of the Philippines is not surprising given the country's much higher per capita income, high level of re-exporting, and large complementary service sector (e.g. finance).

Figure 4. Industry value added (\% of GDP)


The share of industry is higher for Indonesia, Malaysia, and Thailand relative to the Philippines.
Data source: World Bank, World Development Indicators.
To further explore the link between electricity prices and economic development, we examine the changing composition of manufacturing in the Philippines and Indonesia, which had relatively high and low electricity rates respectively. Table 1 reports electricity cost shares in output value by manufacturing subsector for the two countries. For most subsectors electricity cost shares were higher in the Philippines than in Indonesia, in some cases roughly double or more. Cost share rankings of industries are similar in both countries. Chemicals and related products (ISIC 35) and basic metals (ISIC 37) rank at or near the top for both; wood and related products (ISIC 33) and other manufacturing (ISIC 39) rank at or near the bottom. Divergence in ranking for some subsectors may be due to different product composition within the subsectors.

Table 1. Electricity cost shares by manufacturing subsector, Philippines and Indonesia, 1998-1999

|  |  | Philippines |  | Indonesia |  |
| :---: | :--- | :---: | :---: | :---: | :---: |
| ISIC <br> Code | Industry | Electricity cost/ <br> Output value | Rank | Electricity cost/ <br> Output value | Rank |
| 31 | Manufacture of Food, <br> Beverages, and Tobacco | 0.048 | 1 | 0.023 | 5 |
| 35 | Chemicals and Chemical, <br> Petroleum, Coal, Rubber and <br> Plastic Products | 0.043 | 2 | 0.043 | 1 |
| 37 | Basic Metal Industries | 0.038 | 3 | 0.041 | 2 |

32 \begin{tabular}{lllll}
Textile, Wearing Apparel, and \& 0.035 \& 4 \& 0.019 \& 6 <br>

34 \& | Leather Industries |
| :--- | \& 0.034 \& 5 \& 0.026 <br>

\hline | Paper and Paper Products, |
| :--- |
| Printing and Publishing | \& 0.032 \& 6 \& 0.012 \& 9 <br>

36 \& | Non-Metallic Mineral |
| :--- |
| Products, except Products of |
| Petroleum and Coal | \& 0.032 \& 6 \& 0.032 <br>

\hline | Fabricated Metal Products, |
| :--- |
| Machinery and Equipment | \& 0.028 \& 8 \& 0.015 \& 7 <br>


\hline | Other Manufacturing |
| :--- |
| Industries |
| Wood and Wood Products, | \& 0.022 \& 9 \& 0.013 \& 8

\end{tabular}

Data sources: Philippine Statistics Authority (PSA) (Annual Survey of Philippine Business and Industry (ASPBI)) and Badan Pusat Statistik - Statistics Indonesia (Industri Manufaktur Census of Manufacturing).
Note: ISIC is International Standard Industrial Classification. The figures reflect averages for 1998-1999.

Figure 5 shows the changing shares of manufacturing subsectors for the two countries during the period 1984-2001. The composition of Philippine manufacturing shifted in favor of machinery and other subsectors with low electricity cost shares and away from food, chemicals, and other subsectors with high electricity cost shares. The fastest growing subsector in the Philippines was machinery, driven mainly by labor intensive assembly operations in semiconductors and electronic products. The more power-intensive subsectors of textiles, metals, and chemicals grew at annual rates of just $0.4 \%, 0.7 \%$, and $2.4 \%$, respectively. In contrast, growth in Indonesian manufacturing has been driven by power-intensive subsectors, including metals, which grew at $15.3 \%$ annually and machinery, which grew at $19.4 \%$. Compared with its ASEAN neighbors, Indonesia's electricity prices were both lower and flatter during the period, and its more power-intensive sectors were growing rapidly.

## Attachment MPG-2

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Figure 5. Manufacturing subsector shares, 1984-2001


Subsectors are ranked according to electricity cost share with the bottom subsector having the highest cost share. The composition of Philippine manufacturing has shifted toward subsectors with lower electricity cost shares (especially machinery) and away from higher cost subsectors (notably food). In contrast, shares of Indonesia's more power-intensive sectors were growing rapidly.
Data sources: Philippine Statistics Authority (PSA) 2010 Annual Survey of Philippine Business (ASBPI) and Industry and 1983-2001 Badan Pusat Statistik - Statistics Indonesia (Industri Manufaktur - Census of Manufacturing)
Note: ISIC codes are as follows: Food, 31; Textiles, 32; Wood, 33; Paper, 34; Chemicals, 35; Minerals, 36; Metals, 37; Machinery, 38; Others, 39.

The contrast between the Philippines and Indonesia also manifests in the growth of manufacturing in the aggregate. During the 1984-2001 period, manufacturing gross value added grew at annual rates of $2.8 \%$ in the Philippines versus $14.6 \%$ in Indonesia.

The descriptive analysis of this section gives an indication of how electricity prices may influence growth of the manufacturing sector and industry more broadly. We examine this issue more formally in the next section.

## 3. EMPIRICAL ANALYSIS

The descriptive statistics in Section 2 suggest that electricity prices may augment the premature deindustrialization described by Rodrik (2016). In this section, we examine this hypothesis more formally by adding electricity price as an explanatory variable to Rodrik's econometric model of industry shares in output. We follow Rodrik in emphasizing real measures (aggregation at constant prices) of output in order to keep quantities distinct from price movements for purposes of understanding structural change. Estimation using nominal shares is
also included for completeness. We estimate the model using unbalanced panel data, first at the country level and then for regions within the Philippines.

### 3.1 Empirical model

To examine the relationship between the share of industry in output and electricity prices in conjunction with rising output per capita, we estimate the following equation:

$$
\begin{equation*}
S_{c t}=\alpha+\beta_{0} P_{c, t}+\beta_{1} G D P_{c, t}+\beta_{2} G D P_{c, t}^{2}+\beta_{3} P_{c, t} G D P_{c, t}+\beta_{4} P_{c, t} G D P_{c, t}^{2}+\delta X+\varepsilon_{c t} \tag{1}
\end{equation*}
$$

where $S_{c t}$ is the share of industry in GDP (in real or nominal terms) of country or Philippine region $c$ in year $t ; P_{c, t}$ is the unit price of electricity; $G D P_{c, t}$ is GDP per capita; $X$, is a $k \times 1$ vector of other controls, including population, fixed effects by country or region to account for unobserved time-invariant heterogeneity in cross section (e.g., initial resource endowments, history), and decade dummies (i.e., 1980s, 1990s, and 2000s); and $\varepsilon_{c t}$ is the error term. Electricity price, GDP per capita, and population are expressed in logarithms. GDP per capita and population are included in both levels and quadratic form, and GDP per capita and its quadratic form are both interacted with electricity price to account for the possibility that the relationship between industry share and GDP per capita is influenced by electricity prices.

An issue of concern in the estimation of equation (1) is the potential endogeneity of electricity prices. The estimated effect of electricity prices on industry shares will be biased if an omitted variable correlated with electricity price movements also affects a country's industrial trajectory. As Rodrik (2016), points out, adding period dummies captures the effects of common shocks on industrial share in each period relative to the excluded period (pre-1980 for the crosscountry analysis and pre-1990 for the Philippine regional analysis). The period dummies used in the regression analysis help to control for any endogeneity of electricity prices. To check for the robustness of our results, we use one-period lagged values for electricity price and GDP per capita, which captures the sluggish response of macroeconomic variables to energy price shocks.

### 3.2 Data

For the cross-country analysis, we use annual data for 1980-2014 for 33 OECD and Southeast Asian countries. Industry share figures, reflecting gross value added of industry relative to GDP, are from World Bank WDI. Electricity price data come from various sources. For the OECD countries, data were obtained from the International Energy Agency, - OECD Library, and are expressed in USD/kWh in purchasing-power-parity terms. For the Southeast Asian countries data are from power distribution utility companies (Meralco, Malaysia Energy Information Hub, and Singapore Public Utilities Board) supplemented by data from Enerdata and individual country statistics offices. We also rely on Aldaba (2003) for earlier electricity prices from 1980 to 1991 for select Southeast Asian countries. Table 2 presents summary statistics for the cross-country data.

Table 2. Cross-Country Summary Statistics, 1980-2014

|  | Obs | Mean | St Dev | Min | Max |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Industry share in GDP, real | 947 | 28.38 | 8.00 | 10.72 | 49.20 |


| Industry share in GDP, nominal | 930 | 28.80 | 6.60 | 10.67 | 48.53 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Electricity price (constant 2010 USD/kWh) | 944 | 0.16 | 0.12 | 0.05 | 1.26 |
| GDP per capita (constant 2005 prices, thousand USD) | 1102 | 29.81 | 21.11 | 1.23 | 111.97 |
| Population (million) | 1155 | 42.46 | 59.91 | 0.36 | 318.56 |
| Number of years (1980-2014) | 35 |  |  |  |  |
| Number of countries | 33 |  |  |  |  |
| Observations | 1155 |  |  |  |  |

Data sources: Aldaba (2003); Enerdata (various years); Meralco (various years); Malaysian Energy Information Hub Statistics (various years), Singapore National Library Board (various years), Singapore Statistics (various years), WDI (various years); International Energy Agency OECD (various years), International Labor Organization-Laborsta (various years)

For the Philippine regional analysis, we use annual data for 16 regions for 1990-2014 (the longest period for which comparable regions exist). Regional gross domestic product (RGDP) data are from the regional income accounts publications of the Philippine Statistics Authority (PSA). Electricity prices ( $\mathrm{PhP} / \mathrm{kWh}$, measured in constant 2000 prices) are derived from revenue and sales data for distributional utilities (DUs) reported by the Philippine Department of Energy (DOE) with prices taken as the weighted averages. For the three regions covered by Meralco, the biggest DU which operates in Metro Manila and surrounding provinces, the shares of regional consumption compared to total consumption are used to weight each of three regions. As a check on the accuracy of our DOE-derived prices, we compute the simple correlation coefficient with the official electricity price indices reported by PSA. The two series are highly correlated ( 0.98 for the Philippines; 0.95 for Luzon; 0.92 for the Visayas; 0.95 for Mindanao; and 0.91 for the National Capital Region). Summary statistics are presented in Table 3.

Table 3. Philippine Regional Summary Statistics, 1990-2014

|  | Obs | Mean | St Dev | Min | Max |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Average electricity price (PhP/kWh, <br> weighted by sales, constant 2000 | 386 | 4.27 | 0.89 | 0.97 | 6.37 |
| $\quad$ prices) |  |  |  |  |  |

[^34]
### 3.3 Cross-country analysis and simulations

Results from estimating equation (1) using cross-country data are presented in Table 4. Period dummies are excluded in columns (1) to (3) and included in columns (4) to (6). Within each group, two different dependent variables are incorporated: industrial output share in real terms and industrial output share in nominal terms. ${ }^{4}$

In the specifications without period dummies, we find that holding other things constant, electricity price (in real terms) is negatively and significantly associated with the both the real output shares of industry. This relationship is not preserved using nominal variables however (columns 2). As suggested by Rodrik (2016), this may be due to the confounding effects of price movements.

Period dummies (1980s, 1990s, and 2000s) are included to capture time trends and to control for common shocks on industrial share in each decade relative to the years before 1980. The results in column (4) of Table 4 show a remarkable set of regularities. First, we find that there is a strong and statistically significant negative association between electricity prices and output shares of industry (in real terms). This finding empirically validates our descriptive analysis in the previous section. We find an inverted U-shaped relationship between industry shares and GDP per capita in that industry shares are related positively to GDP per capita and negatively to the square of GDP per capita. We also find a strong association between the electricity price interacted with GDP per capita variables and the industrial shares (in real terms). Our finding suggests that with higher electricity prices the rate of growth of industry shares is slower and, after a certain per capita GDP level, the rate of decline in industry shares is faster.

Table 4. Regression results for industry shares in GDP, cross country, 1980-2014

|  | (1) | (2) | (4) | (5) |
| :---: | :---: | :---: | :---: | :---: |
|  | Real output | Nominal output | Real output | Nominal output |
| Electricity price | -90.86*** | -50.82 | -83.50*** | -42.33 |
|  | (24.03) | (31.48) | (25.36) | (33.28) |
| GDP/capita | 86.13*** | 78.69*** | 78.72*** | 66.99*** |
|  | (14.77) | (18.22) | (15.06) | (16.31) |
| $(\mathrm{GDP} / \mathrm{capita})^{2}$ | -4.32*** | -4.10*** | -3.85*** | -3.32*** |
|  | (0.78) | (1.00) | (0.80) | (0.88) |
| Electricity price*(GDP/capita) | 20.11*** | 10.44 | 18.37*** | 8.35 |
|  | (5.54 | (6.72) | (5.85) | (7.18) |
| Electricity price*(GDP/capita) ${ }^{2}$ | -1.10*** | -0.54 | -0.99*** | -0.40 |
|  | (0.31) | (0.36) | (0.33) | (0.38) |
| Population | 59.80** | 63.30* | 43.78 | 34.91 |

[^35]|  | $(26.94)$ | $(32.20)$ | $(26.72)$ | $(28.66)$ |
| :--- | :---: | :---: | :---: | :---: |
| Population ${ }^{2}$ | $-2.32^{* * *}$ | $-2.23^{* *}$ | $-1.79^{* *}$ | -1.29 |
|  | $(0.82)$ | $(0.96)$ | $(0.83)$ | $(0.85)$ |
| 1980 s |  |  | $1.69^{* *}$ | $3.79 * * *$ |
|  |  |  | $(0.76)$ | $(1.03)$ |
| 1990 s |  |  | $1.59 * * *$ | $2.64 * * *$ |
|  |  |  | $(0.50)$ | $(0.55)$ |
| 2000 s |  |  | $1.14^{* * *}$ | $2.15 * * *$ |
|  |  |  | $(0.30)$ | $(0.37)$ |
| Constant | $-745.82^{* * *}$ | $-776.87 * *$ | $-598.59^{* *}$ | $-529.07 *$ |
|  | $(249.06)$ | $(320.88)$ | $(243.30)$ | $(279.44)$ |
| Country fixed effects | Yes | Yes | Yes | Yes |
| Observations | 815 | 798 | 815 | 798 |
| $\mathrm{R}^{2}$ (adjusted) | 0.48 | 0.38 | 0.51 | 0.45 |
| $\mathrm{R}^{2}$ (within) | 0.49 | 0.39 | 0.52 | 0.46 |

Estimation results are from equation (1). Electricity price, GDP per capita, and population are expressed in logarithms. Real output shares are based on constant 2005 USD. Robust standard errors clustered by country are given in parentheses. ${ }^{*},{ }^{* *}$, ${ }^{* * *}$ correspond to 10,5 , and 1 percent significance levels, respectively.

To more vividly show how electricity prices influence the relationship between industry share and GDP per capita, we use the estimates from equation (1) under the specification with period dummies (column 4 of Table 4) to conduct simulations. We select four different electricity prices representing quantile values from the distribution of prices across the 33 countries and 35 years of our sample (see Appendix Figure A.1).

We plot the simulation paths in Figure 6 and provide key quantitative results in Table 5. Each curve in Figure 6 represents predicted industry share as a function of log GDP per capita at a different electricity price quintile. Higher energy prices increase the slope of the curve, implying an earlier turning point and a more rapid decline. The vertical lines indicate the level of GDP per capita at which the industry share reaches a maximum. The peak for an electricity price at the $80^{\text {th }}$ percentile, as represented by the dashed vertical line, occurs at a lower per capita income than the peak for an electricity price at the $20^{\text {th }}$ percentile, as represented by the solid vertical line.

Figure 6. Simulated paths of industry share by electricity price, country level


Each curve represents the simulated path of industry share at a different electricity price quintile. The vertical lines point to the log GDP per capita levels at which industry shares peak, the solid line for an electricity price at the $20^{\text {th }}$ percentile, the dashed line for an electricity price at the $80^{\text {th }}$ percentile.

Table 5 shows quantitative magnitudes for the simulation exercises. Electricity prices range from $0.10 \mathrm{USD} / \mathrm{kWh}$ at the $20^{\text {th }}$ percentile to $0.19 \mathrm{USD} / \mathrm{kWh}$ at the $80^{\text {th }}$ percentile. For an electricity price at the $80^{\text {th }}$ percentile, the turning point comes at a relatively low GDP per capita, about USD56,184 (in 2005 USD) with the industrial share peaking at $31.7 \%$ of GDP. By contrast, for an electricity price at the $20^{\text {th }}$ percentile, the turning point comes at a much higher US $\$ 111,968$ (in 2005 USD) with a peak in the industrial share of $33.3 \%$.

Table 5. Simulated GDP per capita turning points of industry share by electricity price, country level

| Electricity price |  | GDP/capita turning points <br> (USD thousand) |  | Industry shares at peak <br> $(\%)$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Percentile | USD/kWh | Real output | Nominal output | Real output | Nominal output |
| 80 | 0.19 | 56.2 | 22.7 | 31.7 | 29.7 |
| 60 | 0.15 | 67.3 | 22.7 | 32.0 | 29.6 |
| 40 | 0.13 | 81.6 | 22.5 | 32.4 | 29.4 |
| 20 | 0.10 | 111.6 | 22.2 | 33.3 | 29.2 |

The table pertains to the simulated GDP per capita where industry share peaks using parameter estimates from Table 4, columns (4) and (5). Electricity prices are in constant 2010 USD and GDP per capita values in constant 2005 prices.

In sum, our results imply that a higher electricity price tends to shift the inverted U relationship between industrial share and GDP per capita down and to the left. This suggests that high electricity prices amplify premature deindustrialization, i.e., deindustrialization occurs sooner in terms of GDP per capita and at lower industry shares.

The Philippines represents an extreme version of premature deindustrialization. Comparing the Philippines with its higher per capita income Southeast Asian neighbors, we find, with the exception of Singapore, ${ }^{5}$ a lower industry share and, higher electricity prices. Higher electricity prices in the Philippines appear to have exacerbated premature deindustrialization.

### 3.4. Philippine regional analysis and simulations

We now turn to the influence of electricity prices on industry shares across Philippine regions. We estimate equation (1) using panel data for 16 regions of the Philippines over the years 1990-2014. The dependent variable is the share of industry GVA in RGDP in real terms. To mitigate the effects of measurement error associated with electricity price data in small regions we weight observations by population using the maximum population over the sample time frame for each region. Such population weighting ensures that our regression results are driven by data points that are deemed more accurate by giving them more influence in estimating parameters. This increases the efficiency of the estimation compared to unweighted regression. ${ }^{6}$ We then use the resulting estimates to simulate the path of industry share with respect to RGDP per capita holding electricity price constant at different levels.

Table 6 presents regression results for equation (1). Annual dummies are included to capture year effects for the years 1990-2014. The results show a negative and statistically

[^36]significant association between electricity prices and industry share. As with the cross-country analysis, higher electricity prices appear to reduce the share of industry in RGDP. ${ }^{7}$

Table 6. Regression results for industry share, Philippine regions, 1990-2014

|  | Real output |
| :--- | :---: |
| Electricity price | $-2.183^{*}$ |
|  | $(1.082)$ |
| RGDP/capita | 0.820 |
|  | $(0.580)$ |
| (RGDP/capita) ${ }^{2}$ | 0.058 |
|  | $(0.043)$ |
| Electricity | $-0.676^{*}$ |
| price*(RGDP/capita) | $(0.325)$ |
|  | $-0.051^{*}$ |
| Electricity | $(0.024)$ |
| price*(RGDP/capita) |  |
|  | $2.751^{*}$ |
| Population | $(1.465)$ |
|  | $-0.076^{*}$ |
| Population | $(0.040)$ |
|  | -21.304 |
| Constant | $(13.352)$ |
|  | Yes |
| Year dummies | 350 |
| R $^{2}$ | 0.380 |

Estimation results are from equation (1). Electricity price, RGDP per capita, and population are expressed in logarithms. Electricity prices and industry shares are based on constant 2000 PhP prices. Robust standard errors clustered by region are in parentheses. ${ }^{*},{ }^{* *},{ }^{* * *}$ correspond to 10,5 and 1 percent significance levels, respectively.

We use the estimates in Table 6 to simulate the path of industry share with respect to RGDP per capita with results depicted in Figure 7 and key magnitudes reported in Table 7. Figure 7 shows that higher electricity prices are associated with an earlier and lower peak in industry share. For an electricity price at the $20^{\text {th }}$ percentile, we do not see a turning point in industry share; it rises to the upper limit of RGDP per capita used in the simulation exercise. For electricity prices at higher quantiles, however, industry share reaches turning points within the

[^37]simulation range. For an electricity price at the $40^{\text {th }}$ percentile, the turning point is $6,425 \mathrm{PhP}$ per capita while for an electricity price at the $80^{\text {th }}$ percentile it falls to $3,105 \mathrm{PhP}$ per capita.

Figure 7. Simulated paths of industry share by electricity price, Philippine regional level


Each curve represents the simulated path of industry share at a different electricity price quintile. The vertical lines indicate the per capital RGDP levels at which industry shares peaked. The solid red line corresponds to the RGDP per capita for the (low) $20^{\text {th }}$ percentile price. The dashed line shows the per capita RGDP where industry peaks for the case wherein electricity price is set at the $80^{\text {th }}$ percentile.

Table 7. Simulated RGDP per capita turning points of industry share by electricity price, Philippine regional level

| Electricity price |  | $\begin{array}{c}\text { RGDP/capita turning } \\ \text { points } \\ (\text { Percentile })\end{array}$ | $(\mathrm{PhP} / \mathrm{kWh})$ |
| :---: | :---: | :---: | :---: | \(\left.\begin{array}{c}Industry <br>

share at peak <br>
(\%)\end{array}\right]\)

Note: For the $20^{\text {th }}$ percentile, industry share is still rising at the end point of the simulation range (RGDP per capita $=8000 \mathrm{PhP})$. Electricity prices and industry shares are based on constant 2000 PhP prices.

## 4. CONCLUSIONS AND POLICY IMPLICATIONS

Motivated by the Philippine experience of deindustrialization at a low level of per capita income, we study the role of high electricity prices in the process of structural transformation using data at both country and Philippine regional levels.

High electricity prices can plausibly augment other factors that induce premature deindustrialization. We adapt Rodrik's (2016) model of deindustrialization to investigate how industry share moves in connection with GDP per capita and electricity prices. We estimate the model with respect to 33 countries for the period 1980-2014 and with respect to 16 regions of the Philippines for the period 1990-2014.

For both the country and Philippine regional estimations, we find that higher electricity prices are associated with industry share turning downward at lower peaks and at lower levels of GDP per capita. Moreover, the downtrend tends to be steeper the higher are electricity prices. Data limitations constrain definitive conclusions about causality, but it appears that structural transformation is not independent of electricity prices. Descriptive analysis of the Philippine case relative to other Southeast Asian nations provides further evidence of a connection.

Electricity prices can impact industry via several pathways, including business investment, manufacturing productivity, and foreign direct investment. Untangling the relative contributions of the various pathways is a promising agenda for further research.

The Philippine manufacturing sector still accounts for a $20 \%$ share of the country's output. The Philippine government has recently targeted a substantial increase in manufacturing's share. Several promising strategies have been identified-from increasing value added in the electronics sector to improving the competitiveness of paper mills. Realizing this potential may be difficult without lowering the price of electricity and improving its quality and reliability.

Lowering electricity prices by relaxing bureaucratic red-tape and increasing the competitiveness of generation and retailing would confer a win-win in terms of power market efficiency and enhancing manufacturing's ability to act as a growth engine. Whether electricityrate subsidies are warranted to further augment externalities of investment coordination, knowledge and new-good creation remains an open question.

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## Attachment MPG-2

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## APPENDIX

Figure A1. Distribution of electricity prices, in log transformed and USD/kWh terms across 33
countries over 35 years


| Distribution of Electricity price across <br> 35 years |  |
| :---: | :---: |
| Percentile countries in | $\mathrm{USD} / \mathrm{kWh}$ |
| 80 | 0.19 |
| 60 | 0.15 |
| 40 | 0.13 |
| 20 | 0.10 |

Note: Prices are in constant 2010 USD.
Source: Data sources: Aldaba (2003); Enerdata (various years); Meralco (various years); Malaysian Energy Information Hub Statistics (various years), Singapore National Library Board (various years), Singapore Statistics (various years), International Energy Agency OECD (various years),

Table A1. Regression results for industry shares with lagged independent variables, cross country, 1980-2014

|  | (1) <br> Output share, real | (2) <br> Output share, nominal | (3) <br> Employment share |
| :---: | :---: | :---: | :---: |
| Electricity price $_{t-1}$ | $\begin{gathered} -87.768^{* * *} \\ (24.615) \end{gathered}$ | $\begin{gathered} -42.314 \\ (31.142) \end{gathered}$ | $\begin{aligned} & -48.768 \\ & (30.211) \end{aligned}$ |
| $\left(\mathrm{GDP} /\right.$ capita $^{\text {t-1 }}$ | $\begin{gathered} 81.385^{* * *} \\ (14.702) \end{gathered}$ | $\begin{gathered} 67.465^{* * *} \\ (15.379) \end{gathered}$ | $\begin{gathered} 90.491 * * * \\ (15.153) \end{gathered}$ |
| $\left(\mathrm{GDP} /\right.$ capita $^{\text {t }}{ }^{2}{ }^{2}$ | $\begin{gathered} -4.050^{* * *} \\ (0.782) \end{gathered}$ | $\begin{gathered} -3.421^{* * *} \\ (0.832) \end{gathered}$ | $\begin{gathered} -4.791^{* * *} \\ (0.883) \end{gathered}$ |
| Electricity price ${ }_{t}$ - <br> $1^{*}(\mathrm{GDP} / \text { capita })_{t-1}$ | $\begin{gathered} 19.438^{* * *} \\ (5.692) \end{gathered}$ | $\begin{gathered} 8.466 \\ (6.758) \end{gathered}$ | $\begin{aligned} & 10.750 \\ & (6.632) \end{aligned}$ |
| Electricity price $_{t-1} *(\mathrm{GDP} /$ capita $)$ | $\begin{gathered} -1.055^{* * *} \\ (0.321) \end{gathered}$ | $\begin{gathered} -0.415 \\ (0.364) \end{gathered}$ | $\begin{gathered} -0.576 \\ (0.356) \end{gathered}$ |
| Population $_{\text {t }}$ | $\begin{gathered} 43.802 \\ (26.218) \end{gathered}$ | $\begin{gathered} 36.358 \\ (27.695) \end{gathered}$ | $\begin{gathered} -36.036 \\ (21.237) \end{gathered}$ |
| Populationt ${ }_{\text {2 }}$ | $\begin{gathered} -1.770^{* *} \\ (0.817) \end{gathered}$ | $\begin{aligned} & -1.289 \\ & (0.817) \end{aligned}$ | $\begin{aligned} & 1.050^{*} \\ & (0.604) \end{aligned}$ |
| 1980s | $\begin{aligned} & 1.318^{*} \\ & (0.765) \end{aligned}$ | $\begin{gathered} 3.167 * * * \\ (1.009) \end{gathered}$ | $\begin{gathered} 6.473 * * * \\ (1.436) \end{gathered}$ |
| 1990s | $\begin{gathered} 1.427 * * * \\ (0.484) \end{gathered}$ | $\begin{gathered} 2.343 * * * \\ (0.543) \end{gathered}$ | $\begin{gathered} 5.040 * * * \\ (0.841) \end{gathered}$ |
| 2000s | $\begin{gathered} 1.113^{* *} * \\ (0.292) \end{gathered}$ | $\begin{gathered} 2.110 * * * \\ (0.364) \end{gathered}$ | $\begin{gathered} 3.331 * * * \\ (0.549) \end{gathered}$ |
| Constant | $\begin{gathered} -611.986 * * \\ (238.347) \end{gathered}$ | $\begin{aligned} & -546.330^{*} \\ & (267.777) \end{aligned}$ | $\begin{gathered} -90.316 \\ (228.898) \\ \hline \end{gathered}$ |
| Country fixed effects | Yes | Yes | Yes |
| Observations | 798 | 783 | 896 |
| $\mathrm{R}^{2}$, adjusted | 0.495 | 0.440 | 0.709 |
| $\mathrm{R}^{2}$, within | 0.501 | 0.447 | 0.712 |

Note: Estimation results are from equation (1). Electricity price, GDP per capita, and population are expressed in logarithms. Real output shares are based on constant 2005 USD. Robust standard errors clustered by country are in parentheses. ${ }^{*} p<0.10 ;{ }^{* *} p<0.05 ;{ }^{* * *} p<0.01$.

# STATE OF NORTH CAROLINA <br> UTILITIES COMMISSION <br> RALEIGH 

DOCKET NO. E-100, SUB 179
BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
In the Matter of:
Duke Energy Progress, LLC, and ) DIRECT TESTIMONY OF
Duke Energy Carolinas, LLC, 2022 Biennial ) BRADFORD D. MULLER FOR Integrated Resource Plans and Carbon Plan ) CIGFUR II \& III

## Q: MR. MULLER, PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION. <br> A: My name is Bradford D. Muller, and my business address is 2109 Randolph Road, Charlotte, North Carolina 28207. I currently serve as the Vice President of Corporate Communications, Marketing, and Government Affairs for Charlotte Pipe and Foundry Company. <br> Q: PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL QUALIFICATIONS.

A: I have a Bachelor of Arts degree from Kenyon College. I have worked for Charlotte Pipe and Foundry Company ("Charlotte Pipe") for 20 years. During my tenure with Charlotte Pipe, I have gained direct first-hand knowledge and experience with many facets of Charlotte Pipe's business operations, including its manufacturing processes and energy procurement, usage, and load. My professional biography can be found at Appendix A to this testimony.

Q: PLEASE TELL US WHO IS SPONSORING YOUR TESTIMONY IN THIS PROCEEDING.

A: I am providing this testimony on behalf of the Carolina Industrial Group for Fair Utility Rates II \& III (together, "CIGFUR"). Charlotte Pipe is an industrial customer of Duke Energy Carolinas, LLC, currently taking service under DEC's Optional Power Time of Use, Voltage Differential, Secondary Large ("OPT-V") rate schedule. Charlotte Pipe is one of CIGFUR III's member companies.

## Q: CAN YOU PLEASE TELL US MORE ABOUT CHARLOTTE PIPE AND FOUNDRY COMPANY AS A BUSINESS? <br> A: $\quad$ Charlotte Pipe is a fifth-generation, family-owned manufacturer based in North Carolina. Founded in 1901, Charlotte Pipe is the leading producer of cast iron and plastic pipe and fittings for plumbing systems. As its name suggests, Charlotte Pipe is headquartered in Charlotte, North Carolina. Charlotte Pipe has seven plant locations across the United States. Our company recently acquired a wholly owned subsidiary, Neenah Enterprises, Inc., which operates three additional domestic cast iron foundries. Charlotte Pipe employs approximately 1,400 people at its facilities in North Carolina and approximately 2,700 people at its facilities across the country, including those in North Carolina. <br> In Monroe, North Carolina, Charlotte Pipe operates a plastic extrusion and injection molding manufacturing plant with a demand of 17 MW. In addition, Charlotte Pipe is in the process of replacing a cast iron foundry in uptown Charlotte with a demand of 58 MW with a $\$ 460$ million state-of-the-art greenfield foundry in Oakboro, NC. The new 45 -acre facility in Oakboro will have a 70-MW demand and will have converted from using a fossil fuel melt process in the old foundry to a cleaner, more energy-efficient electric melt technology in the new plant. <br> Q: CAN YOU PLEASE TELL US WHAT, IF ANY, CONCERNS YOU HAVE REGARDING DUKE ENERGY'S PROPOSED CARBON PLAN? <br> A: This response corresponds to Ordering Paragraphs 1.i.i. and 1.i.v. of the Commission's July 29, 2022 Order Scheduling Expert Witness Hearing, Requiring Filing of Testimony, and Establishing Discovery Guidelines ("Order").

As a company whose products require energy-intensive manufacturing processes, Charlotte Pipe is very concerned that the total costs and bill impacts to ratepayers have been significantly understated in Duke's proposed Carbon Plan. This is particularly problematic because the estimated rate impacts, albeit understated, will still push industry to the brink (or beyond) of rate increases it is able to absorb before manufacturers are forced to make difficult decisions, including potentially shifting load (and corresponding jobs) out of state where electric rates are more competitive.

More specifically, I believe Duke's proposed Carbon Plan fails to provide an "all-in" total cost and rate impact estimate encompassing all projected capital spending planned in the coming years, both related and unrelated to the Carbon Plan. This is concerning because it means the Commission is being asked to decide-without the benefit of complete and accurate cost and rate impact information-issues such as whether Duke's proposed Carbon Plan complies with least-cost principles and whether Duke's proposed Carbon Plan constitutes the "reasonable steps" to carbon emissions reductions contemplated by House Bill 951. In addition, while I believe the cost and rate impacts provided are understated, the estimates provided by Duke are still—even though understated-significantly large enough to have a detrimental impact on the North Carolina economy.

## Q. CAN YOU ELABORATE ON WHAT YOU MEAN BY DUKE'S CARBON

## PLAN FAILS TO PROVIDE AN "ALL-IN" TOTAL COST AND IMPACTS TO RATEPAYERS FOR ALL PLANNED SPENDING BOTH RELATED

 AND UNRELATED TO THE CARBON PLAN?A: This response corresponds to Ordering Paragraphs 1.a., 1.b., 1.e., 1.f., 1.g., 1.i.i., and 1.i.v. of the Commission's Order.

First, the scenarios Duke has provided with their multi-portfolio proposal are going to be costly no matter what. Again, my testimony emphasizes that this is likely an understatement, but Public Staff's Exhibit 2 - DEC Cumulative and Annual Average Bill Impacts for Industrial Customers - reflects Duke's estimated impact and average annual impact to monthly industrial bills for an average DEC industrial customer using $32,500,000 \mathrm{kWh}$ with a corresponding demand of 50 MW .

| TOTAL IMPACT TO MONTHLY INDUSTRIAL BILLS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Industrial - 32,500,000 KWh / 50,000 KW |  |  |  |  |
|  | 2023-2030 Impact to Industrial Bills |  | 2023-2035 Impact to Industrial Bills |  |
|  | \% Increase | \$ Increase | \% Increase | \$ Increase |
| DEC - COS-(P1) | 7.5\% | \$123,507 | 30.8\% | \$507,228 |
| DEC - COS - (P2) | 4.9\% | \$80,009 | 27.6\% | \$454,268 |
| DEC-COS-( P3) | 6.1\% | \$100,751 | 26.9\% | \$443,057 |
| DEC - COS - (P4) | 4.8\% | \$79,208 | 25.8\% | \$425,275 |
|  |  |  |  |  |
| AVERAGE ANNUAL IMPACT TO MONTHLY INDUSTRIAL BILLS |  |  |  |  |
| Industrial - 32,500,000 KWh / 50,000 KW |  |  |  |  |
|  | 2023-2030 Impact to Industrial Bills |  | 2023-2035 Impact to Industrial Bills |  |
|  | \% Increase | \$ Increase | \% Increase | \$ Increase |
| DEC-COS-(P1) | 1.0\% | \$17,643.88 | 2.3\% | \$42,269.02 |
| DEC-COS-(P2) | 0.7\% | \$11,429.83 | 2.0\% | \$37,855.69 |
| DEC -COS - ( P3) | 0.9\% | \$14,392.93 | 2.0\% | \$36,921.44 |
| DEC-COS - (P4) | 0.7\% | \$11,315.37 | 1.9\% | \$35,439.58 |

These impacts-again, understated though they very likely are-will be even more significant for DEP's industrial customers. And the alternative portfolios proposed by Duke would result in approximately double the total bill impact for each alternative portfolio for both DEP and DEC's industrial customers.

| TOTAL IMPACT TO MONTHLY INDUSTRIAL BILLS |
| :--- |
| Industrial - 32,500,000 KWh / 50,000 KW |

Second, these projected cost and rate impacts are understated, in part, because they do not reflect certain costs that Duke contends are either unrelated to the Carbon Plan or will be common to all proposed portfolios. For example, Duke did not include costs or rate impacts associated with Grid Improvement Plan ("GIP") investments. But GIP costs are still cost drivers that affect the total cumulative rate impact. Without the critically important context of total cumulative rate impact for all new capital spending, it is impossible to evaluate whether the Carbon Plan as proposed is least-cost or whether it constitutes "reasonable steps" towards the energy transition. In addition, Duke makes it clear that for all portfolios, the 2050 long-term strategy for new and existing natural gas plants is to retrofit them so that they can accommodate hydrogen as a fuel source. However, Duke did not include cost assumptions for these hydrogen-enabling infrastructure upgrades into its Carbon Plan total cost projections or bill impact estimates. In addition, Duke did not include other costs common to all portfolios, like storm securitization and the Red Zone Transmission Expansion Plan transmission and distribution upgrades to accommodate additional renewable generation. Finally, while we support Duke's pursuit of subsequent license renewals ("SLRs") for its nuclear fleet, Duke did not
include the projected costs for obtaining these SLRs. These costs need to be reflected in Duke's Carbon Plan cost estimates and projected rate impacts because they are an incremental cost to the present value of revenue requirement ("PVRR") of each Carbon Plan portfolio. These are just a few examples of cost drivers that were largely or entirely omitted from cost and rate impact estimates in Duke's proposed Carbon Plan.

Third, we note that Duke did not provide estimates for the potential additional costs to its North Carolina customers in the event that the Public Service Commission of South Carolina ("PSCSC") rejects the Carbon Plan or otherwise disallows cost recovery of costs to comply with House Bill 951. While CIGFUR contends Duke's North Carolina customers should be held harmless for the South Carolina jurisdictional allocable portion of Carbon Plan implementation and compliance costs, CIGFUR also believes that some modification of the Carbon Plan-at least in the near-term until 2024, when the next Carbon Plan biennial review will occur-is warranted as a hedge against the substantial regulatory risk of the PSCSC's rejection of the Carbon Plan. I believe this is necessary to protect Duke's North Carolina customers from the possibility that Duke seeks future cost recovery from its North Carolina customers for the South Carolina jurisdictional allocable portion of such costs.

I believe the Commission and the general public need to be provided with revised Carbon Plan cost estimates and rate impacts that paint a more all-encompassing and accurate picture of what the "all-in" cost and bill impact forecasts expected to be shouldered by North Carolina ratepayers through 2035 will be, for spending both related and unrelated to the Carbon Plan. Without this
critically important information, how can the Commission be expected to decide whether Duke's proposed Carbon Plan complies with the requirements of HB 951 that it be both least-cost and constitutes "reasonable steps" towards compliance with the carbon dioxide emissions reduction goals set forth in that legislation?

Finally, I believe Duke needs to affirmatively assure this Commission and its ratepayers of its intent to securitize-for the benefit of ratepayers- $50 \%$ of the costs associated with the early, uneconomic retirement of its still serviceable coal fleet, which will come at a substantial cost to ratepayers and is another cost driver that Duke did not sufficiently quantify or otherwise account for in its cost estimates and projected rate impacts in its proposed Carbon Plan.

## Q: CAN YOU ELABORATE ON THE POSITION THAT DUKE'S

 NORTH CAROLINA RATEPAYERS SHOULD BE HELD HARMLESS FOR SOUTH CAROLINA'S JURISDICTIONAL ALLOCABLE SHARE OF HB 951 COMPLIANCE COSTS IN THE EVENT SOUTH CAROLINA REJECTS DUKE'S CARBON PLAN?A: This response corresponds to Ordering Paragraphs 1.a., 1.g., 1.i.i., and 1.i.v. of the Commission's Order.

Duke failed to model how the Carbon Plan portfolios should potentially be adjusted-and how the resulting rate impacts to its North Carolina customers would be affected-in the event that the PSCSC rejects Duke's proposed Carbon Plan next year when Duke seeks regulatory approval through its South Carolina IRP docket. Should South Carolina reject Duke's Carbon Plan, will the utility attempt to unfairly layer even more costs on North Carolina ratepayers? I believe this would be an unreasonable and unjust course of action that would run afoul of the

Legislature's understanding that Carbon Plan implementation costs would be spread across Duke's dual-state footprint in the Carolinas, not shouldered exclusively by North Carolina ratepayers. Most concerning, this issue remains unaddressed. Duke has touted its proposed Carbon Plan as the "Carolinas Carbon Plan." If it is potentially going to instead be the North Carolina-emphasis on the singular "Carolina"-Carbon Plan, then Duke's portfolios should be scaled back and adjusted as appropriate. In no universe is it appropriate or acceptable for North Carolina ratepayers to foot any portion of the bill for South Carolina's jurisdictional allocable share of Carbon Plan implementation costs.

Q: CAN YOU SPEAK TO THE IMPORTANCE OF RELIABILITY AND POWER QUALITY TO CIGFUR MEMBER COMPANIES GENERALLY AND TO CHARLOTTE PIPE SPECIFICALLY, AS ONE OF DEC'S LARGE INDUSTRIAL CUSTOMERS?

A: This response corresponds to Ordering Paragraphs 1.a. and 1.j. of the Commission's Order.

Duke should be applauded for presently being a low-cost, high-quality electricity supplier. Charlotte Pipe operates seven plants around the United States. Duke Energy currently offers the most reliable, highest quality and least cost electricity compared with our suppliers in other states where we operate. But we worry this has the potential to change for the worse as the Carbon Plan is implemented.

As an energy-intensive manufacturer, power interruptions-even momentary flickers-can take an enormous and costly toll on our manufacturing equipment, processes, and production output. A power quality event is typically
measured by the percent of the nominal voltage in conjunction with the duration of the event, which is measured in milliseconds. The deeper the sag, the less time it takes to negatively impact the equipment. A shallower sag can negatively impact operations given a long enough duration.

Charlotte Pipe's plastic extrusion systems are the most sensitive to power quality incidents. A simple voltage sag (voltage drop from nominal) can disrupt the extrusion line operation, shut machines down or otherwise damage equipment, or cause electrical fires, among other consequences. Typically, sags wherein the voltage is $70 \%$ of nominal and greater than 30 milliseconds (less than two cycles) in duration will negatively impact a significant number of extrusion lines. Any total loss of power regardless of duration will take out the entire plant. For these reasons, any disruption or interruption in electric service to the extrusion lines, however brief, poses a safety risk to our employees, disrupts our operations, decreases our production output, and increases our costs.

For example, after our most recent power failure at our Monroe, NC facility, which was caused by a weather event, it took two days to get one plant back online due to burnt dies on the extrusion lines and four days to get a second plant up and running due to that plant being single-phase. The single-phase event caused multiple drive and motor failures, along with almost all our dies needing to be cleaned and refurbished. Attached to this testimony as Exhibit 1 are photos showing partially burnt dies. Attached to this testimony as Exhibit 2 is a photo showing the amount of scrap product resulting from a power failure incident at one of our plants in Texas.

As an energy-intensive industrial user, we are not unique in our need for high-quality, reliable power. Indeed, this is a high priority for all CIGFUR member companies. Though we appreciate Duke's commitment to NERC standards for reliability, it is concerning to hear how "high penetration of wind and solar have exposed energy shortfalls for both brief and prolonged periods of time due to significant weather-related output fluctuations." ${ }^{1}$ The challenges of managing a complex system as large as Duke's with increasing amounts of increasingly variable resources being added to the system underscore how important maintaining or improving-as required by HB 951—system reliability, including power quality, will continue to be in the future as the Carbon Plan is implemented over time.

For these reasons, I believe Duke should have explicitly analyzed power quality as a distinct metric under the reliability umbrella in its proposed Carbon Plan. Even though power quality may very well be analyzed locally, ${ }^{2}$ Duke should at least be required in future iterations of the Carbon Plan to consider and analyze granular circuit-specific data in the aggregate regarding power quality incidents. CIGFUR believes that just like the baseline and accounting methodology for quantifying compliance with the carbon emissions reduction goals set forth in HB 951, so too should there be specific reliability and power quality metricsbeyond just SAIDI and SAIFI—for ensuring compliance with those corresponding requirements set out in HB 951. For example, Duke should be required to also track MAIFI (Momentary Average Interruption Frequency Index) = Total \# of
${ }^{1}$ Direct Testimony of Duke Witnesses Roberts and Holeman, at 26.
${ }^{2}$ See id. at 83.
momentary customer interruptions per year / total number of customers. Beyond MAIFI, Duke could also track aggregated data pertaining to conditions like changes in voltage, including transient change, sags, surges, undervoltage conditions, harmonic distortions, noise, stability, flickers, and frequency deviations.

Q: SHOULD THE COMMISSION LOOK TO OTHER STATES AND CONSIDER HOW DECARBONIZATION EFFORTS ARE BEING IMPLEMENTED ELSEWHERE AS IT DEVELOPS THE INITIAL CARBON PLAN?

A: This response corresponds to Ordering Paragraphs 1.c.ii., 1.c.iii., 1.d., 1.i.i., 1.i.iii., and 1.j. of the Commission's Order.

Yes, the North Carolina Utilities Commission should follow the example of the Virginia State Corporation Commission ("SCC"), the agency responsible for regulating Virginia's public utilities, including Dominion Energy Virginia ("Dominion"). Dominion recently proposed a 2.6 GW offshore wind and transmission project projected to cost $\$ 9.8$ billion initially and $\$ 21.5$ billion total over the 30 -year life of the asset. While the SCC granted Dominion the right to own, build, and operate the proposed project without competitive procurement, it also imposed several conditions for the protection of ratepayers. These conditions included a performance guarantee which would hold Dominion's customers harmless for any shortfall in energy production below the estimated $42 \%$ annual net capacity factor, measured on a three-year rolling average. In addition, the SCC imposed reporting requirements for cost overruns. I believe this Commission should consider imposing similar conditions for all resources selected in the Carbon Plan, but particularly for long-lead time resources and any and all other
resources for which the Commission does not approve competitive or other third-party procurement as a means of ensuring compliance with least-cost principles.

## Q: HOW WILL IMPLEMENTATION OF THE CARBON PLAN AND THE RELATED RISING PRICES FOR ENERGY AFFECT BUSINESSES CONSIDERING WHETHER TO EXPAND OR LOCATE FACILITIES IN NORTH CAROLINA?

A: This response corresponds to Ordering Paragraphs 1.a., 1.a.iii., 1.i.i., and 1.j. of the Commission's Order.

Because our plants are highly energy-intensive, whenever Charlotte Pipe has sited new plant locations throughout our 120-year history, electricity prices and the availability of high-quality, reliable power are primary drivers of the decision regarding where to expand or potentially site a new facility. If Charlotte Pipe was to lose the advantage of Duke's historically low-cost, reliable, high-quality power, this would likely preclude us from expanding operations and creating jobs in the DEC or DEP service territories. Many other CIGFUR member companies would likely fall in this same category, if Duke's future electric service is no longer affordable, reliable, and high-quality.

If the Carbon Plan results in exorbitant increases in electricity prices, decreased power quality, or decreased reliability, existing industry will likely begin to leave the State, and new industry will likely choose not to locate new facilities or expand existing facilities here. The increasing cost structure will then have to be spread over a dwindling industrial rate base, making North Carolina even less competitive and less inclined to attract new manufacturing, launching a death spiral
of economy-killing deindustrialization. Nowhere in Duke's plan is this very predictable scenario addressed. Instead, Duke's economic impact analysis is almost exclusively focused on how it will attract new economic development projects through the "Clean-Energy Economy" without addressing its plan to ensure it actually retains existing non-residential customers and the good jobs those non-residential customers provide to citizens and residents of this State.

## Q: WHAT IS YOUR OPINION REGARDING DUKE'S PLAN TO PURSUE SUBSEQUENT LICENSE RENEWALS FOR ITS EXISTING NUCLEAR FLEET?

A: This response corresponds to Ordering Paragraphs 1.e., 1.i., 1.i.i., and 1.i.v. of the Commission's Order.

Charlotte Pipe strongly supports Duke Energy's efforts to relicense its existing nuclear fleet, which will be necessary to serve base load and without which a Carbon Plan would be impossible to implement from a reliability, cost, and executability perspective. Nuclear is a net-zero energy source and the only proven technology capable of generating electricity that is at once dispatchable, reliable, emissions-free, low-cost, and capable of scaling up to meet growing demand. That said, we believe Duke should be required to report to the Commission, on at least an annual basis, regarding Duke's relicensing efforts and the expected time frame for obtaining such SLRs as well as updated cost estimates as more information is gathered over time. In addition, Duke should be required-in its 2024 biennial Carbon Plan proceeding and thereafter-to explicitly include such costs—and all other "common across all portfolios" costs—in its projected Carbon Plan cost estimates and associated rate impacts.

## Q: WHAT IS YOUR OPINION REGARDING A CARBON PLAN THAT PROVIDES FOR NEW NATURAL GAS GENERATING PLANTS TO BE BUILT?

A: This response corresponds to Ordering Paragraphs 1.c. and 1.j. of the Commission's Order.

Renewable energy resources are variable resources, and the grid cannot operate without sufficient reliable, dispatchable back-up power. Charlotte Pipe and many other CIGFUR member companies support natural gas and believe it will play a critical role as a bridge fuel to facilitate the energy transition in a way that does not compromise existing reliability. In the event new natural gas is selected as a Carbon Plan resource, however, the same cost mitigation tools I previously recommended should likewise apply to any new natural gas plants. In addition, Duke should be required to evaluate whether retrofitting existing coal plants to burn natural gas-particularly given the transmission infrastructure already in place in those locations-could be a possible least-cost alternative compared to building a new natural gas plant.

## Q: DO YOU HAVE ANY OTHER FEEDBACK TO SHARE ON THE PROPOSED CARBON PLAN AT THIS TIME?

A: This response corresponds to Ordering Paragraphs 1.b., 1.d., 1.i.i., and 1.i.iii. of the Commission's Order.

In fairness, I believe that the Carbon Plan proposed by Duke Energy represents an earnest effort by Duke, particularly given the short time frame within which Duke had to conduct modeling and file its proposal with the Commission. We appreciate that Duke flagged certain unknown variables as well as the
numerous other unknowns flagged by the Public Staff, CIGFUR, and various other intervenors, as these are extremely complex technical and economic issues that require more rigorous study. For the sake of all ratepayers, we believe the Commission should not race to put their stamp on a particular portfolio. Rather, Duke, the Commission, and intervenors should be given adequate time-another two years at a minimum-to obtain and evaluate substantial additional information to enable the Commission to decide the "least cost, most reliable" approach. Along these same lines, CIGFUR believes that in the instant proceeding the Commission need only approve near-term activities to occur between now and the first Carbon Plan biennial review process in 2024. Because there are so many unknown variables that could have a material impact on policy objectives like reliability, costs, ratepayer impacts, and executability, I encourage the Commission to remain flexible and open to multiple portfolios at this time.

Moreover, CIGFUR encourages the Commission to utilize the general and specific discretion it was delegated through the passage of HB 951, especially pertaining to the time frame for compliance with the carbon emissions reduction goals set forth in the legislation. Compliance in years later than 2030 allows for costs to be spread out over a longer period of time, thus helping to make the year-over-year rate impacts for ratepayers more manageable and ensuring that the least-cost plan is selected. In addition, it enables North Carolina to be flexible and in a position to adapt to new information or technology advancements or any number of other changed circumstances that could warrant altering the path forward in the future. For these reasons, CIGFUR supports the "check and adjust" strategy recommended by Duke Energy. Finally, I note that all portfolios follow a similar

4 Q: DOES THIS CONCLUDE YOUR TESTIMONY? trajectory to achieve net-zero emissions by 2050. For these reasons, the Commission should not feel pressured to abide an aspirational interim compliance goal of 2030 .

A: Yes, it does.

Bradford D. Muller
Vice President, Corporate Communications
Charlotte Pipe and Foundry Company


Brad is a marketing and communications strategist with more than thirty years of experience in public and corporate affairs, international and government relations, manufacturing and business marketing, crisis management and media training, and more.

Brad spent nearly a decade in Washington, DC, including stints with the U.S. State Department and Edelman Worldwide, the largest public relations and public affairs agency in the world.

Currently, Brad leads government affairs, marketing and corporate communications for Charlotte Pipe and Foundry Company, a fifth-generation, family-owned manufacturer based in North Carolina. Founded in 1901, Charlotte Pipe and Foundry is the leading U.S. producer of cast iron and plastic pipe and fittings for plumbing systems.

Brad worked for the U.S. State Department's Agency for International Development (A.I.D.) in the George H.W. Bush Administration as a desk officer, managing foreign aid programs for Afghanistan and later for Bulgaria and Albania after the 1989 fall of the Berlin Wall.

At Edelman, Brad worked for the late Michael Deaver, former Deputy Chief of Staff to President Ronald Reagan, on a variety of public affairs and international relations issues, including the passage of the North American Free Trade Act (NAFTA).

Brad is very active within the metalcasting industry and his local community, including:

- Leadership roles over the last decade with the American Foundry Society, including incoming president of AFS in 2023, the Cast Iron Soil Pipe Institute and the Municipal Casting Association.
- Providing written and verbal testimony as an industry representative and subject matter expert on manufacturing and regulatory matters before two U.S. House of Representatives subcommittees and the Small Business Administration.
- Advisor to the U.S. Department of Commerce Industry Trade Advisory Committee on Steel and Iron (ITAC) since 2014.
- Member of the U.S. Chamber of Commerce Labor Relations Committee since 2008.
- Served on boards of the YMCA of Greater Charlotte, the Charlotte Chamber of Commerce, the North Carolina Chamber, the John Locke Foundation, and the Charlotte Mecklenburg Police Foundation (former board chair).

You can't beat the system. ${ }^{\text {TM }}$

## PROFESSIONAL EXPERIENCE

## Charlotte Pipe and Foundry Company - Charlotte, NC

Vice President of Corporate Communications, 2002 - Present

- Senior management with fiduciary responsibility as an Officer of the company
- Corporate spokesperson and media contact
- Active role in various industry trade associations
- Leads the company's Government Affairs practice
- Responsible for marketing and branding strategic planning and execution


## Price / McNabB - Charlotte, NC

Senior Account Executive, 1995-2002

- Managed corporate branding, advertising and public relations programs for numerous clients, including Square D Company and its French parent, Schneider Electric.


## Edelman Worldwide - Washington, D.C.

Account Supervisor, 1993-1995

- Developed and executed strategic communications, media relations and public affairs programs for a variety of clients, including the Portuguese Trade Commission; the Embassy of India; the city of St. Petersburg, Russia; and Bank of Boston's Global Initiative.


## U.S. State Department, Agency for International Development - Washington, D.C.

## A.I.D. Desk Officer and Special Assistant, 1989-1993

Special Assistant to the Assistant Administrator for Europe, April 1991 - January 1992

- Responsible for a range of operational, advisory, and supervisory activities for the Assistant Administrator for the Bureau for Europe. Supervised Executive Secretariat operations and personnel.

Desk Officer, Bureau for Europe, March 1990 - April 1991 / January 1992 - February 1993

- Directed and supervised $\$ 90$ million assistance program for Albania, a $\$ 34$ million aid package for Bulgaria and an annual $\$ 20$ million U.S. contribution to the International Fund for Ireland.
- Primary liaison for communicating A.I.D. policy and program details to U.S. Embassy staff overseas and host country officials in Washington. Traveled extensively overseas to supervise aid programs in-country.

CIGFUR II/II Direct Testimony of Bradford D. Muller Docket No. E-100, Sub 179 Appendix A Page 3

Temporary A.I.D. Representative to Albania, January 1992

- Monitored economic and humanitarian assistance in-country for the U.S. Ambassador, including delivery and distribution of critical U.S. food shipments via Greece.

Project Officer, Afghanistan Task Force, May 1989 - March 1990

- Working in Washington and in Pakistan, collected and analyzed data concerning UN and other donor activities related to refugee assistance programs.

Presidential Transition Team / White House Staff - Washington, D.C.

- Office of Presidential Personnel, November 1988 - May 1989


## Bush / Quayle ‘88 Presidential Campaign - Washington, D.C.

- Scheduling Office, July - November, 1988


## EDUCATION

KENYON COLLEGE, Gambier, Ohio Bachelor of Arts, Political Science, 1988

Docket No. E-7, Sub 1276
CIGFUR III witness Collins Direct Exhibit 6
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(1)


## CIGFUR's Proposed PIMs

Duke Energy - DEP Rate Case PIMs Stakeholder Meeting
7/22/2022

## (1) Cost of Service Control and Rate Competitiveness

| NERP Outcome Category | NERP Outcome |
| :--- | :--- |
| Improve customer value | Affordability and bill stability |
| Improve utility regulation | Regulatory incentives aligned with cost control <br> and policy goals |

## H951 "policy goal" categories:

Cost-savings (G.S. 62-133.16(a)(8))
Encourages...efficient use of the system (G.S. 62-133.16(d)(2)a.)
Maintains adequate levels of...customer service (G.S. 62-133.16(d)(2)j.)

Performance Dimension(s): Costs, Customer Satisfaction

Symmetrical incentive/penalty structure: Shared net savings mechanism

| Type of Metric | Examples |
| :--- | :--- |
| Activity-based | Cost-Effective Alternatives to Traditional Infrastructure <br> (\$/MW cost of alternative portfolio relative to the $\$ / \mathrm{MW}$ <br> cost of traditional investment) |
| Outcome-based | DEP's rates stay within X\% of regional, national, and global <br> average electricity rates for customers with similar usage <br> profiles and load factors. |
|  | Avg. monthly bills for DEP customers taking service on <br> LGS-RTP rate schedule |

## (2) Reliability - Power Quality

| NERP Outcome Category | NERP Outcome |
| :--- | :--- |
| Improve customer value | Reliability |
| Improve utility regulation | Regulatory incentives aligned with cost control <br> and policy goals |

## H951 "policy goal" categories:

Reliability of electric service (G.S. 62-133.16(a)(8))
Maintains adequate levels of reliability and customer service (G.S. 62-133.16(d)(2)j.)
Performance Dimension(s): Reliability
Asymmetrical penalty structure: Backstop PIM with penalty for failing to provide core functions of reliability considerations, like power quality

| Type of Metric | Examples |
| :--- | :--- |
| Activity-based | Utilize customer account representatives to do power <br> quality assessments upon request and provide <br> recommendations akin to those provided to residential <br> customers who request home EE reports |
|  | - For all recommendations on utility side of the meter, Duke <br> should design and implement all optimal, cost-effective <br> power quality recommendations |
| Outcome-based | Momentary Average Interruption Frequency Index (MAIFI) <br> = Total \# of momentary customer interruptions per year / <br> total number of customers |
|  | Changes in voltage, including transient change, sag, surge, <br> undervoltage, harmonic distortion, noise, stability, and <br> flicker |
|  | Frequency deviations |

## (3) Voluntary Customer Programs - C\&I DSM/DR

| NERP Outcome Category | NERP Outcome |
| :--- | :--- |
| Improve customer value | Customer choice of energy sources and programs |
| Improve utility regulation | Regulatory incentives aligned with cost control <br> and policy goals |
| Improve environmental quality | Carbon neutral by 2050 |

## H951 "policy goal" categories:

Operational efficiency; cost-savings; Carbon Plan (G.S. 62-133.16(a)(8))
Encourages peak load reduction or efficient use of the system (G.S. 62-133.16(d)(2)a.)
Encourages carbon reductions (G.S. 62-133.16(d)(2)f.)
Maintains adequate levels of reliability and customer service (G.S. 62-133.16(d)(2)j.)
Promotes rate designs that yield peak load reduction or beneficial load-shaping (G.S. 62-133.16(d)(2)k.)

Performance Dimension(s): System Efficiency, Customer Empowerment, Environmental Goals, Customer Engagement

Symmetrical incentive/penalty structure: Shared net savings mechanism

| Type of Metric | Examples |
| :---: | :---: |
| Activity-based | - \# of marketing materials announcing program options and enrollment information to customers |
| Program-based | - \# of programs filed for regulatory approval by X date with key constituent support (i.e. Public Staff, CIGFUR, etc.) <br> - \% of eligible customers per year <br> - Number of eligible customers enrolled <br> - MWh of DR provided over past year <br> - Potential peak demand savings (MW) |
| Outcome-based | - Actual peak demand savings (MW) <br> - Demand response, including (1) capacity availability (MWh) and (2) amount called (MW, MWh per year) <br> - Amount of demand response that shapes customer load profiles through price response, time-varying rates, or behavior campaigns <br> - Amount of demand response that shifts energy consumption from times of high demand to times when there is a surplus of renewable generation <br> - Amount of demand response that sheds load that can be curtailed to provide peak capacity and supports the system in contingency events |

## (4) Voluntary Customer Programs - C\&l Renewable Energy Programs

| NERP Outcome Category | NERP Outcome |
| :--- | :--- |
| Improve customer value | Customer choice of energy sources and programs |
| Improve utility regulation | Regulatory incentives aligned with cost control <br> and policy goals |
| Improve environmental quality | Carbon neutral by 2050; integration of DERs |

## H951 "policy goal" categories:

Carbon Plan (G.S. 62-133.16(a)(8))
Encourages utility-scale renewable energy and storage (G.S. 62-133.16(d)(2)b.)
Encourages DERs (G.S. 62-133.16(d)(2)c.)
Encourages carbon reductions (G.S. 62-133.16(d)(2)f.)

Performance Dimension(s): Customer Empowerment, Environmental Goals, Customer Engagement, Costs

Asymmetrical incentive structure: Fixed reward or percentage adder (allows utilities to earn a rate of return on expenses that would otherwise be a pass-through)

| Type of Metric | Examples |
| :---: | :---: |
| Activity-based | - \# of marketing materials announcing program options and enrollment information to customers |
| Program-based | - \# of programs filed for regulatory approval by $X$ date with key constituent support (i.e. Public Staff, CIGFUR, etc.) <br> - \% of eligible customers enrolled <br> - Number of eligible customers enrolled <br> - MW of capacity subscribed <br> - Total installed capacity (MW) <br> - Total amount of energy produced (MWh) <br> - DER utilization |
| Outcome Based | - MWh of electricity usage provided or offset with clean energy resources <br> - Reduce CO2 emission intensity (emissions per MWh) <br> - Energy intensity (kWh sales/private employment) <br> - Carbon intensity (Tons CO2 / industrial customer) |

## Revenue Requirement Impact of DEC's Proposed ROE Versus DEC's Currently Approved ROE, Test Period Ending December 31, 2021

| Line No. | Source | Description | Percent Ra | Rate |  | Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Q. Bowman Supplemental Exhibit 2, page 2.1 | Long-Term Debt | 47.00\% | 4.53\% |  | 2.13\% |
| 2 | Q. Bowman Supplemental Exhibit 2, page 2.1 | Common Stock Equity, Currently Approve | 53.00\% | 9.60\% |  | 5.09\% |
| 3 | Line $1+$ Line 2 | Total |  |  |  | 7.22\% |
| 4 | Q. Bowman Supplemental Exhibit 2, page 2.1 | Rate Base, Exlcuding ARO CCR (\$000) |  |  | \$ | 18,863,847 |
| 5 | Line 3 x Line 5 | Required Operating Income, Currently Ap | ved ROE (\$000) |  | \$ | 1,361,423 |
| 6 | Q. Bowman Supplemental Exhibit 2, page 2.2 | Long-Term Debt | 47.00\% | 4.53\% |  | 2.13\% |
| 7 | Q. Bowman Supplemental Exhibit 2, page 2.2 | Common Stock Equity, Currently Approve | 53.00\% | 8.10\% |  | 4.29\% |
| 8 | Line $6+$ Line 7 | Total |  |  |  | 6.42\% |
| 9 | Q. Bowman Supplemental Exhibit 2, page 2.2 | Rate Base, ARO CCR (\$000) |  |  | \$ | 180,511 |
| 10 | Line $8 \times$ Line 9 | Required Operating Income, Currently Ap | ved ROE (\$000) |  | \$ | 11,593 |
| 11 | Line 5 + Line 10 | Total Required Operating Income, Currently | approved ROE (\$000) |  | \$ | 1,373,015 |
| 12 | Q. Bowman Supplemental Exhibit 2, page 2 | Required Operating Income, Proposed (\$0 |  |  | \$ | 1,453,684 |
| 13 | Line 12 - Line 11 | Difference in Operating Income |  |  | \$ | 80,669 |
| 14 | Q. Bowman Supplemental Exhibit 2, page 2 | Regulatory Fee (0.1392\%), Uncollectibles | (0.5847\%) |  | \$ | 584 |
| 15 | Q. Bowman Supplemental Exhibit 2, page 2 | Income Taxes (23.3503\%) |  |  | \$ | 18,836 |
| 16 | Line 13 + Line 14 + Line 15 | Difference from Proposed Revenue Req | ment |  | \$ | 100,089 |
| 17 | Q. Bowman Supplemental Exhibit 2, page 2 | Proposed Gross Revenue Requirement Inc |  |  | \$ | 440,300 |
| 18 | Line 17 / Line 16 | Percentage of Proposed Revenue Requir |  |  |  | 22.7\% |


| Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State | Utility | Parent Company Ticker | Docket | $\begin{aligned} & \text { Requested } \\ & \text { ROE } \end{aligned}$ | Order Date | Vertically <br> Integrated <br> (V) / <br> Distribution <br> Only (D) | Approved <br> ROE | Difference | Applicant's <br> Electric Proxy Group (Y/N) | ROE Fully Litigated or Settled | Approved WACC | Approved <br> Equity <br> Ratio | $\begin{gathered} \text { Equity } \\ \text { Contribution } \end{gathered}$ |
| (1) | ${ }^{(2)}$ | (3) | ${ }^{(4)}$ | ${ }^{\text {(5) }}$ | ${ }^{(6)}$ | (7) | (8) | $\begin{gathered} \hline(9) \\ (8)-(5) \end{gathered}$ | (10) | (11) | (12) | (13) | $\begin{gathered} \hline(14) \\ \text { (8) } X(13) \end{gathered}$ |
| Michigan | Consumers Energy Co. | CMS | U-20134 | 10.75\% | 1/9/2019 | v | 10.00\% | (75) | Y | Settled | N/A | N/A | N/A |
| West Virginia | Appalachian Power Co. | AEP | 18-0646-E-42T | 10.22\% | 2/27/2019 | v | 9.75\% | (47) | Y | Settled | 7.28\% | 50.16\% | 4.89\% |
| New Jersey | Atlantic City Electric Co. | EXC | ER18080925 | 10.10\% | 3/13/2019 | D | 9.60\% | (50) |  | Settled | 7.08\% | 49.94\% | 4.79\% |
| New York | Orange \& Rockland Utilities Inc. | ED | 18-E-0067 | 9.75\% | 3/14/2019 | D | 9.00\% | (75) |  | Settled | 6.97\% | 48.00\% | 4.32\% |
| Oklahoma | Public Service Company of OK | AEP | PUD201800097 | 10.30\% | 3/14/2019 | v | 9.40\% | (90) | Y | Settled | 6.97\% | N/A | N/A |
| Maryland | Potomac Edison Co. | FE | 9490 | 10.80\% | 3/22/2019 | D | 9.65\% | (115) | Y | Fully Litigated | 7.15\% | 52.82\% | 5.10\% |
| Kentucky | Kentucky Utilities Co. | PPL | 2018-00294 | 10.42\% | 4/30/2019 | v | 9.73\% | (69) |  | Settled | N/A | N/A | N/A |
| Kentucky | Louisville Gas \& Electric Co. | PPL | 2018-00295 | 10.42\% | 4/30/2019 | v | 9.73\% | (69) |  | Settled | N/A | N/A | N/A |
| South Carolina | Duke Energy Carolinas LLC | DUK | 2018-319-E | 10.50\% | 5/1/2019 | v | 9.50\% | (100) |  | Fully Litigated | 7.16\% | 53.00\% | 5.04\% |
| Michigan | DTE Electric Co. | DTE | U-20162 | 10.50\% | 5/2/2019 | v | 10.00\% | (50) |  | Fully Litigated | 5.48\% | 37.94\% | 3.79\% |
| South Carolina | Duke Energy Progress LLC | DUK | 2018-318-E | 10.50\% | 5/8/2019 | v | 9.50\% | (100) |  | Fully Litigated | 6.99\% | 53.00\% | 5.04\% |
| South Dakota | Otter Tail Power Co. | OTTR | EL18-021 | 10.30\% | 5/14/2019 | v | 8.75\% | (155) | Y | Fully Litigated | 7.09\% | 52.92\% | 4.63\% |
| Hawaii | Maui Electric Company Ltd | HE | 2017-0150 | 10.60\% | 5/16/2019 | v | 9.50\% | (110) |  | Settled | 7.43\% | 57.02\% | 5.42\% |
| Michigan | Upper Peninsula Power Co. |  | U-20276 | 10.50\% | 5/23/2019 | v | 9.90\% | (60) |  | Settled | 6.91\% | N/A | N/A |
| Maryland | Potomac Electric Power Co. | EXC | 9602 | 10.30\% | 8/12/2019 | D | 9.60\% | (70) |  | Fully Litigated | 7.45\% | 50.46\% | 4.84\% |
| Vermont | Green Mountain Power Corp. |  | 19-1932-TF | 9.16\% | 8/29/2019 | V | 9.06\% | (10) |  | Fully Litigated | 6.85\% | 49.46\% | 4.48\% |
| Wisconsin | Northern States Power Co - WI | XEL | 4220-UR-124 | N/A $\Omega$ | 9/4/2019 | v | 10.00\% | N/A | Y | Settled | 7.74\% | 52.52\% | 5.25\% |
| Massachusetts | Massachusetts Electric Co. | NG | DPU-18-150 | 10.50\% | 9/30/2019 | D | 9.60\% | (90) |  | Fully Litigated | 7.56\% | 53.49\% | 5.14\% |
| Montana | Northwestern Corp. | NWE | D2018.2.12 | 10.65\% | 10/29/2019 | v | 9.65\% | (100) | Y | Settled | 6.92\% | 49.38\% | 4.77\% |
| Wisconsin | Wisconsin Electric Power Co. | WEC | 05-UR-109 | 10.35\% | 10/31/2019 | v | 10.00\% | (35) | Y | Settled | 7.49\% | 54.46\% | 5.45\% |
| Wisconsin | Wisconsin Public Service Corp. | WEC | 6690-UR-126 | 10.35\% | 10/31/2019 | v | 10.00\% | (35) | Y | Settled | 7.22\% | 51.96\% | 5.20\% |
| Louisiana | Entergy New Orleans LLC | ETR | UD-18-07 | 10.50\% | 11/7/2019 | v | 9.35\% | (115) | Y | Fully Litigated | 7.09\% | 50.00\% | 4.68\% |
| Idaho | Avista Corp. | AVA | AVU-E-19-04 | 9.90\% | 11/29/2019 | v | 9.50\% | (40) | Y | Settled | 7.35\% | 50.00\% | 4.75\% |
| Illinois | Commonwealth Edison Co. | EXC | 19-0387 | 8.91\% | 12/4/2019 | D | 8.91\% | - |  | Fully Litigated | 6.51\% | 47.97\% | 4.27\% |
| Indiana | Northern Indiana Public Service Co. | NI | 45159 | 10.80\% | 12/4/2019 | V | 9.75\% | (105) |  | Settled | 6.52\% | 47.86\% | 4.67\% |
| Illinois | Ameren Illinois | AEE | 19-0436 | 8.91\% | 12/16/2019 | D | 8.91\% | - | Y | Fully Litigated | 6.71\% | 50.00\% | 4.46\% |
| Georgia | Georgia Power Co. | so | 42516 | 10.90\% | 12/17/2019 | v | 10.50\% | (40) | Y | Fully Litigated | N/A | 56.00\% | 5.88\% |
| Maryland | Baltimore Gas and Electric Co. | EXC | 9610 | 10.30\% | 12/17/2019 | D | 9.70\% | (60) |  | Settled | 6.94\% | N/A | N/A |
| California | Pacific Gas \& Electric Co. | PCG | A-19-04-015 | 12.00\% | 12/19/2019 | v | 10.25\% | (175) |  | Fully Litigated | 7.81\% | 52.00\% | 5.33\% |
| California | San Diego Gas \& Electric Co. | SRE | A-19-04-017 | 12.38\% | 12/19/2019 | v | 10.20\% | (218) | Y | Fully Litigated | 7.55\% | 52.00\% | 5.30\% |
| California | Southern California Edison Co. | EIX | A-19-04-014 | 11.45\% | 12/19/2019 | v | 10.30\% | (115) | Y | Fully Litigated | 7.68\% | 52.00\% | 5.36\% |
| Arkansas | Southwestern Electric Power Co. | AEP | 19-008-U | 10.50\% | 12/20/2019 | v | 9.45\% | (105) | Y | Settled | 4.93\% | 33.71\% | 3.19\% |
| Nevada | Sierra Pacific Power Co. | BRK.A | 19-06002 | 10.21\% | 12/24/2019 | v | 9.50\% | (71) |  | Settled | 6.75\% | 50.92\% | 4.84\% |
| Iowa | Interstate Power \& Light Co. | LNT | RPU-2019-0001 | $10.25 \%$ ¥ | 1/8/2020 | V | $10.02 \%$ ¥ | (23) | Y | Settled | 7.23\% | 51.00\% | 5.11\% |
| New York | Consolidated Edison Co. of NY | ED | 19-E-0065 | 9.75\% | 1/16/2020 | D | 8.80\% | (95) |  | Settled | 6.61\% | 48.00\% | 4.22\% |
| New Jersey | Rockland Electric Company | ED | ER19050552 | 9.60\% | 1/22/2020 | D | 9.50\% | (10) |  | Settled | 7.11\% | 48.32\% | 4.59\% |
| Michigan | Indiana Michigan Power Co. | AEP | U-20359 | 10.50\% | 1/23/2020 | v | 9.86\% | (64) | Y | Settled | 6.08\% | 46.56\% | 4.59\% |
| California | PacifiCorp | BRK.A | A-18-04-002 | 10.60\% | 2/6/2020 | v | 10.00\% | (60) |  | Fully Litigated | N/A | 51.96\% | 5.20\% |
| Colorado | Public Service Company of Colorado | XEL | 19AL-0268E | 10.20\% | 2/11/2020 | v | 9.30\% | (90) | Y | Fully Litigated | 6.97\% | 55.61\% | 5.17\% |
| Texas | Centerpoint Energy | CNP | 49421 | 10.40\% | 2/14/2020 | D | 9.40\% | (100) | Y | Settled | 6.51\% | 42.50\% | 4.00\% |
| Maine | Central Maine Power Co. | IBE | 2018-00194 | 10.00\% | 2/19/2020 | D | 8.25\% | (175) |  | Fully Litigated | 6.30\% | 50.00\% | 4.13\% |
| North Carolina | Virginia Electric \& Power Co. | D | E-22 Sub 562 | 10.75\% | 2/24/2020 | v | 9.75\% | (100) | Y | Settled | 7.20\% | 52.00\% | 5.07\% |


| Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State | Utility | Parent Company Ticker | Docket | $\begin{gathered} \text { Requested } \\ \text { ROE } \\ \hline \end{gathered}$ | Order Date | Vertically <br> Integrated <br> (V) / <br> Distribution <br> Only (D) | Approved ROE | Difference | Applicant's <br> Electric Proxy Group (Y/N) | ROE Fully Litigated or Settled | Approved WACC | Approved <br> Equity <br> Ratio | $\begin{gathered} \text { Equity } \\ \text { Contribution } \end{gathered}$ |
| (1) | ${ }^{(2)}$ | (3) | ${ }^{(4)}$ | ${ }^{\text {(5) }}$ | (6) | (7) | (8) | $\begin{gathered} \hline(9) \\ (8)-(5) \end{gathered}$ | (10) | (11) | (12) | (13) | $\begin{gathered} \hline(14) \\ \text { (8) } X(13) \end{gathered}$ |
| Texas | AEP Texas Inc. | AEP | 49494 | 10.50\% | 2/27/2020 | D | 9.40\% | (110) | Y | Settled | 6.45\% | 42.50\% | 4.00\% |
| Indiana | Indiana Michigan Power Co. | AEP | 45235 | 10.50\% | 3/11/2020 | v | 9.70\% | (80) | Y | Fully Litigated | 5.61\% | 37.55\% | 3.64\% |
| Washington | Avista Corp. | AVA | UE-190334 | 9.90\% | 3/25/2020 | v | 9.40\% | (50) | Y | Settled | 7.21\% | 48.50\% | 4.56\% |
| Massachusetts | Fitchburg Gas \& Electric Light | UTL | DPU 19-130 | 10.50\% | 4/17/2020 | D | 9.70\% | (80) |  | Settled | 7.99\% | 52.45\% | 5.09\% |
| Kentucky | Duke Energy Kentucky Inc. | DUK | 2019-00271 | 9.80\% | 4/27/2020 | v | 9.25\% | (55) |  | Fully Litigated | 6.41\% | 48.23\% | 4.46\% |
| Michigan | DTE Electric Co. | DTE | U-20561 | 10.50\% | 5/8/2020 | v | 9.90\% | (60) |  | Fully Litigated | 5.46\% | 38.32\% | 3.79\% |
| New Mexico | Southwestern Public Service Co | XEL | 19-00170-UT | 10.10\% | 5/20/2020 | v | 9.45\% | (65) | Y | Settled | 7.19\% | 54.77\% | 5.18\% |
| Indiana | Duke Energy Indiana, LLC | DUK | 45253 | 10.40\% | 6/29/2020 | v | 9.70\% | (70) |  | Fully Litigated | 5.71\% | 40.98\% | 3.98\% |
| New Hampshire | Liberty Utilities Granite St | AQN | DE-19-064 | 10.00\% | 6/30/2020 | D | 9.10\% | (90) |  | Settled | 7.60\% | 52.00\% | 4.73\% |
| Missouri | Empire District Electric Co. | AQN | ER-2019-0374 | 9.95\% | 7/1/2020 | v | 9.25\% | (70) |  | Settled | 6.77\% | 46.00\% | 4.26\% |
| Washington | Puget Sound Energy Inc. |  | UE-190529 | 9.50\% | 7/8/2020 | v | 9.40\% | (10) |  | Fully Litigated | 7.39\% | 48.50\% | 4.56\% |
| Maryland | Delmarva Power \& Light Co. | EXC | 9630 | 10.30\% | 7/14/2020 | D | 9.60\% | (70) |  | Fully Litigated | 6.84\% | 50.53\% | 4.85\% |
| Hawaii | Hawaii Electric Light Co | HE | 2018-0368 | 10.50\% | 7/28/2020 | v | 9.50\% | (100) | Y | Settled | 7.52\% | 56.83\% | 5.40\% |
| California | Liberty Utilities (CalPeco Electric) | AQN | A-18-12-001 | 10.30\% | 8/27/2020 | v | 10.00\% | (30) |  | Fully Litigated | 7.63\% | 52.50\% | 5.25\% |
| Vermont | Green Mountain Power Corp. |  | 20-1407-TF | 8.20\% | 8/27/2020 | v | 8.20\% | - |  | Fully Litigated | 6.43\% | 49.87\% | 4.09\% |
| Texas | Southwestern Public Service Co | XEL | 49831 | 10.10\% | 8/27/2020 | v | 9.45\% | (65) | Y | Settled | 7.13\% | 54.62\% | 5.16\% |
| Hawaii | Hawaiian Electric Co. | HE | 2019-0085 | 10.50\% | 10/22/2020 | v | 9.50\% | (100) |  | Settled | 7.37\% | 56.83\% | 5.40\% |
| New Jersey | Jersey Central Power \& Light Co. | FE | ER20020146 | 10.15\% | 10/28/2020 | D | 9.60\% | (55) | Y | Settled | 7.40\% | 51.44\% | 4.94\% |
| New York | NY State Electric \& Gas Corp | IBE | 19-E-0378 | 9.50\% | 11/19/2020 | D | 8.80\% | (70) |  | Settled | 6.10\% | 48.00\% | 4.22\% |
| New York | Rochester Gas \& Electric Corp | IBE | 19-E-0380 | 9.50\% | 11/19/2020 | D | 8.80\% | (70) |  | Settled | 6.62\% | 48.00\% | 4.22\% |
| Virginia | Appalachian Power Co. | AEP | PUR-2020-00015 | 9.90\% | 11/24/2020 | v | 9.20\% | (70) | Y | Fully Litigated | N/A | N/A | N/A |
| Wisconsin | Madison Gas and Electric Co. | MGEE | 3270-UR-123 (Elec) | 9.80\% | 11/24/2020 | v | 9.80\% | - | Y | Settled | 6.95\% | 55.00\% | 5.39\% |
| Illinois | Ameren Illinois | AEE | 20-0381 | 8.38\% | 12/9/2020 | D | 8.38\% | - | Y | Fully Litigated | 6.39\% | 50.00\% | 4.19\% |
| Illinois | Commonwealth Edison Co. | EXC | 20-0393 | 8.38\% | 12/9/2020 | D | 8.38\% | - |  | Fully Litigated | 6.28\% | 48.16\% | 4.04\% |
| Nevada | Nevada Power Co. | BRK.A | 20-06003 | 10.08\% | 12/10/2020 | v | 9.40\% | (68) |  | Settled | 7.14\% | N/A | N/A |
| Washington | PacifiCorp | BRK.A | UE-191024 | 10.20\% | 12/14/2020 | v | 9.50\% | (70) |  | Settled | 7.17\% | 49.10\% | 4.66\% |
| New Hampshire | Public Service Co. of NH | ES | DE-19-057 | 10.40\% | 12/15/2020 | D | 9.30\% | (110) |  | Settled | 6.87\% | 54.40\% | 5.06\% |
| Maryland | Baltimore Gas and Electric Co. | EXC | 9645 | 10.10\% | 12/16/2020 | D | 9.50\% | (60) |  | Fully Litigated | 6.75\% | 52.00\% | 4.94\% |
| Michigan | Consumers Energy Co. | CMS | U-20697 | 10.50\% | 12/17/2020 | v | 9.90\% | (60) | Y | Fully Litigated | 5.67\% | N/A | N/A |
| Oregon | PacifiCorp | BRK.A | UE 374 | 9.80\% | 12/18/2020 | v | 9.50\% | (30) |  | Fully Litigated | 7.14\% | 50.00\% | 4.75\% |
| Arizona | Tucson Electric Power Co. | FTS | E-1933A-19-0028 | 10.00\% | 12/22/2020 | v | 9.15\% | (85) |  | Fully Litigated | 7.04\% | 53.08\% | 4.86\% |
| Wisconsin | Wisconsin Power and Light Co | LNT | 6680-UR-122 (Elec) | N/A | 12/23/2020 | v | 10.00\% | N/A | Y | Fully Litigated | 7.26\% | 52.53\% | 5.25\% |
| Utah | PacifiCorp | BRK.A | 20-035-04 | 9.80\% | 12/30/2020 | v | 9.65\% | (15) |  | Fully Litigated | 7.34\% | 52.50\% | 5.07\% |
| Kentucky | Kentucky Power Co. | AEP | 2020-00174 | 10.00\% | 1/13/2021 | V | 9.30\% | (70) | Y | Fully Litigated | 6.19\% | 43.25\% | 4.02\% |
| North Carolina | Duke Energy Carolinas LLC | DUK | E-7, Sub 1214 | 10.50\% $\mu$ | 3/31/2021 | v | 9.60\% | (90) |  | Settled | 7.04\% | 52.00\% | 4.99\% |
| North Carolina | Duke Energy Progress LLC | DUK | E-2, Sub 1219 | 10.50\% $\mu$ | 4/16/2021 | v | 9.60\% | (90) |  | Settled | 6.92\% | 52.00\% | 4.99\% |
| Florida | Duke Energy Florida LLC | DUK | 20210016-EI | 9.85\% | 5/4/2021 | v | 9.85\% | - |  | Settled | N/A | N/A | N/A |
| Wyoming | PacifiCorp | BRK.A | 20000-578-ER-20 | 9.80\% | 5/18/2021 | v | 9.50\% | (30) |  | Fully Litigated | 7.19\% | 51.00\% | 4.85\% |
| District of Columbia | Potomac Electric | EXC | FC-1156 | 9.70\% | 6/4/2021 | D | 9.28\% | (42) |  | Fully Litigated | 7.17\% | 50.68\% | 4.70\% |
| Maryland | Potomac Electric Power Co. | EXC | 9655 | 10.20\% | 6/23/2021 | v | 9.55\% | (65) |  | Fully Litigated | 7.21\% | 50.50\% | 4.82\% |
| New Mexico | El Paso Electric Co. |  | 20-00104-UT | 10.30\% | 6/28/2021 | D | 9.00\% | (130) |  | Fully Litigated | 7.18\% | 49.21\% | 4.43\% |
| Kentucky | Kentucky Utilities Co. | PPL | 2020-00349 | 10.00\% | 6/30/2021 | V | 9.43\% | (57) |  | Settled | N/A | N/A | N/A |


| Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State | Utility | Parent Company Ticker | Docket | Requested ROE | Order Date | Vertically <br> Integrated <br> (V) / <br> Distribution <br> Only (D) | Approved ROE | Difference | Applicant's <br> Electric <br> Proxy <br> Group <br> (Y/N) | ROE Fully <br> Litigated or Settled | Approved WACC | Approved Equity Ratio | Equity <br> Contribution |
| ${ }^{(1)}$ | ${ }^{(2)}$ | (3) | (4) | (5) | ${ }^{(6)}$ | (7) | (8) | $\begin{gathered} \hline(9) \\ (8)-(5) \end{gathered}$ | (10) | (11) | ${ }^{(12)}$ | (13) | $\begin{gathered} \text { (14) } \\ \text { (8) } \mathrm{X}(13) \end{gathered}$ |
| Kentucky | Louisville Gas \& Electric Co. | PPL | 2020-00350 (elec.) | 10.00\% | 6/30/2021 | v | 9.43\% | (57) |  | Settled | NA | NA | N/A |
| New Jersey | Atlantic City Electric Co. | EXC | ER20120746 | 10.30\% | 7/14/2021 | D | 9.60\% | (70) |  | Settled | 6.99\% | 50.21\% | 4.82\% |
| South Carolina | Dominion Energy South Carolina | D | 2020-125-E | 10.25\% | 7/21/2021 | v | 9.50\% | (75) | Y | Settled | N/A | 51.62\% | 4.90\% |
| Delaware | Delmarva Power \& Light Co. | EXC | 20-0149 | 10.30\% | 8/5/2021 | D | 9.60\% | (70) |  | Fully Litigated | 6.80\% | N/A | N/A |
| North Dakota | Northern States Power Co. | XEL | PU-20-441 | 10.20\% | 8/18/2021 | v | 9.50\% | (70) | Y | Settled | 6.97\% | 52.50\% | 4.99\% |
| Vermont | Green Mountain Power Corp. |  | 21-1963-TF | 8.57\% | 8/31/2021 | v | 8.57\% | - |  | Fully Litigated | 6.67\% | 50.42\% | 4.32\% |
| Idaho | Avista Corp. | AVA | AVU-E-21-01 | 9.90\% | 9/1/2021 | v | 9.40\% | (50) | Y | Settled | 7.05\% | 50.00\% | 4.70\% |
| Washington | Avista Corp. | AVA | UE-200900 | 9.90\% | 9/27/2021 | v | 9.40\% | (50) | Y | Settled | 7.12\% | 48.50\% | 4.56\% |
| Florida | Tampa Electric Co. | EMA | 20210034-EI | 10.75\% | 10/21/2021 | v | 9.95\% | (80) |  | Settled | 6.26\% | 45.07\% | 4.48\% |
| Florida | Florida Power \& Light Co. | NEE | 20210015-EI | 11.50\% | 10/26/2021 | v | 10.60\% | (90) |  | Settled | N/A | N/A | N/A |
| Maine | Versant Power |  | 2020-00316 | 9.35\% | 10/28/2021 | D | 9.35\% | - |  | NA | 6.57\% | 49.00\% | 4.58\% |
| Arizona | Arizona Public Service Co. | PNW | E-01345A-19-0236 | 10.00\% | 11/2/2021 | v | 8.70\% | (130) |  | Settled | 6.62^\% | 54.67\% | 4.76\% |
| Miinnesota | Otter Tail Power Co. | OTTR | E-017/GR-20-719 | 10.20\% | 11/4/2021 | v | 9.48\% | (72) | Y | Fully Litigated | 7.18\% | 52.50\% | 4.98\% |
| Ohio | Ohio Power Co. | AEP | 20-0585-EL-AIR | 10.15\% | 11/17/2021 | D | 9.70\% | (45) | Y | Settled | 7.28\% | 43.43\% | 4.21\% |
| New York | Central Hudson Gas \& Electric | FTS | 20-E-0428 | 9.10\% | 11/18/2021 | D | 9.00\% | (10) |  | Settled | 6.48\% | 50.00\% | 4.50\% |
| Texas | Southwestern Electric Power Co | AEP | 51415 | 10.35\% | 11/18/2021 | v | 9.25\% | (110) | Y | Fully Litigated | 6.69\% | 49.37\% | 4.57\% |
| Virginia | Virginia Electric \& Power Co. | D | PUR-2021-00058 | 10.80\% | 11/18/2021 | v | 9.35\% | (145) | Y | Settled | 6.92\% | 51.92\% | 4.85\% |
| Wisconsin | Madison Gas and Electric Co. | mgee | 3270-UR-124 (Elec) | 9.80\% | 11/23/2021 | v | 9.80\% | - | Y | Settled | 7.18\% | 55.00\% | 5.39\% |
| Wisconsin | Northern States Power Co. | XEL | 4220-UR-125 (Elec) | 10.00\% | 11/18/2021 | v | 10.00\% | - | Y | Settled | 7.31\% | 52.50\% | 5.25\% |
| Wisconsin | Wisconsin Power and Light Co | LNT | 6680-UR-123 (Elec) | 10.00\% | 11/18/2021 | v | 10.00\% | - | Y | Settled | 7.48\% | 52.50\% | 5.25\% |
| Illinois | Commonwealth Edison Co. | EXC | 21-0367 | 7.36\% | 12/1/2021 | D | 7.36\% | - |  | Fully Litigated | 5.72\% | 48.70\% | 3.58\% |
| Illinois | Ameren Illinois | AEE | 21-0365 | 7.36\% | 12/13/2021 | D | 7.36\% | - | Y | Fully Litigated | 5.78\% | 51.00\% | 3.75\% |
| New Jersey | Rockland Electric Company | ED | ER21050823 | 10.00\% | 12/15/2021 | D | 9.60\% | (40) |  | Settled | 7.08\% | 48.51\% | 4.66\% |
| Michigan | Consumers Energy Co. | CMS | U-20963 | 10.50\% | 12/22/2021 | v | 9.90\% | (60) | Y | Fully Litigated | 5.62\% | 41.84\% | 4.14\% |
| Oklahoma | Public Service Co. of OK | AEP | PUD202100055 | 10.00\% | 12/28/2021 | V | 9.40\% | (60) | Y | Settled | 6.74\% | N/A | N/A |
| New York | Niagara Mohawk Power Corp. | NG. | 20-E-0380 | 9.50\% | 1/20/2022 | D | 9.00\% | (50) |  | Settled | 6.08\% | 48.00\% | 4.32\% |
| New Mexico | Southwestern Public Service Co | XEL | 20-00238-UT | 10.35\% | 2/16/2022 | v | 9.35\% | (100) | Y | Settled | 7.07\% | 54.72\% | 5.12\% |
| Indiana | Indiana Michigan Power Co. | AEP | 45576 | 10.00\% | 2/23/2022 | v | 9.70\% | (30) | Y | Settled | 5.78\% | 40.70\% | 3.95\% |
| Colorado | Public Service Co. of CO | XEL | 21AL-0317E | 10.00\% | 3/16/2022 | v | 9.30\% | (70) | Y | Settled | 6.82\% | 55.69\% | 5.18\% |
| New York | Orange \& Rockland Uttts Inc. | ED | 21-E-0074 | 9.50\% | 4/14/2022 | D | 9.20\% | (30) |  | Settled | 6.77\% | 48.00\% | 4.42\% |
| New Hampshire | Unitil Energy Systems Inc. | UTL | DE-21-030 | 10.00\% | 5/12/2022 | D | 9.20\% | (80) |  | Settled | 7.42\% | 52.00\% | 4.78\% |
| Oregon | Portland General Electric Co. | POR | UE-394 | 9.50\% | 4/25/2022 | v | 9.50\% | - | Y | Settled | 6.81\% | 50.00\% | 4.75\% |
| Arkansas | Southwestern Electric Power Co | AEP | 21-070-U | 10.35\% | 5/23/2022 | v | 9.50\% | (85) | Y | Fully Litigated | N/A | 44.54\% | 4.23\% |
| Vermont | Green Mountain Power Corp. |  | 22-0175-TF | 8.57\% | 8/31/2022 | v | 8.57\% | - |  | NA | 6.30\% | 49.98\% | 4.28\% |
| Oklahoma | Oklahoma Gas and Electric Co. | OGE | PUD202100164 | 10.20\% | 9/8/2022 | v | 9.50\% | (70) | Y | Settled | N/A | 53.37\% | 5.07\% |
| Texas | El Paso Electric Co. |  | 52195 | 10.30\% | 9/15/2022 | v | 9.35\% | (95) |  | Settled | 7.50\% | 51.00\% | 4.77\% |
| Tennessee | Kingsport Power Company | AEP | 21-00107 | 10.20\% | 10/25/2022 | v | 9.50\% | (70) | Y | Settled | 6.02\% | 48.90\% | 4.65\% |
| Illinois | Commonwealth Edison Co. | EXC | 22-0302 | 7.85\% | 11/17/2022 | D | 7.85\% | - |  | Fully Litigated | 5.94\% | 49.45\% | 3.88\% |
| Michigan | DTE Electric Co. | DTE | U-20836 | 10.25\% | 11/18/2022 | V | 9.90\% | (35) |  | Fully Litigated | 5.42\% | 39.62\% | 3.92\% |
| Massachusetts | NSTAR Electric Co. | ES | DPU 22-22 | 10.50\% | 11/30/2022 | D | 9.80\% | (70) |  | Fully Litigated | 7.06\% | 53.21\% | 5.21\% |
| Wisconsin | Wisconsin Electric Power Co. | WEC | 5-UR-110 | 10.00\% | 12/1/2022 | v | 9.80\% | (20) | Y | Fully Litigated | N/A | 53.00\% | 5.19\% |
| Wisconsin | Wisconsin Public Service Corp. | WEC | 6690-UR-127 | 10.00\% | 12/1/2022 | v | 9.80\% | (20) | Y | Fully Litigated | N/A | 53.00\% | 5.19\% |

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present


Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present

| Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2019 to Present |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State | Utility $\quad$Parent Company <br> Ticker | Docket | $\begin{aligned} & \text { Requested } \\ & \text { ROE } \end{aligned}$ | Order Date | Vertically <br> Integrated (V) / <br> Distribution Only (D) | Approved <br> ROE | Difference | Applicant's <br> Electric Proxy Group (Y/N) | ROE Fully <br> Litigated or Settled | Approved WACC | Approved <br> Equity <br> Ratio | $\begin{gathered} \text { Equity } \\ \text { Contribution } \end{gathered}$ |
| (1) | (2) (3) | (4) | (5) | ${ }^{(6)}$ | ${ }^{(7)}$ | (8) | $\begin{gathered} (9) \\ (8)-(5) \end{gathered}$ | (10) | (11) | (12) | (13) | $\stackrel{(14)}{(8) \mathrm{X}(13)}$ |
| Average | (Vertically Integrated Only) |  | 10.59\% |  |  | 9.73\% | (86) |  |  | 7.01\% | 50.32\% | 4.90\% |
| 2020 |  |  |  |  |  |  |  |  |  |  |  |  |
| \# of Decisions |  |  | 42 |  |  |  |  |  |  |  |  |  |
| Average | (All Utilities) |  | 10.00\% |  |  | 9.39\% | (62) |  |  | 6.82\% | 49.77\% | 4.67\% |
| Average | (Distribution Only) |  | 9.83\% |  |  | 9.10\% | (73) |  |  | 6.79\% | 49.22\% | 4.48\% |
| Average | (Distribution Only, exc. IL FRP) |  | 10.07\% |  |  | 9.21\% | (86) |  |  | 6.86\% | 49.24\% | 4.54\% |
| Average | (Vertically Integrated Only) |  | 10.10\% |  |  | 9.55\% | (56) |  |  | 6.84\% | 50.12\% | 4.78\% |
| 2021 |  |  |  |  |  |  |  |  |  |  |  |  |
| \# of Decisions |  |  | 34 |  |  |  |  |  |  |  |  |  |
| Average | (All Utilities) |  | 9.93\% |  |  | 9.38\% | (55) |  |  | 6.81\% | 49.93\% | 4.64\% |
| Average | (Distribution Only) |  | 9.39\% |  |  | 8.99\% | (41) |  |  | 6.71\% | 48.97\% | 4.36\% |
| Average | (Distribution Only, exc. IL FRP) |  | 9.90\% |  |  | 9.39\% | (51) |  |  | 6.94\% | 48.72\% | 4.56\% |
| Average | (Vertically Integrated Only) |  | 10.15\% |  |  | 9.54\% | (60) |  |  | 6.87\% | 50.38\% | 4.78\% |
| 2022 |  |  |  |  |  |  |  |  |  |  |  |  |
| \# of Decisions |  |  | 27 |  |  |  |  |  |  |  |  |  |
| Average | (All Utilities) |  | 10.03\% |  |  | 9.52\% | (51) |  |  | 6.78\% | 50.54\% | 4.82\% |
| Average | (Distribution Only) |  | 9.80\% |  |  | 9.27\% | (53) |  |  | 6.77\% | 50.69\% | 4.71\% |
| Average | (Distribution Only, exc. IL FRP) |  | 10.08\% |  |  | 9.47\% | (61) |  |  | 6.89\% | 50.87\% | 4.82\% |
| Average | (Vertically Integrated Only) |  | 10.13\% |  |  | 9.63\% | (50) |  |  | 6.79\% | 50.47\% | 4.86\% |
| 2023 |  |  |  |  |  |  |  |  |  |  |  |  |
| \# of Decisions |  |  | 12 |  |  |  |  |  |  |  |  |  |
| Average | (All Utilities) |  | 10.27\% |  |  | 9.64\% | (63) |  |  | 6.82\% | 50.47\% | 4.79\% |
| Average | (Distribution Only) |  | 9.95\% |  |  | 9.47\% | (48) |  |  | 6.17\% | 47.17\% | 4.46\% |
| Average | (Distribution Only, exc. IL FRP) |  | 9.95\% |  |  | 9.47\% | (48) |  |  | 6.17\% | 47.17\% | 4.46\% |
| Average | (Vertically Integrated Only) |  | 10.37\% |  |  | 9.70\% | (67) |  |  | 7.14\% | 52.12\% | 5.00\% |
| Source: S\&P Global Market Intelligence |  |  |  |  |  |  |  |  |  |  |  |  |
| Last Updated: 3/7/2023 |  |  |  |  |  |  |  |  |  |  |  |  |
| $\Omega$ Utility did not file a full rate case, approved ROE based on a settlement |  |  |  |  |  |  |  |  |  |  |  |  |
| $¥$ Weighted to include ratemaking-principles rate base and ROE |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mu$ S\&P incorrectly reports this value as $9.6 \%$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Excludes Calif | ockets A21-08-013, A21-08-014, and A21-08-015, which reaffirm | Commiss | orders on ROE and | re not new app | oved ROEs. |  |  |  |  |  |  |  |

Revenue Requirement Impact of DEC's Proposed ROE Versus Approved ROEs for Vertically Integrated Utilities, 2019-Present

| Line No. | Source | Description | Percent | Rate |  | Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Q. Bowman Supplemental Exhibit 2, page 2.1 | Long-Term Debt | 47.00\% | 4.53\% |  | 2.13\% |
| 2 | Chriss Exhibit 2 | Common Stock Equity, Currently Approvec | 53.00\% | 9.62\% |  | 5.10\% |
| 3 | Line 1 + Line 2 | Total |  |  |  | 7.23\% |
| 4 | Q. Bowman Supplemental Exhibit 2, page 2.1 | Rate Base, Exlcuding ARO CCR (\$000) |  |  | \$ | 18,863,847 |
| 5 | Line $3 \times$ Line 5 | Required Operating Income, Currently Approved ROE (\$000) |  |  | \$ | 1,363,278 |
| 6 | Q. Bowman Supplemental Exhibit 2, page 2.2 | Long-Term Debt | 47.00\% | 4.53\% |  | 2.13\% |
| 7 | Q. Bowman Supplemental Exhibit 2, page 2.2 | Common Stock Equity, Currently Approved | 53.00\% | 8.12\% |  | 4.30\% |
| 8 | Line $6+$ Line 7 | Total |  |  |  | 6.43\% |
| 9 | Q. Bowman Supplemental Exhibit 2, page 2.2 | Rate Base, ARO CCR (\$000) |  |  | \$ | 180,511 |
| 10 | Line $8 \times$ Line 9 | Required Operating Income, Currently Approved ROE (\$000) |  |  | \$ | 11,610 |
| 11 | Line $5+$ Line 10 | Total Required Operating Income, Currently Approved ROE (\$000) |  |  | \$ | 1,374,888 |
| 12 | Q. Bowman Supplemental Exhibit 2, page 2 | Required Operating Income, Proposed (\$000) |  |  | \$ | 1,453,684 |
| 13 | Line 12 - Line 11 | Difference in Operating Income |  |  | \$ | 78,796 |
| 14 | Q. Bowman Supplemental Exhibit 2, page 2 | Regulatory Fee (0.1392\%), Uncollectibles Rate (0.5847\%) |  |  | \$ | 570 |
| 15 | Q. Bowman Supplemental Exhibit 2, page 2 | Income Taxes (23.3503\%) |  |  | \$ | 18,399 |
| 16 | Line 13 + Line 14 + Line 15 | Difference from Proposed Revenue Requirement |  |  | \$ | 97,765 |
| 17 | Q. Bowman Supplemental Exhibit 2, page 2 | Proposed Gross Revenue Requirement Increase |  |  | \$ | 440,300 |
| 18 | Line 17 / Line 16 | Percentage of Proposed Revenue Requirement |  |  |  | 22.2\% |

## Calculation of Rate of Return Indexes, DEC Cost of Service Results

| Rate Class | Test Year (Rate Year 0) |  | Rate Year 1 |  | Rate Year 2 |  | Rate Year 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Present Rate of Return | Rate of Return Index | Present Rate of Return | Rate of Return Index | Present Rate of Return | Rate of Return Index | Present Rate of Return | Rate of Return Index |
| (1) | ${ }^{(2)}$ | (3) | ${ }^{(2)}$ | (3) | ${ }^{(2)}$ | (3) | ${ }^{(2)}$ | (3) |
| RES | 5.9\% | 0.98 | 5.3\% | 0.95 | 4.3\% | 0.91 | 3.3\% | 0.89 |
| GS | 7.4\% | 1.23 | 6.5\% | 1.16 | 5.0\% | 1.06 | 3.2\% | 0.86 |
| LT | 0.1\% | 0.02 | -0.4\% | (0.07) | -1.3\% | (0.28) | -2.6\% | (0.70) |
| I | 5.4\% | 0.90 | 4.8\% | 0.86 | 3.8\% | 0.81 | 2.6\% | 0.70 |
| OPT | 7.0\% | 1.17 | 7.0\% | 1.25 | 6.9\% | 1.47 | 6.8\% | 1.84 |
| Total | 6.0\% | 1.00 | 5.6\% | 1.00 | 4.7\% | 1.00 | 3.7\% | 1.00 |
| Sources: |  |  |  |  |  |  |  |  |
| Beveridge Exhibit 4 |  |  |  |  |  |  |  |  |
| Beveridge Exhibit 4_1 |  |  |  |  |  |  |  |  |
| Beveridge Exhibit 4_2 |  |  |  |  |  |  |  |  |
| Beveridge Exhibit 4_3 |  |  |  |  |  |  |  |  |

## Kroger/Harris Teeter Recommended OPT-V Secondary Rate Design

Revenue Verification - Year 1 At Duke Energy Carolinas Proposed Revenue Requirement

|  |  | Proposed <br> Rate | Proposed <br> Billing Units | Proposed <br> Revenue |
| :--- | :---: | ---: | ---: | ---: |
|  |  |  |  |  |
| Basic Customer Charge | Month | $\$ 34.00$ | 202,070 | $\$ 6,870,380$ |
| Peak Demand | kW | $\$ 3.58$ | $23,607,503$ | $\$ 84,514,861$ |
| Mid-Peak, First 1000 kW | kW | $\$ 8.48$ | $20,444,044$ | $\$ 173,365,493$ |
| Mid-Peak, Next 2000 kW | kW | $\$ 7.89$ | $3,224,055$ | $\$ 25,437,794$ |
| Mid-Peak, Over 3000 kW | kW | $\$ 6.53$ | $2,229,473$ | $\$ 14,558,459$ |
| Base De,amd | kW | $\$ 1.70$ | $30,122,070$ | $\$ 51,207,519$ |
| On-Peak Energy | kWh | $\$ 0.083618$ | $1,112,665,289$ | $\$ 93,038,846$ |
| Off-Peak Energy | kWh | $\$ 0.037042$ | $7,981,707,878$ | $\$ 295,658,423$ |
| Discount Energy | kWh | $\$ 0.024333$ | $2,956,963,823$ | $\$ 71,951,801$ |
|  |  |  |  | $\$ 816,603,576$ |

## Kroger/Harris Teeter Recommended OPT-V Secondary Rate Design <br> Revenue Verification - Year 2 At Duke Energy Carolinas Proposed Revenue Requirement

|  |  | Proposed <br> Rate | Proposed <br> Billing Units | Proposed <br> Revenue |
| :--- | :---: | ---: | ---: | ---: |
|  |  |  |  |  |
| Basic Customer Charge | Month | $\$ 34.00$ | 202,070 | $\$ 6,870,380$ |
| Peak Demand | kW | $\$ 3.77$ | $23,607,503$ | $\$ 89,000,286$ |
| Mid-Peak, First 1000 kW | kW | $\$ 8.91$ | $20,444,044$ | $\$ 182,156,432$ |
| Mid-Peak, Next 2000 kW | kW | $\$ 8.29$ | $3,224,055$ | $\$ 26,727,416$ |
| Mid-Peak, Over 3000 kW | kW | $\$ 6.86$ | $2,229,473$ | $\$ 15,294,185$ |
| Base De,amd | kW | $\$ 1.78$ | $30,122,070$ | $\$ 53,617,285$ |
| On-Peak Energy | kWh | $\$ 0.083618$ | $1,112,665,289$ | $\$ 93,038,846$ |
| Off-Peak Energy | kWh | $\$ 0.037042$ | $7,981,707,878$ | $\$ 295,658,423$ |
| Discount Energy | kWh | $\$ 0.024333$ | $2,956,963,823$ | $\$ 71,951,801$ |
|  |  |  |  | $\$ 834,315,054$ |

## Kroger/Harris Teeter Recommended OPT-V Secondary Rate Design

Revenue Verification - Year 3 At Duke Energy Carolinas Proposed Revenue Requirement

|  |  | Proposed <br> Rate | Proposed <br> Billing Units | Proposed <br> Revenue |
| :--- | :---: | ---: | ---: | ---: |
| Basic Customer Charge | Month | $\$ 34.00$ | 202,070 | $\$ 6,870,380$ |
| Peak Demand | kW | $\$ 3.91$ | $23,607,503$ | $\$ 92,305,337$ |
| Mid-Peak, First 1000 kW | kW | $\$ 9.26$ | $20,444,044$ | $\$ 189,311,847$ |
| Mid-Peak, Next 2000 kW | kW | $\$ 8.61$ | $3,224,055$ | $\$ 27,759,114$ |
| Mid-Peak, Over 3000 kW | kW | $\$ 7.13$ | $2,229,473$ | $\$ 15,896,142$ |
| Base De,amd | kW | $\$ 1.85$ | $30,122,070$ | $\$ 55,725,830$ |
| On-Peak Energy | kWh | $\$ 0.083618$ | $1,112,665,289$ | $\$ 93,038,846$ |
| Off-Peak Energy | kWh | $\$ 0.037042$ | $7,981,707,878$ | $\$ 295,658,423$ |
| Discount Energy | kWh | $\$ 0.024333$ | $2,956,963,823$ | $\$ 71,951,801$ |
|  |  |  |  | $\$ 848,517,720$ |

Rate Schedule OPT-V Secondary Monthly Bill Impacts
at Kroger/Harris Teeter Proposed Rates Year 1
at Duke Energy Carolinas Proposed Revenue Requirement

| Schedule OPT-V Secondary (General Service) |  |  |  |  |  | Schedule OPT-V Secondary (General Service) Non-Summer Months |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| kW | kWh | Load <br> Factor | Present Equivalent Rates | Proposed Rates | Percent Change | kW | kWh | Load Factor | Present Equivalent Rates | $\begin{array}{r} \text { Proposed } \\ \text { Rates } \\ \hline \end{array}$ | Percent Change |
| 75 | 20,000 | 37\% | \$1,859 | \$2,031 | 9.2\% | 75 | 20,000 | 37\% | \$1,859 | \$2,031 | 9.2\% |
| 75 | 40,000 | 73\% | \$2,800 | \$2,970 | 6.1\% | 75 | 40,000 | 73\% | \$2,800 | \$2,970 | 6.1\% |
| 250 | 75,000 | 41\% | \$6,502 | \$7,065 | 8.7\% | 250 | 75,000 | 41\% | \$6,502 | \$7,065 | 8.7\% |
| 250 | 150,000 | 82\% | \$10,029 | \$10,588 | 5.6\% | 250 | 150,000 | 82\% | \$10,029 | \$10,588 | 5.6\% |
| 500 | 150,000 | 41\% | \$12,965 | \$14,090 | 8.7\% | 500 | 150,000 | 41\% | \$12,965 | \$14,090 | 8.7\% |
| 500 | 300,000 | 82\% | \$20,020 | \$21,136 | 5.6\% | 500 | 300,000 | 82\% | \$20,020 | \$21,136 | 5.6\% |
| 1,000 | 500,000 | 68\% | \$35,288 | \$37,519 | 6.3\% | 1,000 | 500,000 | 68\% | \$35,288 | \$37,519 | 6.3\% |
| 2,500 | 1,300,000 | 71\% | \$89,780 | \$95,200 | 6.0\% | 2,500 | 1,300,000 | 71\% | \$89,780 | \$95,200 | 6.0\% |
| 5,000 | 2,600,000 | 71\% | \$176,633 | \$186,883 | 5.8\% | 5,000 | 2,600,000 | 71\% | \$176,633 | \$186,883 | 5.8\% |
| 10,000 | 5,500,000 | 75\% | \$363,459 | \$383,146 | 5.4\% | 10,000 | 5,500,000 | 75\% | \$363,459 | \$383,146 | 5.4\% |


| Schedule OPT-V Secondary (Industrial) Summer Months |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| kW | kWh | Load Factor | Present Equivalent Rates | Proposed Rates | Percent Change |
| 75 | 20,000 | 37\% | \$1,912 | \$2,062 | 7.8\% |
| 75 | 40,000 | 73\% | \$2,880 | \$3,007 | 4.4\% |
| 250 | 75,000 | 41\% | \$6,630 | \$7,113 | 7.3\% |
| 250 | 150,000 | 82\% | \$10,261 | \$10,659 | 3.9\% |
| 500 | 150,000 | 41\% | \$13,197 | \$14,161 | 7.3\% |
| 500 | 300,000 | 82\% | \$20,460 | \$21,252 | 3.9\% |
| 1,000 | 500,000 | 68\% | \$36,003 | \$37,696 | 4.7\% |
| 2,500 | 1,300,000 | 71\% | \$91,600 | \$95,621 | 4.4\% |
| 5,000 | 2,600,000 | 71\% | \$180,249 | \$187,699 | 4.1\% |
| 10,000 | 5,500,000 | 75\% | \$371,080 | \$384,846 | 3.7\% |


| Schedule OPT-V Secondary (Industrial) Non-Summer Months |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| kW | kWh | Load Factor | Present Equivalent Rates | Proposed Rates | Percent Change |
| 75 | 20,000 | 37\% | \$1,912 | \$2,062 | 7.8\% |
| 75 | 40,000 | 73\% | \$2,880 | \$3,007 | 4.4\% |
| 250 | 75,000 | 41\% | \$6,630 | \$7,113 | 7.3\% |
| 250 | 150,000 | 82\% | \$10,261 | \$10,659 | 3.9\% |
| 500 | 150,000 | 41\% | \$13,197 | \$14,161 | 7.3\% |
| 500 | 300,000 | 82\% | \$20,460 | \$21,252 | 3.9\% |
| 1,000 | 500,000 | 68\% | \$36,003 | \$37,696 | 4.7\% |
| 2,500 | 1,300,000 | 71\% | \$91,600 | \$95,621 | 4.4\% |
| 5,000 | 2,600,000 | 71\% | \$180,249 | \$187,699 | 4.1\% |
| 10,000 | 5,500,000 | 75\% | \$371,080 | \$384,846 | 3.7\% |

Rate Schedule OPT-V Secondary Monthly Bill Impacts
at Kroger/Harris Teeter Proposed Rates Year 2
at Duke Energy Carolinas Proposed Revenue Requirement

| Schedule OPT-V Secondary (General Service) Summer Months |  |  |  |  |  | Schedule OPT-V Secondary (General Service) Non-Summer Months |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| kW | kWh | Load <br> Factor | Present Equivalent Rates | Proposed Rates | Percent <br> Change | kW | kWh | Load <br> Factor | Present Equivalent Rates | Proposed Rates | Percent <br> Change |
| 75 | 20,000 | 37\% | \$1,859 | \$2,084 | 12.1\% | 75 | 20,000 | 37\% | \$1,859 | \$2,084 | 12.1\% |
| 75 | 40,000 | 73\% | \$2,800 | \$3,024 | 8.0\% | 75 | 40,000 | 73\% | \$2,800 | \$3,024 | 8.0\% |
| 250 | 75,000 | 41\% | \$6,502 | \$7,243 | 11.4\% | 250 | 75,000 | 41\% | \$6,502 | \$7,243 | 11.4\% |
| 250 | 150,000 | 82\% | \$10,029 | \$10,766 | 7.3\% | 250 | 150,000 | 82\% | \$10,029 | \$10,766 | 7.3\% |
| 500 | 150,000 | 41\% | \$12,965 | \$14,445 | 11.4\% | 500 | 150,000 | 41\% | \$12,965 | \$14,445 | 11.4\% |
| 500 | 300,000 | 82\% | \$20,020 | \$21,491 | 7.3\% | 500 | 300,000 | 82\% | \$20,020 | \$21,491 | 7.3\% |
| 1,000 | 500,000 | 68\% | \$35,288 | \$38,229 | 8.3\% | 1,000 | 500,000 | 68\% | \$35,288 | \$38,229 | 8.3\% |
| 2,500 | 1,300,000 | 71\% | \$89,780 | \$96,930 | 8.0\% | 2,500 | 1,300,000 | 71\% | \$89,780 | \$96,930 | 8.0\% |
| 5,000 | 2,600,000 | 71\% | \$176,633 | \$190,163 | 7.7\% | 5,000 | 2,600,000 | 71\% | \$176,633 | \$190,163 | 7.7\% |
| 10,000 | 5,500,000 | 75\% | \$363,459 | \$389,467 | 7.2\% | 10,000 | 5,500,000 | 75\% | \$363,459 | \$389,467 | 7.2\% |

Schedule OPT-V Secondary (Industrial)
Summer Months


| Schedule OPT-V Secondary (Industrial) <br> Non-Summer Months <br> Present |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
| $\mathbf{c y y y y y}$ | Load <br> Equivalent <br> Rates | Proposed <br> Rates | Percent <br> Change |  |  |
| 75 | 20,000 | $37 \%$ | $\$ 1,912$ | $\$ 2,115$ | $10.6 \%$ |
| 75 | 40,000 | $73 \%$ | $\$ 2,880$ | $\$ 3,060$ | $6.3 \%$ |
| 250 | 75,000 | $41 \%$ | $\$ 6,630$ | $\$ 7,291$ | $10.0 \%$ |
| 250 | 150,000 | $82 \%$ | $\$ 10,261$ | $\$ 10,836$ | $5.6 \%$ |
| 500 | 150,000 | $41 \%$ | $\$ 13,197$ | $\$ 14,516$ | $10.0 \%$ |
| 500 | 300,000 | $82 \%$ | $\$ 20,460$ | $\$ 21,607$ | $5.6 \%$ |
| 1,000 | 500,000 | $68 \%$ | $\$ 36,003$ | $\$ 38,406$ | $6.7 \%$ |
| 2,500 | $1,300,000$ | $71 \%$ | $\$ 91,600$ | $\$ 97,350$ | $6.3 \%$ |
| 5,000 | $2,600,000$ | $71 \%$ | $\$ 180,249$ | $\$ 190,980$ | $6.0 \%$ |
| 10,000 | $5,500,000$ | $75 \%$ | $\$ 371,080$ | $\$ 391,167$ | $5.4 \%$ |

Rate Schedule OPT-V Secondary Monthly Bill Impacts
at Kroger/Harris Teeter Proposed Rates Year 3
at Duke Energy Carolinas Proposed Revenue Requirement

| Schedule OPT-V Secondary (General Service) |  |  |  |  |  | Schedule OPT-V Secondary (General Service) Non-Summer Months |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| kW | kWh | Load <br> Factor | Present Equivalent Rates | Proposed Rates | Percent Change | kW | kWh | Load Factor | Present Equivalent Rates | $\begin{array}{r} \text { Proposed } \\ \text { Rates } \\ \hline \end{array}$ | Percent Change |
| 75 | 20,000 | 37\% | \$1,859 | \$2,127 | 14.4\% | 75 | 20,000 | 37\% | \$1,859 | \$2,127 | 14.4\% |
| 75 | 40,000 | 73\% | \$2,800 | \$3,066 | 9.5\% | 75 | 40,000 | 73\% | \$2,800 | \$3,066 | 9.5\% |
| 250 | 75,000 | 41\% | \$6,502 | \$7,386 | 13.6\% | 250 | 75,000 | 41\% | \$6,502 | \$7,386 | 13.6\% |
| 250 | 150,000 | 82\% | \$10,029 | \$10,909 | 8.8\% | 250 | 150,000 | 82\% | \$10,029 | \$10,909 | 8.8\% |
| 500 | 150,000 | 41\% | \$12,965 | \$14,731 | 13.6\% | 500 | 150,000 | 41\% | \$12,965 | \$14,731 | 13.6\% |
| 500 | 300,000 | 82\% | \$20,020 | \$21,776 | 8.8\% | 500 | 300,000 | 82\% | \$20,020 | \$21,776 | 8.8\% |
| 1,000 | 500,000 | 68\% | \$35,288 | \$38,799 | 9.9\% | 1,000 | 500,000 | 68\% | \$35,288 | \$38,799 | 9.9\% |
| 2,500 | 1,300,000 | 71\% | \$89,780 | \$98,310 | 9.5\% | 2,500 | 1,300,000 | 71\% | \$89,780 | \$98,310 | 9.5\% |
| 5,000 | 2,600,000 | 71\% | \$176,633 | \$192,787 | 9.1\% | 5,000 | 2,600,000 | 71\% | \$176,633 | \$192,787 | 9.1\% |
| 10,000 | 5,500,000 | 75\% | \$363,459 | \$394,535 | 8.6\% | 10,000 | 5,500,000 | 75\% | \$363,459 | \$394,535 | 8.6\% |


| Schedule OPT-V Secondary (Industrial) Summer Months |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| kW | kWh | Load Factor | Present Equivalent Rates | Proposed Rates | Percent Change |
| 75 | 20,000 | 37\% | \$1,912 | \$2,158 | 12.9\% |
| 75 | 40,000 | 73\% | \$2,880 | \$3,103 | 7.8\% |
| 250 | 75,000 | 41\% | \$6,630 | \$7,433 | 12.1\% |
| 250 | 150,000 | 82\% | \$10,261 | \$10,979 | 7.0\% |
| 500 | 150,000 | 41\% | \$13,197 | \$14,801 | 12.2\% |
| 500 | 300,000 | 82\% | \$20,460 | \$21,893 | 7.0\% |
| 1,000 | 500,000 | 68\% | \$36,003 | \$38,976 | 8.3\% |
| 2,500 | 1,300,000 | 71\% | \$91,600 | \$98,731 | 7.8\% |
| 5,000 | 2,600,000 | 71\% | \$180,249 | \$193,604 | 7.4\% |
| 10,000 | 5,500,000 | 75\% | \$371,080 | \$396,236 | 6.8\% |


| Schedule OPT-V Secondary (Industrial) <br> Non-Summer Months <br> Present |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
| kW | kWh | Load <br> Factor | Equivalent <br> Rates | Proposed <br> Rates | Percent <br> Change |
| 75 | 20,000 | $37 \%$ | $\$ 1,912$ | $\$ 2,158$ | $12.9 \%$ |
| 75 | 40,000 | $73 \%$ | $\$ 2,880$ | $\$ 3,103$ | $7.8 \%$ |
| 250 | 75,000 | $41 \%$ | $\$ 6,630$ | $\$ 7,433$ | $12.1 \%$ |
| 250 | 150,000 | $82 \%$ | $\$ 10,261$ | $\$ 10,979$ | $7.0 \%$ |
| 500 | 150,000 | $41 \%$ | $\$ 13,197$ | $\$ 14,801$ | $12.2 \%$ |
| 500 | 300,000 | $82 \%$ | $\$ 20,460$ | $\$ 21,893$ | $7.0 \%$ |
| 1,000 | 500,000 | $68 \%$ | $\$ 36,003$ | $\$ 38,976$ | $8.3 \%$ |
| 2,500 | $1,300,000$ | $71 \%$ | $\$ 91,600$ | $\$ 98,731$ | $7.8 \%$ |
| 5,000 | $2,600,000$ | $71 \%$ | $\$ 180,249$ | $\$ 193,604$ | $7.4 \%$ |
| 10,000 | $5,500,000$ | $75 \%$ | $\$ 371,080$ | $\$ 396,236$ | $6.8 \%$ |

Docket No. E-7, Sub 1276 William E. Powers \& Rao Konidena On Behalf of NC WARN Exhibit 1

DEC Exhibit TC-7: MYRP Transmission Project Details

Location/Task

| $\frac{\text { Line }}{\text { No. }}$ | MYRP Project Name |
| :---: | :---: |
| 1 | Breakers |
| 2 | Breakers |
| 3 | Breakers |
| 4 | Breakers |
| 5 | Breakers |
| 6 | Breakers |
| 7 | Breakers |
| 8 | Breakers |
| 9 | Breakers |
| 10 | Breakers |
| 11 | Breakers |
| 12 | Breakers |
| 13 | Breakers |
| 14 | Breakers |
| 15 | Breakers |
| 16 | Breakers |
| 17 | Breakers |
| 18 | Breakers |
| 19 | Breakers |
| 20 | Breakers |
| 21 | Breakers |
| 22 | Breakers |
| 23 | Breakers |
| 24 | Breakers |
| 25 | Breakers |
| 26 | Breakers |
| 27 | Breakers |
| 28 | Breakers |
| 29 | Breakers |
| 30 | Breakers |
| 31 | Breakers |
| 32 | Breakers |
| 33 | Breakers |
| 34 | Breakers |
| 35 | Breakers |
| 36 | Breakers |
| 37 | Breakers |
| 38 | Breakers |
| 39 | Breakers |
| 40 | Breakers |
| 41 | Breakers |
| 42 | Breakers |
| 43 | Breakers |
| 44 | Breakers |
| 45 | Breakers |
| 46 | Breakers |
| 47 | Breakers |
| 48 | Breakers |
| 49 | Breakers |
| 50 | Breakers |


| Location/Task |
| :--- |
| Bainbridge Retail - Replace DOIL Breakers |
| Bannertown Tie - Replace TOIL Breakers |
| Beckerdite Tie - Replace TOIL Breakers |
| Beckerdite Tie - Replace TOIL Breakers |
| Beckerdite Tie - Replace TOIL Breakers |
| Bethlehem Switching Station - Replace DOIL Breakers |
| Blue Ridge EC Del 14 TOIL Breakers |
| Brassfield Retail - Replace DOIL Breakers |
| Broad River EC Del 2 TOIL Breakers |
| Burlington Main TOIL Breakers |
| Campobello Tie TOIL Breakers |
| Central Tie - Replace TOIL Breakers |
| Central Tie - Replace TOIL Breakers |
| Central Tie - Replace TOIL Breakers |
| Central Tie - Replace TOIL Breakers |
| Central Tie - Replace TOIL Breakers |
| Claremont Retail - Replace DOIL Breakers |
| Clemmons Retail - Replace DOIL Breakers |
| Cliffside Switching Station TOIL Breakers |
| Crest St Retail - Replace TOIL Breakers |
| Denton Retail - Replace DOIL Breakers |
| Duke Unv Station 1 - Replace TOIL Breakers |
| Duke Unv Station 2 - Replace TOIL Breakers |
| Duke Unv Station 5 - Replace TOIL Breakers |
| E Greenville Switching Station TOIL Breakers |
| Eastgate TOIL Breakers |
| Energy United EMC Delivery 32 - Replace TOIL Breakers |
| Four Seasons - Replace DOIL Breakers |
| Gaffney Tie - Replace TOIL Breakers |
| Gastonia Main - Replace DOIL Breakers |
| Glen Raven Main TOIL \& DOIL Breakers |
| Great Falls Switching Station - Replace TOIL Breakers |
| Great Falls Switching Station - Replace TOIL Breakers |
| Great Falls Switching Station - Replace TOIL Breakers |
| Greenlawn Switching Station TOIL Breakers |
| Harrisburg Tie TOIL Breakers |
| Hendersonville Tie TOIL Breakers |
| Horseshoe Tie TOIL Breakers |
| IVA Switching Station - Replace DOIL Breakers |
| Kivett Dr Retail - Replace TOIL Breakers |
| Lancaster Main - Replace TOIL Breakers |
| Linden Street Switch Station - Replace TOIL Breakers |
| Longview Tie - Replace TOIL Breakers |
| Madison Tie TOIL Breakers |
| Marion Main - Replace DOIL Breakers |
| Marshall Steam - Replace Transmission Breakers |
| Mt Tabor TOIL Breakers |
| Mulberry Creek - Replace TOIL \& DOIL Breakers |
| Newport Tie - Replace Transmission Breakers |
| Ninety Nine Island Hydro TOIL Breakers |


| Forecasted In- |
| :---: |
| Service Date |
| Sep-24 |
| Nov-26 |
| Sep-25 |
| Oct-25 |
| Oct-26 |
| Dec-26 |
| Feb-25 |
| Oct-24 |
| Jun-26 |
| Oct-25 |
| Dec-24 |
| Jun-25 |
| Mar-25 |
| May-25 |
| Sep-25 |
| Sep-26 |
| May-24 |
| Oct-26 |
| May-25 |
| Aug-24 |
| Dec-26 |
| Jul-25 |
| Jul-26 |
| Jul-24 |
| Feb-25 |
| Dec-26 |
| Nov-25 |
| Jun-25 |
| Dec-25 |
| Dec-26 |
| May-24 |
| Dec-24 |
| Dec-25 |
| Oct-26 |
| Nov-25 |
| Mar-26 |
| May-26 |
| May-24 |
| Jan-25 |
| Oct-23 |
| Jul-26 |
| Sep-26 |
| Jul-24 |
| Apr-26 |
| Dec-26 |
| Dec-26 |
| Dec-26 |
| Nov-25 |
| Jan-25 |
| Oct-24 |



| Line |  |
| :---: | :---: |
| No. | MYRP Project Name |
| 250 | System Intelligence |
| 251 | System Intelligence |
| 252 | System Intelligence |
| 253 | System Intelligence |
| 254 | System Intelligence |
| 255 | System Intelligence |
| 256 | System Intelligence |
| 257 | System Intelligence |
| 258 | System Intelligence |
| 259 | System Intelligence |
| 260 | System Intelligence |
| 261 | System Intelligence |
| 262 | System Intelligence |
| 263 | System Intelligence |
| 264 | System Intelligence |
| 265 | System Intelligence |
| 266 | System Intelligence |
| 267 | System Intelligence |
| 268 | System Intelligence |
| 269 | System Intelligence |
| 270 | System Intelligence |
| 271 | System Intelligence |
| 272 | System Intelligence |
| 273 | System Intelligence |
| 274 | System Intelligence |
| 275 | System Intelligence |
| 276 | System Intelligence |
| 277 | System Intelligence |
| 278 | System Intelligence |
| 279 | System Intelligence |
| 280 | System Intelligence |
| 281 | T Line H\&R |
| 282 | T Line H\&R |
| 283 | T Line H\&R |
| 284 | T Line H\&R |
| 285 | T Line H\&R |
| 286 | T Line H\&R |
| 287 | T Line H\&R |
| 288 | T Line H\&R |
| 289 | T Line H\&R |
| 290 | T Line H\&R |
| 291 | T Line H\&R |
| 292 | T Line H\&R |
| 293 | T Line H\&R |
| 294 | T Line H\&R |
| 295 | T Line H\&R |
| 296 | T Line H\&R |
| 297 | T Line H\&R |
| 298 | T Line H\&R |
| 299 | T Line H\&R |


|  | Forecasted In- |
| :--- | :---: |
| Location/Task | Service Date |
| Oconee 230kV Switchyard - Relay Control House Upgrade | Apr-25 |
| Oconee Nuclear Station - Remote Operated Switches | Sep-24 |
| Ogden Retail - Relay Upgrades | Jan-25 |
| Peach Valley Tie - Condition Based Monitoring | Oct-25 |
| Performance Fibers Tap - Battery Bank Replacement | Apr-25 |
| Pisgah Tie - Condition Based Monitoring | Oct-26 |
| Resolute FP US Inc- Communication Upgrade | Sep-26 |
| Robert Bosch - Relay Upgrades | Apr-25 |
| Ruffin - Remote Operated Switch | Aug-25 |
| Rural Hall Tie - Condition Based Monitoring | Oct-26 |
| Seneca Place - Relay Upgrades | Jan-25 |
| Shelby Tie - Condition Based Monitoring | Oct-26 |
| Shiloh Switching Station - Relay Upgrade | Apr-26 |
| Shuman Ave - Relay Upgrade | Sep-26 |
| Stamey Tie - Condition Based Monitoring | Oct-24 |
| Stoneville Retail - Relay Upgrade | May-26 |
| Timken Co Specialty - Battery Bank Replacement | May-26 |
| Transformer Condition Based Monitoring | Jul-24 |
| Transformer Temperature Monitors | Dec-24 |
| Transmission Line Faull Detection | Apr-24 |
| Transmission Line Fault Detection | Dec-24 |
| Tuckasegee Tie - Condition Based Monitoring | Oct-25 |
| W Norwood Retail - Relay Upgrade | Feb-26 |
| Waco - Remote Operated Switch | Aug-24 |
| Wadsworth Retail - Annunciator Upgrade | Sep-26 |
| Walhalla Retail - Relay Upgrade | Oct-25 |
| Winecoff Tie - Condition Based Monitoring | Oct-25 |
| Wix Filtration Corp Dixon - Battery Bank Replacement | May-24 |
| Woodlawn Tie - Annunciator Upgrade | Sep-26 |
| Woodlawn Tie - Communication Upgrade | Sep-26 |
| York EC Delivery 20 - Remote Operated Switch | Sep-24 |
| Bainbridge - Insulator Replacement | Nov-25 |
| Campobello Tie - Line Insulator Upgrade | Dec-23 |
| Cathodic Protection | Dec-24 |
| Cathodic Protection | Dec-25 |
| Cathodic Protection | Jan-26 |
| Cathodic Protection | Dec-26 |
| Esto-Pickens Tie 100kV - Line Rebuild | Jul-26 |
| Hankins 44kV - Line Rebuild | Jun-24 |
| Harmony 44kV - Line Rebuild | Jun-24 |
| Harmony 44kV - Line Rebuild | Dec-24 |
| Harmony 44kV - Line Rebuild | Jan-25 |
| Harmony 44kV - Line Rebuild | Jun-25 |
| Harmony 44kV - Line Rebuild | Sep-25 |
| Harmony 44kV - Line Rebuild | Oct-25 |
| Hogback - Tower Replacement | Dec-26 |
| Holly Hill Tap 100kV - Line Rebuild | Stevens 44kV - Line Rebuild |
| Liberty 44kV - Line Rebuild | A4kV - Line Rebuild |



| No. | MYRP Project Name |
| :---: | :---: |
| 300 | T Line H\&R |
| 301 | T Line H\&R |
| 302 | T Line H\&R |
| 303 | T Line H\&R |
| 304 | T Line H\&R |
| 305 | T Line H\&R |
| 306 | T Line H\&R |
| 307 | T Line H\&R |
| 308 | T Line H\&R |
| 309 | T Line H\&R |
| 310 | T Line H\&R |
| 311 | T Line H\&R |
| 312 | T Line H\&R |
| 313 | T Line H\&R |
| 314 | T Line H\&R |
| 315 | T Line H\&R |
| 316 | T Line H\&R |
| 317 | T Line H\&R |
| 318 | T Line H\&R |
| 319 | T Line H\&R |
| 320 | T Line H\&R |
| 321 | T Line H\&R |
| 322 | T Line H\&R |
| 323 | T Line H\&R |
| 324 | T Line H\&R |
| 325 | T Line H\&R |
| 326 | T Line H\&R |
| 327 | T Line H\&R |
| 328 | T Line H\&R |
| 329 | T Line H\&R |
| 330 | T Line H\&R |
| 331 | T Line H\&R |
| 332 | T Line H\&R |
| 333 | T Line H\&R |
| 334 | T Line H\&R |
| 335 | T Line H\&R |
| 336 | T Line H\&R |
| 337 | T Line H\&R |
| 338 | T Line H\&R |
| 339 | T Line H\&R |
| 340 | T Line H\&R |
| 341 | T Line H\&R |
| 342 | T Line H\&R |
| 343 | T Line H\&R |
| 344 | T Line H\&R |
| 345 | T Line H\&R |
| 346 | T Line H\&R |
| 347 | T Line H\&R |
| 348 | T Line H\&R |
| 349 | T Line H\&R |

Location/Task
Mitchel River - Insulator Replacemen
Orange Line - OHGW Replacement
Quebec 44kV - Line Rebuild
Quebec 44kV - Line Rebuild
Quebec 44kV - Line Rebuild
Quebec 44kV - Line Rebuild
Ripp - Insulator Replacement
Rockford 44kV - Line Rebuild
Sawmill 1\&2 44kV - Line Rebuild
Sawmill 1\&2 44kV - Line Rebuild
Shuler - Insulator Replacement
Sigsbee A\&B 44kV - Line Rebuild
Sigsbee A\&B 44kV - Line Rebuild
Spindale 44kV - Line Rebuild
Targeted Wood Poles Upgrades
Targeted Wood Poles Upgrades
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Location/Task
Forecasted In-
Jan-26
Dec-26
Jun-26
Oct-25
Mar-26
Aug-26
Jan-26
May-24
Sep-24
Jan-26
Nov-25
Nov-25
Feb-24
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Jun- 24
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Oct-24
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Jun- 25
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Nov-25
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Jan-26
Feb-26
Mar-26
Apr-26
May-26
Jun-26
Jul-26
Aug-26
Sep-26
Oct-26
Nov-26
Dec-26

| Total Project Amount (System) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Projected In-Service |  | Projected Annual Net |  |  | Projected |
|  |  |  | O\&M |  | stallation O\&M |
| \$ | 581,281 | \$ | - | \$ | - |
| \$ | 3,299,097 | \$ | - | \$ | - |
| \$ | 2,056,833 | \$ | - | \$ | - |
| \$ | 3,410,693 | \$ | - | \$ | - |
| \$ | 7,855,994 | \$ | - | \$ | - |
| \$ | 9,910,770 | \$ | - | \$ | - |
| \$ | 1,011,430 | \$ | - | \$ | - |
| \$ | 11,601,768 | \$ | - | \$ | - |
| \$ | 106,933 | \$ | - | \$ | - |
| \$ | 28,738,597 | \$ | - | \$ | - |
| \$ | 1,016,013 | \$ | - | \$ | - |
| \$ | 2,271 | \$ | - | \$ | - |
| \$ | 23,582,155 | \$ | - | \$ | - |
| \$ | 9,031,629 | \$ | - | \$ | - |
| \$ | 916,667 | \$ | - |  | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
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| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |
| \$ | 916,667 | \$ | - | \$ | 45,833 |


| MYRP Project Name | Location/Task |
| :--- | :--- |
| Vegetation Management | Hazard Tree Removal |
| Vegetation Management | Hazard Tree Removal |
| Vegetation Management | Hazard Tree Removal |
| Vegetation Management | Hazard Tree Removal |
| Vegetation Management | Hazard Tree Removal |
| Vegetation Management | Hazard Tree Removal |
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| Vegetation Management | Hazard Tree Removal |
| Vegetation Management | Hazard Tree Removal |
| Vegetation Management | Hazard Tree Removal |


| Location/Task |
| :---: |
| Forecasted In- |
| Service Date |
| Oct-24 |
| Nov-24 |
| Dec-24 |
| Jan-25 |
| Feb-25 |
| Mar-25 |
| Apr-25 |
| May-25 |
| Jun-25 |
| Jul-25 |
| Aug-25 |
| Sep-25 |
| Oct-25 |
| Nov-25 |
| Dec-25 |
| Jan-26 |
| Feb-26 |
| Mar-26 |
| Apr-26 |
| May-26 |
| Jun-26 |
| Jul-26 |
| Aug-26 |
| Sep-26 |
| Oct-26 |
| Nov-26 |
| Dec-26 |


| Total Project Amount (System) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Projected In-Service |  | Projected Annual Net |  | Projected |  |
|  | Costs |  |  |  | ation O\&M |
| \$ | 1,957,169 | \$ | - | \$ |  |
| \$ | 1,957,169 | \$ | - | \$ | - |
| \$ | 1,957,169 | \$ | - | \$ | - |
| \$ | 1,479,905 | \$ | - | \$ | - |
| \$ | 1,479,905 | \$ | - | \$ | - |
| \$ | 1,479,905 | \$ | - | \$ | - |
| \$ | 1,479,905 | \$ | - | \$ | - |
| \$ | 1,479,905 | \$ | - | \$ |  |
| \$ | 1,479,905 | \$ | - | \$ | - |
| \$ | 1,479,905 | \$ | - | \$ | - |
| \$ | 1,479,905 | \$ | - | \$ |  |
| \$ | 1,479,905 | \$ | - | \$ | - |
| \$ | 2,287,126 | \$ | - | \$ |  |
| \$ | 2,287,126 | \$ | - | \$ |  |
| \$ | 2,287,126 | \$ | - | \$ | - |
| \$ | 1,433,849 | \$ | - | \$ | - |
| \$ | 1,433,849 | \$ | - | \$ | - |
| \$ | 1,433,849 | \$ | - | \$ | - |
| \$ | 1,433,849 | \$ | - | \$ | - |
| \$ | 1,433,849 | \$ | - | \$ | - |
| \$ | 1,433,849 | \$ | - | \$ | - |
| \$ | 1,433,849 | \$ | - | \$ | - |
| \$ | 1,433,849 | \$ | - | \$ | - |
| \$ | 1,433,849 | \$ | - | \$ | - |
| \$ | 2,215,949 | \$ | - | \$ | - |
| \$ | 2,215,949 | \$ | - | \$ | - |
| \$ | 2,215,949 | \$ | - | \$ | - |
| \$ | 1,757,280,868 | \$ | 120,000 | \$ | 1,650,000 |

## 

Docket No. E-7, Sub 1276 William E. Powers \& Rao Konidena On Behalf of NC WARN Exhibit 2 NREL 2022 ATB



|  | A | B | c | D |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |
| 2 | Electricity Generation Technology LCOE equation for Standard Scenarios - ReEDS Model Inputs and Annual Technology Baseline presentation of technology assumptions. Note: Costs associated with a given year are for systems that come online in that year. For example, the overnight capital cost (OCC) for a technology in 2022 represents the OCC of a system that begins commercial operation in 2022. The capacity factor for a technology in 2022 represents the expected annualized lifetime energy production for a system that begins commercial operation in 2022. |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  | Levelized Cost of Energy (\$/MWh) | LCOE $=(($ FCR $*$ CAPEX + FOM)* $1000 /($ CF $* 8760))+$ VOM + Fuel |  |
| 6 |  |  | LCOE = ( $($ CRF * ProFinfactor * ConFinFactor * (OCC * CapRegMult + GCC) + FOM) * 1000/(CF * 8760)) + VOM + Fuel |  |
| 7 |  |  |  |  |
| 8 |  | Fixed Charge Rate | FCR $=$ CRF * ProFinFactor | Amount of revenue per dollar of investment required that must be collected annually from customers to pay the carrying charges on that investment. |
| 9 |  |  |  |  |
| 10 |  | CAPEX | CAPEX $=$ ConFinFActor * (OCC * CapRegMult + GCC) | Capital expenditures required to achieve commercial operation of the generation plant |
| 11 |  |  |  |  |
| 12 |  | Capital Recovery Factor | CRF = WACC / (1-(1/(1+WACC)^t)) note: WACC real | *ReEDS uses: CRF = (WACC - 1) / (1-(1/ WACC)^t) |
| 13 |  |  | WACC $=\left(\left(1+\left((1-\mathrm{DF})^{*}\left((1+\mathrm{RROE})^{*}(1+\mathrm{i})-1\right)\right)+\left(\mathrm{DF}^{*}((1+\mathrm{R}))^{*}(1+\mathrm{i})-1\right)^{*}(1-\mathrm{TR})\right)\right.$ / (1+i)) - 1 | but uses a WACC that is equal to $1+$ the WACC rate, and returns a CRF that is $1+$ CRF |
| 14 |  |  | DF = debt fraction |  |
| 15 |  |  | RROE $=$ rate of return on equity (real) $=10.24 \%$ | but uses RROE, i , and IR that are equal to $1+$ the rates, and returns a WACC that is 1+WACC |
| 16 |  |  | $\mathrm{i}=$ average inflation rate over project lifetime $=2.5 \%$ |  |
| 17 |  |  | $\mathbb{R}=$ interest rate (real) $=5.4 \%$ |  |
| 18 |  |  |  |  |
| 19 |  | Project Finance factor |  |  |
| 20 |  |  | TR = combined state/federal tax rate |  |
| 21 |  |  | PVD $=$ present value of depreciation = summation from $\mathrm{y}=1$ to $\mathrm{y}=\mathrm{M}+1$ of ( $\left.\mathrm{FD}_{\mathrm{y}} * \mathrm{f}_{\mathrm{y}}\right)$ |  |
| 22 |  |  | $\mathrm{M}=$ \# years in MACRS depreciation schedule |  |
| 23 |  |  | $\mathrm{FD}_{\mathrm{y}}=$ fraction of capital depreciated in year y |  |
| 24 |  |  | $\mathrm{fy}_{\mathrm{y}}=$ depreciation factor in year y | $\mathrm{f}_{\mathrm{y}}=1 / \mathrm{d}^{\mathrm{y}}$ |
| 25 |  |  | $\mathrm{d}=$ nominal discount rate (8.9\%) | $\mathrm{d}=$ WACC *i |
| 26 |  |  | $\mathrm{i}=$ average inflation rate over project lifetime |  |
| 27 |  |  |  |  |
| 28 |  | Construction Finance Factor | ConFinFactor $=$ summation from $\mathrm{y}=0$ to $\mathrm{y}=\mathrm{C}-1$ of $\left(\mathrm{FC}_{\mathrm{y}} * \mathrm{Al}_{\mathrm{y}}\right)$ |  |
| 29 |  |  | FC ${ }^{\prime}=$ fraction of capital spent in year $y$ |  |
| 30 |  |  | $\mathrm{Al}_{\mathrm{y}}=1+\left((1+\mathrm{IDC})^{\text {(vear }+0.5)}-1\right)$ | *ReEDS uses: $\mathrm{Al}_{\mathrm{y}}=1+(1-\mathrm{TR}) *\left(\right.$ IDC $^{\text {(yearat }}$. ${ }^{\text {a }}$ - 1 ) |
| 31 |  |  | IDC = interest during construction | but uses an IDC that is equal to $1+$ the interest rate |
| 32 |  |  | $y=$ year index, starting at 0 |  |
| 33 |  |  | $\mathrm{C}=$ construction duration (years) |  |
| 34 |  |  |  |  |
| 35 |  | Overnight Capital Cost | OCC = input in $\$ / \mathrm{kW}$ |  |
| 36 |  |  |  |  |
| 37 |  | Capital Regional Multiplier | CapRegMult = 1 for ATB | CapRegMult = 1 for ATB |
| 38 |  |  |  |  |
| 39 |  | Grid Connection Costs | GCC $=$ GF + OnSpurCost + Off SpurCost |  |


|  | A | B | C | D |
| :---: | :---: | :---: | :---: | :---: |
| 40 |  |  | GF | grid feature $=0$ for ATB |
| 41 |  |  | OnSpurCost | Onshore Spur Line Costs $=0$ for ATB |
| 42 |  |  | Off SpurCost | Offshore (underwater) Spur Line Costs |
| 43 |  |  |  |  |
| 44 |  | Fixed Operating Expenses | FOM = input in \$/kW |  |
| 45 |  |  |  |  |
| 46 |  | * 1000 | conversion factor from \$/kW inputs to \$/MWh output |  |
| 47 |  |  |  |  |
| 48 |  | Capacity Factor | CF = input as \% |  |
| 49 |  |  |  |  |
| 50 |  | * 8760 | conversion factor for hours per year |  |
| 51 |  |  |  |  |
| 52 |  | Variable Operating Expenses | VOM = input in \$/MWh |  |
| 53 |  |  |  |  |
| 54 |  | Fuel | Fuel = input in \$/MWh |  |
| 55 |  |  |  |  |
| 56 |  | Overnight LCOE | $=\left(\left(\mathrm{OCC}^{*} \mathrm{CRF}^{*}(1-\mathrm{TR} \text { *VVD))/(8760*CF*(1-TR))+FOM/(8760*CF)})^{*} 1000\right)+\mathrm{VOM}\right.$ | This is similar to the LCOE used in the TCDB (Transparent Cost database) |
| 57 |  |  |  |  |
| 58 |  | Definitions: |  |  |
| 59 |  | AI | Accumulated Interest | Accumulated interest is a function of the interest during construction and the tax rate. |
| 60 |  | C | Construction Duration | Number of years in construction period |
| 61 |  | CapRegMult | Capital Regional Multiplier | Capital cost multipliers to account for regional variations that affect plant costs, e.g. labor rates, etc. Separate multipliers are applied to land-based and offshore wind plants, PV, CSP, coal, gas, nuclear, etc. No multipliers for geothermal or hydropower due to site specific nature of plant cost estimates. |
| 62 |  | CF | Capacity Factor (\%) | Generally defined as the ratio of actual annual output to output at rated capacity for an entire year. |
| 63 |  | ConFinFactor | Construction Finance Factor | Portion of all-in capital cost associated with construction period financing. ConFinFactor is a function of $\mathrm{C}, \mathrm{FC}$, and IDC. |
| 64 |  | CRF | Capital Recovery Factor | The ratio of a constant annuity to the present value of receiving that annuity for a given length of time. (Default in ReEDS is $8.89 \%$ real); CRF is a function of WACC and $t$. |
| 65 |  | d | nominal discount rate (8.9\%) | The discount rate is a function of the WACC and inflation. |
| 66 |  | DF | Debt Fraction | Fraction of capital financed with debt. 1-DF is assumed financed with equity. (50\% for all technologies in ReEDS) |
| 67 |  | EMRP | Expected Market Risk Premium | The market risk premium is the difference between the expected return on a market portfolio and the risk-free rate. |
| 68 |  | f | Depreciation Factor | The depreciation factor is a function of the discount rate. |
| 69 |  | FC | Capital Fraction | Fraction of capital spent in each year of construction, 1 to C . |
| 70 |  | FD | Depreciation Fraction | Fraction of capital depreciated in each year, 1 to M. |
| 71 |  | FOM | Fixed Operation and Maintenance Expenses (\$/MW-year) | Annual expenditures to operate and maintain equipment that are not incurred on a per-unit-energy basis. |
| 72 |  | Fuel | fuel cost (\$/MWh) | Fuel costs are converted to \$/MWh from various units. |
| 73 |  | GCC | Grid Connection Costs | Distance-based costs of spur lines over land, offshore wind plant export cable costs and construction-period transit costs |


|  | A | B | C | D |
| :---: | :---: | :---: | :---: | :---: |
| 74 |  | GF | Grid Feature | Point of interconnection at the high voltage transmission network, including substation, transmission lines, load center, or BA center. (Default in ReEDS is $\$ 0 / \mathrm{kW}$ for substation and load center and $\$ 14 / \mathrm{kW}$ for others) |
| 75 |  | i | Inflation Rate | Assumed average inflation rate over project lifetime based on historical data. (2.5\% in ReEDS) |
| 76 |  | ICC | Installed Capital Cost (\$/MW) | Total capital expenditure to achieve commercial operation up to the plant gate. This intermediate value is used only in presentation of technology cost assumptions with historic market data. It is not required to calculate LCOE. |
| 77 |  | IDC | Interest During Construction | Interest rate for financing project during construction period. |
| 78 |  | IR | Interest Rate (real) | Assumed interest rate on debt. (5.4\% for all technologies in ReEDS, 8\% nominal) |
| 79 |  | M | Depreciation period (years) | Number of years in MACRS depreciation schedule. |
| 80 |  | OCC | Overnight Capital Cost (\$/MW) | Capital expenditures excluding construction period financing. Includes onsite electrical equipment (e.g., switchyard), a nominal-distance spur line (<1 mi), and necessary upgrades at a transmission substation. |
| 81 |  | OffDist | Offshore Distance | Total offshore distance covered by the offshore export cables |
| 82 |  | OffSpurCost | Offshore (underwater) Spur Line Costs | Cost for offshore (underwater) export cables from the offshore wind plant to land; OffSpurCost is a function of OffDist and OffDistFactor. |
| 83 |  | OffDistFactor | Offshore Distance Factor | Incremental capital expenditure for offshore wind plant export cable length between landfall and offshore wind plant site. |
| 84 |  | OnDist | Onshore Distance | Total onshore distance covered by the onshore transmission spur lines |
| 85 |  | OnRegTransMult | Onshore Regional Transmission Multiplier | Transmission cost multipliers to account for regional variations that affect onshore transmission line costs, e.g. labor rates, terrain, siting, etc. |
| 86 |  | OnSpurCost | Onshore Spur Line Costs | Cost for onshore transmission lines from the plant gate to the grid feature; OnSpurCost is a function of OnDist, OnTransCost, and OnRegTransMult. |
| 87 |  | OnTransCost | Onshore Transmission Costs (for spur line) | Base onshore transmission line costs (Default in ReEDS is \$3922/MW-mile) |
| 88 |  | ProFinFactor | Project Finance factor | Technology-specific financial multiplier to account for any applicable differences in depreciation schedule, and tax policies. ProFinFactor is a function of TR, WACC, i, M, and FD |
| 89 |  | PVD | Present Value of Depreciation | PVD is a function of FD, f and y . |
| 90 |  | RROE | Rate of Return on Equity (real) | Assumed rate of return on the share of assets financed with equity. ( $10 \%$ for all technologies in ReEDS, 13\% nominal) |
| 91 |  | t | Economic Lifetime (years) | Length of time for paying off assets (20 years for all technologies in ReEDS) |
| 92 |  | TR | Tax Rate | Combined state and federal tax rate (40\%) |
| 93 |  | VOM | Variable Operation and Maintenance Expenses (\$/MWh) | Operating and maintenance costs incurred on a per-unit-energy basis. |
| 94 |  | WACC | Weighted Average Cost of Capital (real) | The average expected rate that is paid to finance assets. (Default in ReEDS is $6.2 \%$ real); WACC is a function of DF, RROE, IR, i , and TR. |
| 95 |  | y | year index, starting at 0 |  |
| 96 |  |  |  |  |
| 97 |  | Notes: |  |  |
| 98 |  | CapRegMult = 1 | ATB assumes that all plants represent typical equipment costs and do not include regionally specific labor or material cost increments. |  |
| 99 |  | GCC $=0$ | ATB assumes that base plant cost includes small spur line to connect with grid for all technologies in overnight capital cost. An exception is made for offshore wind plants where the export cable and construction-period transit costs based on a 30 km distance from shore are represented in GCC. Specific transmission lines based on geographically determined distances between ReEDS regions and existing transmission features for wind and solar are not included in ATB. |  |
| 100 |  | Inputs in ATB are in \$/kW, in ReEDS they are \$/MW |  |  |
| 101 |  |  |  |  |


|  | A | B | C |  |
| :--- | :--- | :--- | :--- | :--- |
| 102 | $2018 \$$ to 2019\$ Multiplier: | 1.0181 | D |  |
| 103 | $2019 \$$ to 2020 Multiplier: | 1.0123 |  |  |
| 104 |  |  | Source Year Value in 2018 Dollars |  |
| 105 | Inflation example: | $\$ 1,000.00$ | Value in 2020 Dollars |  |
| 106 |  |  | Source Year Value in 2019 Dollars |  |
| 107 |  | $\$ 1,000.00$ | Value in 2020 Doillars |  |
| 108 |  |  | $\$ 1,012.30$ |  |
| 109 |  |  |  |  |


|  | A | B | C | D | E | F | G | H | 1 | J |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Fina | I Assumptions and |  | RP |  |  |  |  |  |  |
| 2 |  | The R\&D case presents results without tax credits and with 2020 financial data. LCOE improvement is based on R\&D improvements alone. The Market case presents market and policy changes over time. |  |  | The cost recovery period represents the period over which the initial capital investment to build a plant is recovered. 30 is the default to allow comparisons consistent with typical renewable project lifetimes. |  |  |  |  |  |
| 3 |  | Modify the financial scenario by clicking on the blue cell below |  | Reference financial scenarios. Do not modify | Modify the capital recovery period by clicking on the blue cell below |  | Reference capital recovery periods. Do not modify. |  | CRP values used by "TechLife" CRP. | For custom CRP, modify these values and select "custom" in cell E 5 . |
| 4 |  | Chosen Financial Case |  | Possible Financial Cases | Chosen Capital Recovery Period |  | Possible Capital Recovery Periods | Technology Names | Tech Life CRPs | Custom CRP |
| 5 |  | R\&D | $\nabla$ | Market | 30 | V | 20 | Offshore Wind | 30 | 30 |
| 6 |  |  |  | R\&D |  |  | 30 | Land-Based Wind | 30 | 30 |
| 7 |  |  |  |  |  |  | TechLife | Distributed Wind | 30 | 30 |
| 8 |  |  |  |  |  |  | Custom | Solar - Utility PV | 30 | 30 |
| 9 |  |  |  |  |  |  |  | Solar - PV Dist. Comm | 30 | 30 |
| 10 |  |  |  |  |  |  |  | Solar - PV Dist. Res | 30 | 30 |
| 11 |  |  |  |  |  |  |  | Solar - CSP | 30 | 30 |
| 12 |  |  |  |  |  |  |  | Geothermal | 30 | 30 |
| 13 |  |  |  |  |  |  |  | Hydropower | 100 | 100 |
| 14 |  |  |  |  |  |  |  | Nuclear | 60 | 60 |
| 15 |  |  |  |  |  |  |  | Biopower | 45 | 45 |
| 16 |  |  |  |  |  |  |  | Utility-Scale PV-Plus-Battery | 30 | 30 |
| 17 |  |  |  |  |  |  |  | Pumped Storage Hydropower | 100 | 100 |



|  | A | B |  |  | FG | H | I | J | K | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 |  |  |  |  |  |  |  | Capital Recovery Peric | (Years) |  |  |
| 32 |  |  |  |  |  |  |  | Depreciation Period |  |  |  |
| 33 |  |  |  |  |  |  |  | Equity Premium Du | Construction |  |  |
| 34 |  |  |  |  |  |  |  | Construction Dura | y yrs |  |  |
| 35 |  |  |  |  |  |  |  | Year | Capital | Leverage During | Equity During |
| 36 |  |  |  |  |  |  |  | Index | Fraction | Construction | Construction |
| 37 |  |  |  |  |  |  |  | 0 |  | 80\% | 20.0\% |
| 38 |  |  |  |  |  |  |  | 1 |  | 80\% | 20.0\% |
| 39 |  |  |  |  |  |  |  | 2 |  | 80\% | 20.0\% |
| 40 |  |  |  |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  |  |  |  | 2020 |
| 42 |  |  |  |  |  |  |  |  | Inflation Rate | * | 2.5\% |
| 43 |  |  |  |  |  |  |  |  | Interest Rate Nominal | Advanced | 4.0\% |
| 44 |  |  |  |  |  |  |  |  | Interest Rate Nominal | Moderate | 4.0\% |
| 45 |  |  |  |  |  |  |  |  | Interest Rate Nominal | Conservative | 4.0\% |
| 46 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real | Advanced | 1.5\% |
| 47 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real | Moderate | 1.5\% |
| 48 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real | Conservative | 1.5\% |
| 49 |  |  |  |  |  | ${ }_{0}^{10}$ |  |  | Interest During Construction - Nominal | * | 4.0\% |
| 50 |  |  |  |  |  | $0$ |  |  | Rate of Return on Equity Nominal | Advanced | 10.0\% |
| 51 |  |  |  |  |  | $\stackrel{1}{\square}$ |  |  | Rate of Return on Equity Nominal | Moderate | 10.0\% |
| 52 |  |  |  |  |  | L |  |  | Rate of Return on Equity Nominal | Conservative | 10.0\% |
| 53 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real | Advanced | 7.3\% |
| 54 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real | Moderate | 7.3\% |
| 55 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real | Conservative | 7.3\% |
| 56 |  |  |  |  |  |  |  | Assumptions | Debt Fraction | Advanced | 68.5\% |
| 57 |  |  |  |  |  |  |  |  | Debt Fraction | Moderate | 68.5\% |
| 58 |  |  |  |  |  |  |  |  | Debt Fraction | Conservative | 68.5\% |
| 59 |  |  |  |  |  |  |  |  | Tax Rate (Federal and State) | * | 25.7\% |
| 60 |  |  |  |  |  |  |  |  | WACC Nominal | Advanced | 5.2\% |
| 61 |  |  |  |  |  |  |  |  | WACC Nominal | Moderate | 5.2\% |
| 62 |  |  |  |  |  |  |  |  | WACC Nominal | Conservative | 5.2\% |
| 63 |  |  |  |  |  |  |  |  | WACC Real | Advanced | 2.6\% |
| 64 |  |  |  |  |  |  |  |  | WACC Real | Moderate | 2.6\% |
| 65 |  |  |  |  |  |  |  |  | WACC Real | Conservative | 2.6\% |


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| 66 |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal | Advanced | 6.6\% |
| 67 |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal | Moderate | 6.6\% |
| 68 |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal | Conservative | 6.6\% |
| 69 |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real | Advanced | 4.9\% |
| 70 |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real | Moderate | 4.9\% |
| 71 |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real | Conservative | 4.9\% |
| 72 |  |  |  |  |  |  |  |  |  |  |
| 73 |  |  |  |  |  |  |  |  |  |  |
| 74 |  |  | $\times$ |  |  |  |  |  |  |  |
| 75 |  |  |  |  |  |  |  |  |  | Base Year |
| 76 |  |  |  |  |  |  |  |  |  | 2020 |
| 77 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Advanced | 46\% |
| 78 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Moderate | 46\% |
| 79 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Conservative | 45\% |
| 80 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Advanced | 45\% |
| 81 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Moderate | 44\% |
| 82 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Conservative | 44\% |
| 83 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Advanced | 45\% |
| 84 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Moderate | 45\% |
| 85 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Conservative | 44\% |
| 86 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Advanced | 45\% |
| 87 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Moderate | 45\% |
| 88 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Conservative | 44\% |
| 89 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Advanced | 44\% |
| 90 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Moderate | 44\% |
| 91 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Conservative | 43\% |
| 92 |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Advanced | 38\% |
| 93 |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Moderate | 38\% |
| 94 |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Conservative | 37\% |
| 95 |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Advanced | 29\% |
| 96 |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Moderate | 29\% |
| 97 |  |  |  |  |  |  | Net Capacity Factor | Offshore Wind - Class 7 | Conservative | 29\% |
| 98 |  |  |  |  |  |  | (\%) | Offshore Wind - Class 8 | Advanced | 52\% |
| 99 |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Moderate | 52\% |
| 100 |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Conservative | 51\% |


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| 101 |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Advanced | 51\% |
| 102 |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Moderate | 51\% |
| 103 |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Conservative | 50\% |
| 104 |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Advanced | 50\% |
| 105 |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Moderate | 50\% |
| 106 |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Conservative | 49\% |
| 107 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Advanced | 49\% |
| 108 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Moderate | 49\% |
| 109 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Conservative | 49\% |
| 110 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Advanced | 46\% |
| 111 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Moderate | 46\% |
| 112 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Conservative | 46\% |
| 113 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Advanced | 37\% |
| 114 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Moderate | 37\% |
| 115 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Conservative | 37\% |
| 116 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Advanced | 30\% |
| 117 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Moderate | 30\% |
| 118 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Conservative | 30\% |
| 119 |  |  |  |  |  |  |  |  |  |  |
| 120 |  |  |  |  |  |  |  |  |  | 2020 |
| 121 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Advanced | 4,025 |
| 122 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Moderate | 3,995 |
| 123 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Conservative | 3,919 |
| 124 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Advanced | 3,923 |
| 125 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Moderate | 3,893 |
| 126 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Conservative | 3,819 |
| 127 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Advanced | 3,952 |
| 128 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Moderate | 3,922 |
| 129 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Conservative | 3,848 |
| 130 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Advanced | 3,934 |
| 131 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Moderate | 3,904 |
| 132 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Conservative | 3,830 |
| 133 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Advanced | 3,871 |
| 134 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Moderate | 3,841 |
| 135 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Conservative | 3,769 |


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| 136 |  |  |  |  |  |  | Annual Energy Production (kWh/kW) | Offshore Wind - Class 6 | Advanced | 3,323 |
| 137 |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Moderate | 3,298 |
| 138 |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Conservative | 3,236 |
| 139 |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Advanced | 2,567 |
| 140 |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Moderate | 2,548 |
| 141 |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Conservative | 2,500 |
| 142 |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Advanced | 4,557 |
| 143 |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Moderate | 4,543 |
| 144 |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Conservative | 4,506 |
| 145 |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Advanced | 4,446 |
| 146 |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Moderate | 4,432 |
| 147 |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Conservative | 4,396 |
| 148 |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Advanced | 4,367 |
| 149 |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Moderate | 4,353 |
| 150 |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Conservative | 4,318 |
| 151 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Advanced | 4,308 |
| 152 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Moderate | 4,294 |
| 153 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Conservative | 4,260 |
| 154 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Advanced | 4,059 |
| 155 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Moderate | 4,046 |
| 156 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Conservative | 4,013 |
| 157 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Advanced | 3,237 |
| 158 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Moderate | 3,226 |
| 159 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Conservative | 3,200 |
| 160 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Advanced | 2,661 |
| 161 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Moderate | 2,652 |
| 162 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Conservative | 2,631 |
| 163 |  |  |  |  |  |  |  |  |  |  |
| 164 |  |  |  |  |  |  |  |  |  | 2020 |
| 165 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Advanced | \$3,285 |
| 166 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Moderate | \$3,448 |
| 167 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Conservative | \$3,748 |
| 168 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Advanced | \$3,324 |
| 169 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Moderate | \$3,489 |
| 170 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Conservative | \$3,793 |


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| 171 |  |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Advanced | \$3,456 |
| 172 |  |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Moderate | \$3,628 |
| 173 |  |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Conservative | \$3,944 |
| 174 |  |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Advanced | \$3,589 |
| 175 |  |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Moderate | \$3,768 |
| 176 |  |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Conservative | \$4,096 |
| 177 |  |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Advanced | \$3,766 |
| 178 |  |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Moderate | \$3,953 |
| 179 |  |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Conservative | \$4,298 |
| 180 |  |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Advanced | \$3,739 |
| 181 |  |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Moderate | \$3,925 |
| 182 |  |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Conservative | \$4,267 |
| 183 |  |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Advanced | \$3,773 |
| 184 |  |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Moderate | \$3,961 |
| 185 |  |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Conservative | \$4,306 |
| 186 |  |  |  |  |  |  |  | CA | Offshore Wind - Class 8 | Advanced | \$4,667 |
| 187 |  |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Moderate | \$4,896 |
| 188 |  |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Conservative | \$5,303 |
| 189 |  |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Advanced | \$4,752 |
| 190 |  |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Moderate | \$4,985 |
| 191 |  |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Conservative | \$5,399 |
| 192 |  |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Advanced | \$4,857 |
| 193 |  |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Moderate | \$5,095 |
| 194 |  |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Conservative | \$5,518 |
| 195 |  |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Advanced | \$5,200 |
| 196 |  |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Moderate | \$5,455 |
| 197 |  |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Conservative | \$5,908 |
| 198 |  |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Advanced | \$5,422 |
| 199 |  |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Moderate | \$5,688 |
| 200 |  |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Conservative | \$6,160 |
| 201 |  |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Advanced | \$5,567 |
| 202 |  |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Moderate | \$5,840 |
| 203 |  |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Conservative | \$6,325 |
| 204 |  |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Advanced | \$5,632 |
| 205 |  |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Moderate | \$5,908 |



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| 241 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Conservative | \$411 |
| 242 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Advanced | \$377 |
| 243 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Moderate | \$396 |
| 244 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Conservative | \$429 |
| 245 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Advanced | \$387 |
| 246 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Moderate | \$406 |
| 247 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Conservative | \$440 |
| 248 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Advanced | \$392 |
| 249 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Moderate | \$411 |
| 250 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Conservative | \$445 |
| 251 |  |  |  |  |  |  |  |  |  |  |
| 252 |  |  |  |  |  |  |  |  |  | 2020 |
| 253 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Advanced | \$2,240 |
| 254 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Moderate | \$2,351 |
| 255 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Conservative | \$2,556 |
| 256 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Advanced | \$2,247 |
| 257 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Moderate | \$2,359 |
| 258 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Conservative | \$2,564 |
| 259 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Advanced | \$2,364 |
| 260 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Moderate | \$2,481 |
| 261 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Conservative | \$2,697 |
| 262 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Advanced | \$2,468 |
| 263 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Moderate | \$2,591 |
| 264 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Conservative | \$2,816 |
| 265 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Advanced | \$2,512 |
| 266 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Moderate | \$2,637 |
| 267 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Conservative | \$2,866 |
| 268 |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Advanced | \$2,535 |
| 269 |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Moderate | \$2,661 |
| 270 |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Conservative | \$2,893 |
| 271 |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Advanced | \$2,766 |
| 272 |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Moderate | \$2,904 |
| 273 |  |  |  |  |  |  | Overnight Capital | Offshore Wind - Class 7 | Conservative | \$3,157 |
| 274 |  |  |  |  |  |  | Cost (\$/kW) | Offshore Wind - Class 8 | Advanced | \$3,388 |
| 275 |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Moderate | \$3,554 |


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| 276 |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Conservative | \$3,849 |
| 277 |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Advanced | \$3,400 |
| 278 |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Moderate | \$3,567 |
| 279 |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Conservative | \$3,864 |
| 280 |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Advanced | \$3,494 |
| 281 |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Moderate | \$3,666 |
| 282 |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Conservative | \$3,970 |
| 283 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Advanced | \$3,622 |
| 284 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Moderate | \$3,799 |
| 285 |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Conservative | \$4,115 |
| 286 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Advanced | \$3,660 |
| 287 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Moderate | \$3,840 |
| 288 |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Conservative | \$4,159 |
| 289 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Advanced | \$3,664 |
| 290 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Moderate | \$3,844 |
| 291 |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Conservative | \$4,164 |
| 292 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Advanced | \$4,026 |
| 293 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Moderate | \$4,223 |
| 294 |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Conservative | \$4,574 |
| 295 |  |  |  |  |  |  |  |  |  |  |
| 296 |  |  |  |  |  |  |  |  |  | 2020 |
| 297 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Advanced | \$102 |
| 298 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Moderate | \$107 |
| 299 |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Conservative | \$116 |
| 300 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Advanced | \$105 |
| 301 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Moderate | \$110 |
| 302 |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Conservative | \$119 |
| 303 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Advanced | \$106 |
| 304 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Moderate | \$111 |
| 305 |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Conservative | \$121 |
| 306 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Advanced | \$107 |
| 307 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Moderate | \$113 |
| 308 |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Conservative | \$122 |
| 309 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Advanced | \$110 |
| 310 |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Moderate | \$116 |



|  | A | B | CDE |  | G | H | I | J | K | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 346 |  |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Conservative | \$0 |
| 347 |  |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Advanced | \$0 |
| 348 |  |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Moderate | \$0 |
| 349 |  |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Conservative | \$0 |
| 350 |  |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Advanced | \$0 |
| 351 |  |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Moderate | \$0 |
| 352 |  |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Conservative | \$0 |
| 353 |  |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Advanced | \$0 |
| 354 |  |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Moderate | \$0 |
| 355 |  |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Conservative | \$0 |
| 356 |  |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Advanced | \$0 |
| 357 |  |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Moderate | \$0 |
| 358 |  |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Conservative | \$0 |
| 359 |  |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Advanced | \$0 |
| 360 |  |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Moderate | \$0 |
| 361 |  |  |  |  |  |  |  | Variable Operation | Offshore Wind - Class 7 | Conservative | \$0 |
| 362 |  |  |  |  |  |  |  | Expenses (\$/MWh) | Offshore Wind - Class 8 | Advanced | \$0 |
| 363 |  |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Moderate | \$0 |
| 364 |  |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Conservative | \$0 |
| 365 |  |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Advanced | \$0 |
| 366 |  |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Moderate | \$0 |
| 367 |  |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Conservative | \$0 |
| 368 |  |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Advanced | \$0 |
| 369 |  |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Moderate | \$0 |
| 370 |  |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Conservative | \$0 |
| 371 |  |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Advanced | \$0 |
| 372 |  |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Moderate | \$0 |
| 373 |  |  |  |  |  |  |  |  | Offshore Wind - Class 11 | Conservative | \$0 |
| 374 |  |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Advanced | \$0 |
| 375 |  |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Moderate | \$0 |
| 376 |  |  |  |  |  |  |  |  | Offshore Wind - Class 12 | Conservative | \$0 |
| 377 |  |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Advanced | \$0 |
| 378 |  |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Moderate | \$0 |
| 379 |  |  |  |  |  |  |  |  | Offshore Wind - Class 13 | Conservative | \$0 |
| 380 |  |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Advanced | \$0 |


|  | A |  | CDE | EF\| | G | H | I | J | K | L | M |
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| 381 |  |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Moderate | \$0 |
| 382 |  |  |  |  |  |  |  |  | Offshore Wind - Class 14 | Conservative | \$0 |
| 383 |  |  |  |  |  |  |  |  |  |  |  |
| 384 |  |  |  |  |  |  |  |  |  |  |  |
| 385 |  |  |  |  |  |  |  |  |  |  | 2020 |
| 386 |  |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Advanced | \$816 |
| 387 |  |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Moderate | \$857 |
| 388 |  |  |  |  |  |  |  |  | Offshore Wind - Class 1 | Conservative | \$932 |
| 389 |  |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Advanced | \$846 |
| 390 |  |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Moderate | \$888 |
| 391 |  |  |  |  |  |  |  |  | Offshore Wind - Class 2 | Conservative | \$965 |
| 392 |  |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Advanced | \$852 |
| 393 |  |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Moderate | \$894 |
| 394 |  |  |  |  |  |  |  |  | Offshore Wind - Class 3 | Conservative | \$972 |
| 395 |  |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Advanced | \$871 |
| 396 |  |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Moderate | \$914 |
| 397 |  |  |  |  |  |  |  |  | Offshore Wind - Class 4 | Conservative | \$994 |
| 398 |  |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Advanced | \$992 |
| 399 |  |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Moderate | \$1,042 |
| 400 |  |  |  |  |  |  |  |  | Offshore Wind - Class 5 | Conservative | \$1,132 |
| 401 |  |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Advanced | \$944 |
| 402 |  |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Moderate | \$991 |
| 403 |  |  |  |  |  |  |  |  | Offshore Wind - Class 6 | Conservative | \$1,077 |
| 404 |  |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Advanced | \$744 |
| 405 |  |  |  |  |  |  |  |  | Offshore Wind - Class 7 | Moderate | \$781 |
| 406 |  |  |  |  |  |  |  | Grid Connection | Offshore Wind - Class 7 | Conservative | \$849 |
| 407 |  |  |  |  |  |  |  | Costs (GCC) (\$/kW) | Offshore Wind - Class 8 | Advanced | \$955 |
| 408 |  |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Moderate | \$1,002 |
| 409 |  |  |  |  |  |  |  |  | Offshore Wind - Class 8 | Conservative | \$1,085 |
| 410 |  |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Advanced | \$1,021 |
| 411 |  |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Moderate | \$1,071 |
| 412 |  |  |  |  |  |  |  |  | Offshore Wind - Class 9 | Conservative | \$1,160 |
| 413 |  |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Advanced | \$1,025 |
| 414 |  |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Moderate | \$1,075 |
| 415 |  |  |  |  |  |  |  |  | Offshore Wind - Class 10 | Conservative | \$1,164 |





|  | A |  |  | FG] | H | 1 | J | K | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 521 |  |  |  |  | $\stackrel{\square}{0}$ |  |  | 10 year CRF | Conservative | 11.61\% |
| 522 |  |  |  |  | O |  |  | ITC Schedule | * | 0.0\% |
| 523 |  |  |  |  | U |  | Tax Credit | PVD | Advanced | 0.870 |
| 524 |  |  |  |  | $\stackrel{0}{0}$ |  | Tax Credit | PVD | Moderate | 0.870 |
| 525 |  |  |  |  | 范 |  |  | PVD | Conservative | 0.870 |
| 526 |  |  |  |  | - |  |  | PFF | Advanced | 1.045 |
| 527 |  |  |  |  |  |  |  | PFF | Moderate | 1.045 |
| 528 |  |  |  |  |  |  |  | PFF | Conservative | 1.045 |
| 529 |  |  |  |  |  | MACRS |  | Year (Advanced) |  | 2020 |
| 530 |  |  |  |  |  | 0.2 | Depreciation Factor | 1 |  | 0.9507 |
| 531 |  |  |  |  |  | 0.32 |  | 2 |  | 0.9038 |
| 532 |  |  |  |  |  | 0.192 |  | 3 |  | 0.8593 |
| 533 |  |  |  |  |  | 0.1152 |  | 4 |  | 0.8169 |
| 534 |  |  |  |  |  | 0.1152 |  | 5 |  | 0.7767 |
| 535 |  |  |  |  |  | 0.0576 |  | 6 |  | 0.7384 |
| 536 |  |  |  |  |  |  |  | Year (Moderate) |  | 2020 |
| 537 |  |  |  |  |  |  |  | 1 |  | 0.9507 |
| 538 |  |  |  |  |  |  |  | 2 |  | 0.9038 |
| 539 |  |  |  |  |  |  |  | 3 |  | 0.8593 |
| 540 |  |  |  |  |  |  |  | 4 |  | 0.8169 |
| 541 |  |  |  |  |  |  |  | 5 |  | 0.7767 |
| 542 |  |  |  |  |  |  |  | 6 |  | 0.7384 |
| 543 |  |  |  |  |  |  |  | Year (Conservative) |  | 2020 |
| 544 |  |  |  |  |  |  |  | 1 |  | 0.9507 |
| 545 |  |  |  |  |  |  |  | 2 |  | 0.9038 |
| 546 |  |  |  |  |  |  |  | 3 |  | 0.8593 |
| 547 |  |  |  |  |  |  |  | 4 |  | 0.8169 |
| 548 |  |  |  |  |  |  |  | 5 |  | 0.7767 |
| 549 |  |  |  |  |  |  |  | 6 |  | 0.7384 |
| 550 |  |  |  |  |  |  |  |  |  |  |
| 551 |  |  |  |  |  |  |  |  |  | 2020 |
| 552 |  |  |  |  |  |  |  | CFF | Advanced | 1.075 |
| 553 |  |  |  |  |  |  | Finance Factor | CFF | Moderate | 1.075 |
| 554 |  |  |  |  |  |  |  | CFF | Conservative | 1.075 |
| 555 |  |  |  |  |  |  |  |  |  |  |


|  | A |  | CDE | EFG | G | H | 1 | J | K | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 556 |  |  |  |  |  |  |  |  | Accumulated Interest - Year 1 | * | 1.020 |
| 557 |  |  |  |  |  |  |  |  | Accumulated Interest - Year 2 | * | 1.061 |
| 558 |  |  |  |  |  |  |  |  | Accumulated Interest - Year 3 | * | 1.103 |
| 559 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 | Advanced | 1.058 |
| 560 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 | Advanced | 1.185 |
| 561 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 | Advanced | 1.328 |
| 562 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 | Moderate | 1.058 |
| 563 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 | Moderate | 1.185 |
| 564 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 | Moderate | 1.328 |
| 565 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 | Conservative | 1.058 |
| 566 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 | Conservative | 1.185 |
| 567 <br> 568 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 | Conservative | 1.328 |
| 568 |  |  |  |  |  |  |  |  |  |  |  |
| 569 |  |  |  |  |  |  |  |  |  |  |  |
| 570 |  |  | x |  | Data | a So | S | ut |  |  |  |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | el.gov/electricity/2022/offshore wind |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  | Inputs |  |  |
| 3 |  |  |  |  |  |  |  | Calculated |  |  |
| 4 |  |  |  |  |  |  |  | Input from |  |  |
| 5 |  |  |  |  |  |  |  | other tab |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  | Assumptions |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 | s where source dollar years don't match 2020. |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 | Average CAPEX (\$/kW) | Average OPEX (\$/kW/yr) | Average Net CF (\%) | Average Wind Speed (m/s) @ 100m | Potential Wind Plant Capacity (GW) | Potential Wind Plant Energy (TWh) | Share of total fixed-bottom / floating capacity (\%) |  |  |  |
| 13 | 3,494 | 109 | 45\% | 8.74 | 14 | 55 | 2\% |  |  |  |
| 14 | 3,535 | 111 | 44\% | 8.62 | 14 | 53 | 2\% |  |  |  |
| 15 | 3,676 | 113 | 45\% | 8.63 | 27 | 105 | 4\% |  |  |  |
| 16 | 3,817 | 114 | 44\% | 8.61 | 54 | 214 | 8\% |  |  |  |
| 17 | 4,006 | 117 | 44\% | 8.59 | 109 | 419 | 16\% |  |  |  |
| 18 | 3,977 | 115 | 38\% | 7.83 | 217 | 732 | 32\% |  |  |  |
| 19 | 4,013 | 110 | 29\% | 6.78 | 244 | 634 | 36\% |  |  |  |
| 20 | 4,955 | 80 | 52\% | 9.59 | 28 | 126 | 2\% |  |  |  |
| 21 | 5,045 | 80 | 51\% | 9.42 | 28 | 123 | 2\% |  |  |  |
| 22 | 5,157 | 84 | 50\% | 9.30 | 55 | 241 | 4\% |  |  |  |
| 23 | 5,521 | 91 | 49\% | 9.33 | 110 | 477 | 8\% |  |  |  |
| 24 | 5,757 | 95 | 46\% | 9.05 | 221 | 919 | 16\% |  |  |  |
| 25 | 5,910 | 99 | 37\% | 7.96 | 442 | 1,495 | 32\% |  |  |  |
| 26 | 5,979 | 89 | 30\% | 7.04 | 497 | 1,340 | 36\% |  |  |  |
| 27 |  |  |  |  | 2,058 | 6,935 |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  | Financial Case |  | R\&D |  |  |  |  |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 |  | 30 |  | Capital Reco | Period | 30 |  |  |  |  |
| 32 |  | 5 |  |  |  |  |  |  |  |  |
| 33 |  | 2.0\% |  |  |  |  |  |  |  |  |
| 34 |  | 3 |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 42 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 43 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 44 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 45 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 46 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 47 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 48 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 49 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 51 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 52 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 53 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 54 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 55 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 56 | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% |
| 57 | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% |
| 58 | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% |
| 59 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 60 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 61 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 62 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 63 | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% |
| 64 | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% |
| 65 | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66 | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% |
| 67 | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% |
| 68 | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% |
| 69 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 70 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 71 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 72 |  |  |  |  |  |  |  |  |  |  |
| 73 |  |  |  |  |  |  |  |  |  |  |
| 74 |  |  |  |  |  |  |  |  |  |  |
| 75 |  |  |  |  |  |  |  |  |  |  |
| 76 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 77 | 47\% | 48\% | 48\% | 49\% | 50\% | 50\% | 51\% | 52\% | 52\% | 53\% |
| 78 | 46\% | 47\% | 48\% | 48\% | 49\% | 49\% | 50\% | 50\% | 50\% | 51\% |
| 79 | 45\% | 45\% | 46\% | 46\% | 46\% | 46\% | 46\% | 47\% | 47\% | 47\% |
| 80 | 46\% | 47\% | 47\% | 48\% | 49\% | 49\% | 50\% | 50\% | 51\% | 51\% |
| 81 | 45\% | 46\% | 46\% | 47\% | 47\% | 48\% | 48\% | 49\% | 49\% | 50\% |
| 82 | 44\% | 44\% | 44\% | 45\% | 45\% | 45\% | 45\% | 45\% | 46\% | 46\% |
| 83 | 46\% | 47\% | 48\% | 48\% | 49\% | 50\% | 50\% | 51\% | 51\% | 51.8\% |
| 84 | 46\% | 46\% | 47\% | 47\% | 48\% | 48\% | 49\% | 49\% | 50\% | 50.0\% |
| 85 | 44\% | 45\% | 45\% | 45\% | 45\% | 45\% | 46\% | 46\% | 46\% | 46.0\% |
| 86 | 46\% | 47\% | 47\% | 48\% | 49\% | 49\% | 50\% | 51\% | 51\% | 52\% |
| 87 | 45\% | 46\% | 47\% | 47\% | 48\% | 48\% | 49\% | 49\% | 49\% | 50\% |
| 88 | 44\% | 44\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 46\% | 46\% |
| 89 | 45\% | 46\% | 47\% | 47\% | 48\% | 49\% | 49\% | 50\% | 50\% | 51\% |
| 90 | 45\% | 45\% | 46\% | 46\% | 47\% | 47\% | 48\% | 48\% | 49\% | 49\% |
| 91 | 43\% | 44\% | 44\% | 44\% | 44\% | 44\% | 45\% | 45\% | 45\% | 45\% |
| 92 | 39\% | 40\% | 40\% | 41\% | 41\% | 42\% | 43\% | 43\% | 44\% | 44\% |
| 93 | 38\% | 39\% | 39\% | 40\% | 40\% | 41\% | 41\% | 42\% | 42\% | 43\% |
| 94 | 37\% | 37\% | 38\% | 38\% | 38\% | 38\% | 38\% | 39\% | 39\% | 39\% |
| 95 | 30\% | 31\% | 31\% | 32\% | 32\% | 33\% | 34\% | 34\% | 35\% | 35\% |
| 96 | 30\% | 30\% | 31\% | 31\% | 32\% | 32\% | 32\% | 33\% | 33\% | 34\% |
| 97 | 29\% | 29\% | 29\% | 29\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% |
| 98 | 53\% | 53\% | 54\% | 54\% | 55\% | 55\% | 56\% | 56\% | 57\% | 57\% |
| 99 | 52\% | 53\% | 53\% | 54\% | 54\% | 54\% | 55\% | 55\% | 56\% | 56\% |
| 100 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 101 | 51\% | 52\% | 53\% | 53\% | 54\% | 54\% | 55\% | 55\% | 56\% | 56\% |
| 102 | 51\% | 52\% | 52\% | 52\% | 53\% | 53\% | 54\% | 54\% | 54\% | 55\% |
| 103 | 50\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 52\% | 52\% |
| 104 | 51\% | 51\% | 52\% | 52\% | 53\% | 53\% | 54\% | 54\% | 55\% | 55\% |
| 105 | 50\% | 51\% | 51\% | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 54\% |
| 106 | 49\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 51\% | 51\% | 51\% |
| 107 | 50\% | 50\% | 51\% | 52\% | 52\% | 53\% | 53\% | 54\% | 54\% | 54\% |
| 108 | 50\% | 50\% | 50\% | 51\% | 51\% | 52\% | 52\% | 52\% | 53\% | 53\% |
| 109 | 49\% | 49\% | 49\% | 49\% | 49\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 110 | 47\% | 48\% | 48\% | 49\% | 49\% | 50\% | 50\% | 51\% | 51\% | 52\% |
| 111 | 47\% | 47\% | 48\% | 48\% | 48\% | 49\% | 49\% | 49\% | 50\% | 50\% |
| 112 | 46\% | 46\% | 46\% | 46\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% |
| 113 | 38\% | 38\% | 39\% | 39\% | 40\% | 40\% | 41\% | 41\% | 41\% | 41.9\% |
| 114 | 37\% | 38\% | 38\% | 38\% | 39\% | 39\% | 40\% | 40\% | 40\% | 40.6\% |
| 115 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 38\% | 38\% | 38\% | 37.9\% |
| 116 | 31\% | 31\% | 32\% | 32\% | 33\% | 33\% | 34\% | 34\% | 35\% | 35\% |
| 117 | 31\% | 31\% | 31\% | 32\% | 32\% | 33\% | 33\% | 33\% | 34\% | 34\% |
| 118 | 30\% | 30\% | 30\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |
| 119 |  |  |  |  |  |  |  |  |  |  |
| 120 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 121 | 4,108 | 4,180 | 4,245 | 4,306 | 4,363 | 4,418 | 4,470 | 4,521 | 4,571 | 4,619 |
| 122 | 4,060 | 4,117 | 4,168 | 4,216 | 4,260 | 4,303 | 4,343 | 4,383 | 4,421 | 4,458 |
| 123 | 3,947 | 3,971 | 3,992 | 4,011 | 4,029 | 4,045 | 4,061 | 4,076 | 4,090 | 4,104 |
| 124 | 4,004 | 4,075 | 4,140 | 4,200 | 4,256 | 4,310 | 4,363 | 4,413 | 4,462 | 4,510 |
| 125 | 3,958 | 4,014 | 4,064 | 4,111 | 4,155 | 4,197 | 4,237 | 4,276 | 4,314 | 4,351 |
| 126 | 3,847 | 3,870 | 3,891 | 3,910 | 3,927 | 3,943 | 3,959 | 3,974 | 3,988 | 4,002 |
| 127 | 4,034 | 4,105 | 4,170 | 4,230 | 4,287 | 4,341 | 4,393 | 4,444 | 4,493 | 4,541 |
| 128 | 3,987 | 4,043 | 4,094 | 4,141 | 4,185 | 4,227 | 4,268 | 4,307 | 4,345 | 4,382 |
| 129 | 3,876 | 3,899 | 3,920 | 3,939 | 3,956 | 3,972 | 3,988 | 4,003 | 4,017 | 4,031 |
| 130 | 4,015 | 4,087 | 4,151 | 4,211 | 4,268 | 4,322 | 4,374 | 4,425 | 4,474 | 4,522 |
| 131 | 3,969 | 4,025 | 4,076 | 4,123 | 4,167 | 4,209 | 4,249 | 4,288 | 4,326 | 4,363 |
| 132 | 3,858 | 3,881 | 3,902 | 3,921 | 3,938 | 3,955 | 3,970 | 3,985 | 3,999 | 4,013 |
| 133 | 3,951 | 4,022 | 4,086 | 4,146 | 4,202 | 4,256 | 4,308 | 4,358 | 4,407 | 4,455 |
| 134 | 3,905 | 3,961 | 4,011 | 4,058 | 4,102 | 4,143 | 4,184 | 4,222 | 4,260 | 4,297 |
| 135 | 3,796 | 3,819 | 3,840 | 3,858 | 3,875 | 3,892 | 3,907 | 3,922 | 3,936 | 3,950 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 136 | 3,397 | 3,463 | 3,523 | 3,579 | 3,632 | 3,684 | 3,733 | 3,781 | 3,828 | 3,874 |
| 137 | 3,357 | 3,408 | 3,455 | 3,499 | 3,540 | 3,580 | 3,618 | 3,655 | 3,691 | 3,726 |
| 138 | 3,260 | 3,281 | 3,300 | 3,317 | 3,333 | 3,349 | 3,363 | 3,377 | 3,390 | 3,404 |
| 139 | 2,633 | 2,691 | 2,745 | 2,797 | 2,846 | 2,894 | 2,940 | 2,985 | 3,029 | 3,073 |
| 140 | 2,599 | 2,645 | 2,687 | 2,727 | 2,765 | 2,801 | 2,837 | 2,871 | 2,905 | 2,938 |
| 141 | 2,521 | 2,539 | 2,555 | 2,571 | 2,585 | 2,599 | 2,612 | 2,625 | 2,637 | 2,649 |
| 142 | 4,615 | 4,668 | 4,718 | 4,765 | 4,811 | 4,856 | 4,899 | 4,942 | 4,984 | 5,025 |
| 143 | 4,588 | 4,629 | 4,668 | 4,704 | 4,739 | 4,773 | 4,807 | 4,839 | 4,871 | 4,903 |
| 144 | 4,524 | 4,540 | 4,555 | 4,569 | 4,582 | 4,595 | 4,607 | 4,619 | 4,630 | 4,642 |
| 145 | 4,504 | 4,556 | 4,605 | 4,652 | 4,698 | 4,742 | 4,785 | 4,828 | 4,870 | 4,911 |
| 146 | 4,477 | 4,517 | 4,555 | 4,592 | 4,627 | 4,661 | 4,694 | 4,726 | 4,758 | 4,790 |
| 147 | 4,414 | 4,430 | 4,445 | 4,458 | 4,471 | 4,484 | 4,496 | 4,508 | 4,519 | 4,531 |
| 148 | 4,424 | 4,476 | 4,526 | 4,572 | 4,618 | 4,662 | 4,705 | 4,747 | 4,789 | 4,830 |
| 149 | 4,398 | 4,438 | 4,476 | 4,512 | 4,547 | 4,581 | 4,614 | 4,646 | 4,678 | 4,709 |
| 150 | 4,336 | 4,352 | 4,366 | 4,380 | 4,393 | 4,405 | 4,417 | 4,429 | 4,441 | 4,452 |
| 151 | 4,365 | 4,417 | 4,466 | 4,512 | 4,558 | 4,602 | 4,645 | 4,687 | 4,729 | 4,770 |
| 152 | 4,339 | 4,379 | 4,417 | 4,453 | 4,487 | 4,521 | 4,554 | 4,586 | 4,618 | 4,649 |
| 153 | 4,277 | 4,293 | 4,307 | 4,321 | 4,334 | 4,346 | 4,358 | 4,370 | 4,382 | 4,393 |
| 154 | 4,115 | 4,166 | 4,214 | 4,260 | 4,304 | 4,348 | 4,390 | 4,432 | 4,473 | 4,514 |
| 155 | 4,089 | 4,129 | 4,166 | 4,201 | 4,236 | 4,269 | 4,301 | 4,333 | 4,365 | 4,396 |
| 156 | 4,031 | 4,046 | 4,060 | 4,073 | 4,086 | 4,098 | 4,110 | 4,122 | 4,133 | 4,144 |
| 157 | 3,288 | 3,336 | 3,381 | 3,425 | 3,468 | 3,510 | 3,551 | 3,591 | 3,631 | 3,671 |
| 158 | 3,266 | 3,303 | 3,338 | 3,372 | 3,404 | 3,436 | 3,467 | 3,498 | 3,528 | 3,559 |
| 159 | 3,216 | 3,230 | 3,243 | 3,255 | 3,267 | 3,279 | 3,290 | 3,301 | 3,312 | 3,322 |
| 160 | 2,709 | 2,754 | 2,798 | 2,840 | 2,882 | 2,922 | 2,962 | 3,002 | 3,041 | 3,080 |
| 161 | 2,689 | 2,724 | 2,758 | 2,790 | 2,821 | 2,852 | 2,883 | 2,913 | 2,942 | 2,972 |
| 162 | 2,645 | 2,658 | 2,670 | 2,682 | 2,693 | 2,704 | 2,715 | 2,726 | 2,736 | 2,746 |
| 163 |  |  |  |  |  |  |  |  |  |  |
| 164 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 165 | \$2,913 | \$2,756 | \$2,644 | \$2,557 | \$2,487 | \$2,427 | \$2,375 | \$2,330 | \$2,289 | \$2,252 |
| 166 | \$3,141 | \$2,993 | \$2,887 | \$2,806 | \$2,739 | \$2,683 | \$2,634 | \$2,591 | \$2,553 | \$2,518 |
| 167 | \$3,579 | \$3,466 | \$3,386 | \$3,324 | \$3,273 | \$3,230 | \$3,193 | \$3,161 | \$3,131 | \$3,105 |
| 168 | \$2,947 | \$2,788 | \$2,675 | \$2,588 | \$2,516 | \$2,456 | \$2,403 | \$2,357 | \$2,316 | \$2,278 |
| 169 | \$3,178 | \$3,028 | \$2,922 | \$2,839 | \$2,772 | \$2,715 | \$2,666 | \$2,622 | \$2,583 | \$2,548 |
| 170 | \$3,622 | \$3,508 | \$3,426 | \$3,364 | \$3,312 | \$3,269 | \$3,231 | \$3,198 | \$3,168 | \$3,141 |


|  | N | O | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 171 | \$3,065 | \$2,899 | \$2,782 | \$2,691 | \$2,617 | \$2,554 | \$2,499 | \$2,451 | \$2,408 | \$2,369 |
| 172 | \$3,304 | \$3,149 | \$3,038 | \$2,952 | \$2,882 | \$2,823 | \$2,772 | \$2,727 | \$2,686 | \$2,649 |
| 173 | \$3,766 | \$3,647 | \$3,563 | \$3,498 | \$3,444 | \$3,399 | \$3,360 | \$3,325 | \$3,295 | \$3,267 |
| 174 | \$3,183 | \$3,011 | \$2,889 | \$2,794 | \$2,717 | \$2,652 | \$2,595 | \$2,545 | \$2,501 | \$2,460 |
| 175 | \$3,431 | \$3,270 | \$3,155 | \$3,066 | \$2,993 | \$2,932 | \$2,878 | \$2,831 | \$2,789 | \$2,751 |
| 176 | \$3,911 | \$3,787 | \$3,700 | \$3,632 | \$3,577 | \$3,530 | \$3,489 | \$3,453 | \$3,421 | \$3,392 |
| 177 | \$3,340 | \$3,159 | \$3,031 | \$2,932 | \$2,851 | \$2,782 | \$2,723 | \$2,671 | \$2,624 | \$2,582 |
| 178 | \$3,601 | \$3,431 | \$3,310 | \$3,217 | \$3,141 | \$3,076 | \$3,020 | \$2,971 | \$2,927 | \$2,887 |
| 179 | \$4,104 | \$3,974 | \$3,882 | \$3,811 | \$3,753 | \$3,704 | \$3,661 | \$3,623 | \$3,590 | \$3,559 |
| 180 | \$3,316 | \$3,137 | \$3,010 | \$2,911 | \$2,831 | \$2,763 | \$2,704 | \$2,652 | \$2,605 | \$2,563 |
| 181 | \$3,575 | \$3,407 | \$3,287 | \$3,194 | \$3,118 | \$3,054 | \$2,999 | \$2,950 | \$2,906 | \$2,866 |
| 182 | \$4,075 | \$3,946 | \$3,855 | \$3,784 | \$3,726 | \$3,677 | \$3,635 | \$3,598 | \$3,564 | \$3,534 |
| 183 | \$3,346 | \$3,165 | \$3,037 | \$2,938 | \$2,856 | \$2,788 | \$2,728 | \$2,676 | \$2,629 | \$2,586 |
| 184 | \$3,607 | \$3,437 | \$3,317 | \$3,223 | \$3,147 | \$3,082 | \$3,026 | \$2,976 | \$2,932 | \$2,892 |
| 185 | \$4,111 | \$3,982 | \$3,890 | \$3,818 | \$3,760 | \$3,711 | \$3,668 | \$3,630 | \$3,597 | \$3,566 |
| 186 | \$4,171 | \$3,954 | \$3,800 | \$3,680 | \$3,582 | \$3,500 | \$3,428 | \$3,365 | \$3,309 | \$3,258 |
| 187 | \$4,486 | \$4,282 | \$4,137 | \$4,025 | \$3,933 | \$3,856 | \$3,789 | \$3,729 | \$3,676 | \$3,628 |
| 188 | \$5,067 | \$4,908 | \$4,795 | \$4,708 | \$4,637 | \$4,576 | \$4,524 | \$4,478 | \$4,437 | \$4,399 |
| 189 | \$4,247 | \$4,026 | \$3,869 | \$3,747 | \$3,647 | \$3,563 | \$3,491 | \$3,426 | \$3,369 | \$3,317 |
| 190 | \$4,568 | \$4,360 | \$4,213 | \$4,098 | \$4,005 | \$3,926 | \$3,857 | \$3,797 | \$3,743 | \$3,694 |
| 191 | \$5,159 | \$4,997 | \$4,882 | \$4,793 | \$4,721 | \$4,659 | \$4,606 | \$4,559 | \$4,517 | \$4,479 |
| 192 | \$4,340 | \$4,114 | \$3,954 | \$3,829 | \$3,728 | \$3,642 | \$3,567 | \$3,502 | \$3,443 | \$3,390 |
| 193 | \$4,668 | \$4,456 | \$4,305 | \$4,189 | \$4,093 | \$4,012 | \$3,942 | \$3,881 | \$3,826 | \$3,776 |
| 194 | \$5,272 | \$5,107 | \$4,990 | \$4,899 | \$4,825 | \$4,762 | \$4,708 | \$4,660 | \$4,617 | \$4,578 |
| 195 | \$4,647 | \$4,405 | \$4,233 | \$4,100 | \$3,991 | \$3,899 | \$3,819 | \$3,749 | \$3,686 | \$3,629 |
| 196 | \$4,998 | \$4,771 | \$4,609 | \$4,484 | \$4,382 | \$4,296 | \$4,221 | \$4,155 | \$4,096 | \$4,042 |
| 197 | \$5,645 | \$5,468 | \$5,342 | \$5,245 | \$5,166 | \$5,098 | \$5,040 | \$4,989 | \$4,943 | \$4,901 |
| 198 | \$4,845 | \$4,593 | \$4,414 | \$4,275 | \$4,162 | \$4,066 | \$3,983 | \$3,909 | \$3,844 | \$3,784 |
| 199 | \$5,212 | \$4,975 | \$4,806 | \$4,676 | \$4,569 | \$4,479 | \$4,401 | \$4,332 | \$4,271 | \$4,215 |
| 200 | \$5,886 | \$5,701 | \$5,571 | \$5,469 | \$5,386 | \$5,316 | \$5,255 | \$5,202 | \$5,154 | \$5,111 |
| 201 | \$4,975 | \$4,716 | \$4,532 | \$4,389 | \$4,273 | \$4,174 | \$4,089 | \$4,014 | \$3,946 | \$3,886 |
| 202 | \$5,351 | \$5,107 | \$4,935 | \$4,801 | \$4,692 | \$4,599 | \$4,519 | \$4,448 | \$4,385 | \$4,328 |
| 203 | \$6,043 | \$5,854 | \$5,719 | \$5,615 | \$5,530 | \$5,458 | \$5,396 | \$5,341 | \$5,292 | \$5,247 |
| 204 | \$5,033 | \$4,771 | \$4,585 | \$4,441 | \$4,323 | \$4,223 | \$4,137 | \$4,061 | \$3,992 | \$3,931 |
| 205 | \$5,413 | \$5,167 | \$4,992 | \$4,857 | \$4,746 | \$4,653 | \$4,572 | \$4,500 | \$4,436 | \$4,378 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 206 | \$6,114 | \$5,922 | \$5,786 | \$5,681 | \$5,595 | \$5,522 | \$5,459 | \$5,403 | \$5,353 | \$5,308 |
| 207 |  |  |  |  |  |  |  |  |  |  |
| 208 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 209 | \$203 | \$192 | \$184 | \$178 | \$173 | \$169 | \$165 | \$162 | \$159 | \$157 |
| 210 | \$219 | \$208 | \$201 | \$195 | \$191 | \$187 | \$183 | \$180 | \$178 | \$175 |
| 211 | \$249 | \$241 | \$236 | \$231 | \$228 | \$225 | \$222 | \$220 | \$218 | \$216 |
| 212 | \$205 | \$194 | \$186 | \$180 | \$175 | \$171 | \$167 | \$164 | \$161 | \$159 |
| 213 | \$221 | \$211 | \$203 | \$198 | \$193 | \$189 | \$186 | \$182 | \$180 | \$177 |
| 214 | \$252 | \$244 | \$238 | \$234 | \$231 | \$227 | \$225 | \$223 | \$220 | \$219 |
| 215 | \$213 | \$202 | \$194 | \$187 | \$182 | \$178 | \$174 | \$171 | \$168 | \$165 |
| 216 | \$230 | \$219 | \$211 | \$205 | \$201 | \$196 | \$193 | \$190 | \$187 | \$184 |
| 217 | \$262 | \$254 | \$248 | \$243 | \$240 | \$237 | \$234 | \$231 | \$229 | \$227 |
| 218 | \$221 | \$210 | \$201 | \$194 | \$189 | \$185 | \$181 | \$177 | \$174 | \$171 |
| 219 | \$239 | \$228 | \$220 | \$213 | \$208 | \$204 | \$200 | \$197 | \$194 | \$191 |
| 220 | \$272 | \$264 | \$257 | \$253 | \$249 | \$246 | \$243 | \$240 | \$238 | \$236 |
| 221 | \$232 | \$220 | \$211 | \$204 | \$198 | \$194 | \$190 | \$186 | \$183 | \$180 |
| 222 | \$251 | \$239 | \$230 | \$224 | \$219 | \$214 | \$210 | \$207 | \$204 | \$201 |
| 223 | \$286 | \$277 | \$270 | \$265 | \$261 | \$258 | \$255 | \$252 | \$250 | \$248 |
| 224 | \$231 | \$218 | \$209 | \$203 | \$197 | \$192 | \$188 | \$185 | \$181 | \$178 |
| 225 | \$249 | \$237 | \$229 | \$222 | \$217 | \$213 | \$209 | \$205 | \$202 | \$199 |
| 226 | \$284 | \$275 | \$268 | \$263 | \$259 | \$256 | \$253 | \$250 | \$248 | \$246 |
| 227 | \$233 | \$220 | \$211 | \$204 | \$199 | \$194 | \$190 | \$186 | \$183 | \$180 |
| 228 | \$251 | \$239 | \$231 | \$224 | \$219 | \$214 | \$211 | \$207 | \$204 | \$201 |
| 229 | \$286 | \$277 | \$271 | \$266 | \$262 | \$258 | \$255 | \$253 | \$250 | \$248 |
| 230 | \$290 | \$275 | \$264 | \$256 | \$249 | \$244 | \$239 | \$234 | \$230 | \$227 |
| 231 | \$312 | \$298 | \$288 | \$280 | \$274 | \$268 | \$264 | \$260 | \$256 | \$253 |
| 232 | \$353 | \$342 | \$334 | \$328 | \$323 | \$318 | \$315 | \$312 | \$309 | \$306 |
| 233 | \$296 | \$280 | \$269 | \$261 | \$254 | \$248 | \$243 | \$238 | \$234 | \$231 |
| 234 | \$318 | \$303 | \$293 | \$285 | \$279 | \$273 | \$268 | \$264 | \$261 | \$257 |
| 235 | \$359 | \$348 | \$340 | \$334 | \$329 | \$324 | \$321 | \$317 | \$314 | \$312 |
| 236 | \$302 | \$286 | \$275 | \$267 | \$259 | \$253 | \$248 | \$244 | \$240 | \$236 |
| 237 | \$325 | \$310 | \$300 | \$291 | \$285 | \$279 | \$274 | \$270 | \$266 | \$263 |
| 238 | \$367 | \$355 | \$347 | \$341 | \$336 | \$331 | \$328 | \$324 | \$321 | \$319 |
| 239 | \$323 | \$307 | \$295 | \$285 | \$278 | \$271 | \$266 | \$261 | \$257 | \$253 |
| 240 | \$348 | \$332 | \$321 | \$312 | \$305 | \$299 | \$294 | \$289 | \$285 | \$281 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 241 | \$393 | \$381 | \$372 | \$365 | \$359 | \$355 | \$351 | \$347 | \$344 | \$341 |
| 242 | \$337 | \$320 | \$307 | \$298 | \$290 | \$283 | \$277 | \$272 | \$268 | \$263 |
| 243 | \$363 | \$346 | \$334 | \$325 | \$318 | \$312 | \$306 | \$302 | \$297 | \$293 |
| 244 | \$410 | \$397 | \$388 | \$381 | \$375 | \$370 | \$366 | \$362 | \$359 | \$356 |
| 245 | \$346 | \$328 | \$315 | \$305 | \$297 | \$291 | \$285 | \$279 | \$275 | \$270 |
| 246 | \$372 | \$355 | \$343 | \$334 | \$327 | \$320 | \$314 | \$310 | \$305 | \$301 |
| 247 | \$421 | \$407 | \$398 | \$391 | \$385 | \$380 | \$376 | \$372 | \$368 | \$365 |
| 248 | \$350 | \$332 | \$319 | \$309 | \$301 | \$294 | \$288 | \$283 | \$278 | \$274 |
| 249 | \$377 | \$360 | \$347 | \$338 | \$330 | \$324 | \$318 | \$313 | \$309 | \$305 |
| 250 | \$425 | \$412 | \$403 | \$395 | \$389 | \$384 | \$380 | \$376 | \$373 | \$369 |
| 251 |  |  |  |  |  |  |  |  |  |  |
| 252 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 253 | \$1,986 | \$1,879 | \$1,803 | \$1,744 | \$1,696 | \$1,655 | \$1,620 | \$1,588 | \$1,561 | \$1,535 |
| 254 | \$2,142 | \$2,041 | \$1,969 | \$1,913 | \$1,868 | \$1,830 | \$1,796 | \$1,767 | \$1,741 | \$1,717 |
| 255 | \$2,441 | \$2,364 | \$2,309 | \$2,267 | \$2,232 | \$2,203 | \$2,177 | \$2,155 | \$2,135 | \$2,117 |
| 256 | \$1,992 | \$1,885 | \$1,808 | \$1,749 | \$1,701 | \$1,660 | \$1,625 | \$1,593 | \$1,565 | \$1,540 |
| 257 | \$2,148 | \$2,047 | \$1,975 | \$1,919 | \$1,874 | \$1,835 | \$1,802 | \$1,772 | \$1,746 | \$1,722 |
| 258 | \$2,448 | \$2,371 | \$2,316 | \$2,274 | \$2,239 | \$2,210 | \$2,184 | \$2,162 | \$2,142 | \$2,123 |
| 259 | \$2,096 | \$1,983 | \$1,903 | \$1,840 | \$1,789 | \$1,746 | \$1,709 | \$1,676 | \$1,647 | \$1,620 |
| 260 | \$2,260 | \$2,153 | \$2,078 | \$2,019 | \$1,971 | \$1,931 | \$1,896 | \$1,865 | \$1,837 | \$1,812 |
| 261 | \$2,576 | \$2,494 | \$2,437 | \$2,392 | \$2,355 | \$2,325 | \$2,298 | \$2,274 | \$2,253 | \$2,234 |
| 262 | \$2,189 | \$2,070 | \$1,987 | \$1,922 | \$1,868 | \$1,824 | \$1,785 | \$1,750 | \$1,720 | \$1,692 |
| 263 | \$2,360 | \$2,248 | \$2,170 | \$2,108 | \$2,058 | \$2,016 | \$1,979 | \$1,947 | \$1,918 | \$1,892 |
| 264 | \$2,689 | \$2,605 | \$2,544 | \$2,498 | \$2,460 | \$2,427 | \$2,399 | \$2,375 | \$2,353 | \$2,333 |
| 265 | \$2,227 | \$2,107 | \$2,022 | \$1,955 | \$1,901 | \$1,856 | \$1,816 | \$1,781 | \$1,750 | \$1,722 |
| 266 | \$2,401 | \$2,288 | \$2,208 | \$2,145 | \$2,095 | \$2,052 | \$2,014 | \$1,981 | \$1,952 | \$1,925 |
| 267 | \$2,737 | \$2,651 | \$2,589 | \$2,542 | \$2,503 | \$2,470 | \$2,442 | \$2,417 | \$2,394 | \$2,374 |
| 268 | \$2,248 | \$2,126 | \$2,040 | \$1,974 | \$1,919 | \$1,873 | \$1,833 | \$1,798 | \$1,766 | \$1,738 |
| 269 | \$2,424 | \$2,309 | \$2,228 | \$2,165 | \$2,114 | \$2,071 | \$2,033 | \$2,000 | \$1,970 | \$1,943 |
| 270 | \$2,762 | \$2,675 | \$2,613 | \$2,565 | \$2,526 | \$2,493 | \$2,464 | \$2,439 | \$2,416 | \$2,396 |
| 271 | \$2,453 | \$2,321 | \$2,227 | \$2,154 | \$2,094 | \$2,044 | \$2,000 | \$1,962 | \$1,927 | \$1,896 |
| 272 | \$2,645 | \$2,520 | \$2,432 | \$2,363 | \$2,307 | \$2,260 | \$2,219 | \$2,182 | \$2,150 | \$2,121 |
| 273 | \$3,015 | \$2,919 | \$2,852 | \$2,800 | \$2,757 | \$2,721 | \$2,689 | \$2,662 | \$2,637 | \$2,615 |
| 274 | \$3,028 | \$2,870 | \$2,758 | \$2,671 | \$2,600 | \$2,540 | \$2,488 | \$2,443 | \$2,402 | \$2,365 |
| 275 | \$3,256 | \$3,108 | \$3,003 | \$2,922 | \$2,855 | \$2,799 | \$2,750 | \$2,707 | \$2,668 | \$2,634 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 276 | \$3,678 | \$3,562 | \$3,481 | \$3,417 | \$3,365 | \$3,322 | \$3,284 | \$3,250 | \$3,220 | \$3,193 |
| 277 | \$3,039 | \$2,881 | \$2,768 | \$2,681 | \$2,610 | \$2,550 | \$2,498 | \$2,452 | \$2,411 | \$2,374 |
| 278 | \$3,269 | \$3,120 | \$3,015 | \$2,933 | \$2,866 | \$2,809 | \$2,760 | \$2,717 | \$2,679 | \$2,644 |
| 279 | \$3,692 | \$3,576 | \$3,494 | \$3,430 | \$3,378 | \$3,334 | \$3,296 | \$3,263 | \$3,233 | \$3,205 |
| 280 | \$3,123 | \$2,960 | \$2,845 | \$2,755 | \$2,682 | \$2,620 | \$2,567 | \$2,519 | \$2,477 | \$2,439 |
| 281 | \$3,359 | \$3,206 | \$3,097 | \$3,013 | \$2,945 | \$2,887 | \$2,836 | \$2,792 | \$2,752 | \$2,716 |
| 282 | \$3,793 | \$3,674 | \$3,590 | \$3,525 | \$3,471 | \$3,426 | \$3,387 | \$3,352 | \$3,321 | \$3,294 |
| 283 | \$3,237 | \$3,068 | \$2,949 | \$2,856 | \$2,780 | \$2,716 | \$2,660 | \$2,611 | \$2,568 | \$2,528 |
| 284 | \$3,481 | \$3,323 | \$3,211 | \$3,124 | \$3,052 | \$2,992 | \$2,940 | \$2,894 | \$2,853 | \$2,816 |
| 285 | \$3,932 | \$3,809 | \$3,721 | \$3,653 | \$3,598 | \$3,551 | \$3,511 | \$3,475 | \$3,443 | \$3,414 |
| 286 | \$3,271 | \$3,101 | \$2,980 | \$2,886 | \$2,810 | \$2,745 | \$2,689 | \$2,639 | \$2,595 | \$2,555 |
| 287 | \$3,519 | \$3,359 | \$3,245 | \$3,157 | \$3,085 | \$3,024 | \$2,971 | \$2,925 | \$2,883 | \$2,846 |
| 288 | \$3,974 | \$3,849 | \$3,761 | \$3,692 | \$3,636 | \$3,589 | \$3,548 | \$3,512 | \$3,480 | \$3,450 |
| 289 | \$3,275 | \$3,104 | \$2,983 | \$2,889 | \$2,813 | \$2,748 | \$2,692 | \$2,642 | \$2,598 | \$2,558 |
| 290 | \$3,522 | \$3,362 | \$3,249 | \$3,160 | \$3,088 | \$3,027 | \$2,975 | \$2,928 | \$2,887 | \$2,849 |
| 291 | \$3,978 | \$3,853 | \$3,765 | \$3,696 | \$3,640 | \$3,593 | \$3,552 | \$3,516 | \$3,483 | \$3,454 |
| 292 | \$3,598 | \$3,410 | \$3,277 | \$3,174 | \$3,090 | \$3,019 | \$2,957 | \$2,903 | \$2,854 | \$2,810 |
| 293 | \$3,869 | \$3,693 | \$3,569 | \$3,472 | \$3,393 | \$3,326 | \$3,268 | \$3,217 | \$3,171 | \$3,130 |
| 294 | \$4,370 | \$4,233 | \$4,136 | \$4,061 | \$3,999 | \$3,947 | \$3,902 | \$3,862 | \$3,827 | \$3,795 |
| 295 |  |  |  |  |  |  |  |  |  |  |
| 296 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 297 | \$97 | \$93 | \$89 | \$87 | \$84 | \$82 | \$80 | \$78 | \$77 | \$75 |
| 298 | \$102 | \$99 | \$96 | \$93 | \$91 | \$89 | \$87 | \$86 | \$84 | \$83 |
| 299 | \$113 | \$110 | \$108 | \$107 | \$105 | \$104 | \$103 | \$102 | \$101 | \$100 |
| 300 | \$99 | \$95 | \$91 | \$88 | \$86 | \$84 | \$82 | \$80 | \$78 | \$77 |
| 301 | \$105 | \$101 | \$98 | \$95 | \$93 | \$91 | \$89 | \$88 | \$86 | \$85 |
| 302 | \$115 | \$113 | \$111 | \$109 | \$107 | \$106 | \$105 | \$104 | \$103 | \$102 |
| 303 | \$101 | \$97 | \$93 | \$90 | \$87 | \$85 | \$83 | \$81 | \$80 | \$78 |
| 304 | \$107 | \$103 | \$100 | \$97 | \$95 | \$93 | \$91 | \$89 | \$88 | \$86 |
| 305 | \$117 | \$115 | \$113 | \$111 | \$109 | \$108 | \$107 | \$106 | \$105 | \$104 |
| 306 | \$102 | \$97 | \$94 | \$91 | \$88 | \$86 | \$84 | \$82 | \$80 | \$79 |
| 307 | \$108 | \$104 | \$101 | \$98 | \$96 | \$93 | \$92 | \$90 | \$89 | \$87 |
| 308 | \$118 | \$116 | \$114 | \$112 | \$110 | \$109 | \$108 | \$107 | \$106 | \$105 |
| 309 | \$105 | \$100 | \$96 | \$93 | \$91 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 310 | \$111 | \$107 | \$103 | \$101 | \$98 | \$96 | \$94 | \$92 | \$91 | \$90 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 311 | \$122 | \$119 | \$117 | \$115 | \$113 | \$112 | \$111 | \$110 | \$109 | \$108 |
| 312 | \$103 | \$99 | \$95 | \$92 | \$89 | \$87 | \$85 | \$83 | \$81 | \$80 |
| 313 | \$109 | \$105 | \$102 | \$99 | \$97 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 314 | \$120 | \$117 | \$115 | \$113 | \$112 | \$110 | \$109 | \$108 | \$107 | \$106 |
| 315 | \$99 | \$94 | \$91 | \$88 | \$85 | \$83 | \$81 | \$79 | \$78 | \$76 |
| 316 | \$104 | \$100 | \$97 | \$95 | \$92 | \$91 | \$89 | \$87 | \$86 | \$84 |
| 317 | \$115 | \$112 | \$110 | \$108 | \$107 | \$106 | \$104 | \$103 | \$102 | \$101 |
| 318 | \$71 | \$69 | \$66 | \$64 | \$62 | \$61 | \$60 | \$58 | \$57 | \$56 |
| 319 | \$75 | \$73 | \$71 | \$69 | \$68 | \$66 | \$65 | \$64 | \$63 | \$62 |
| 320 | \$83 | \$81 | \$80 | \$79 | \$78 | \$77 | \$76 | \$76 | \$75 | \$74 |
| 321 | \$72 | \$69 | \$67 | \$65 | \$63 | \$62 | \$60 | \$59 | \$58 | \$57 |
| 322 | \$76 | \$74 | \$72 | \$70 | \$68 | \$67 | \$66 | \$65 | \$64 | \$63 |
| 323 | \$84 | \$82 | \$81 | \$80 | \$79 | \$78 | \$77 | \$76 | \$76 | \$75 |
| 324 | \$75 | \$72 | \$70 | \$68 | \$66 | \$64 | \$63 | \$61 | \$60 | \$59 |
| 325 | \$79 | \$77 | \$74 | \$73 | \$71 | \$70 | \$68 | \$67 | \$66 | \$65 |
| 326 | \$87 | \$85 | \$84 | \$83 | \$82 | \$81 | \$80 | \$80 | \$79 | \$78 |
| 327 | \$81 | \$78 | \$75 | \$73 | \$71 | \$69 | \$68 | \$66 | \$65 | \$64 |
| 328 | \$86 | \$83 | \$81 | \$79 | \$77 | \$75 | \$74 | \$73 | \$72 | \$71 |
| 329 | \$94 | \$92 | \$91 | \$90 | \$89 | \$88 | \$87 | \$86 | \$85 | \$85 |
| 330 | \$82 | \$79 | \$76 | \$74 | \$72 | \$70 | \$69 | \$67 | \$66 | \$65 |
| 331 | \$91 | \$88 | \$86 | \$84 | \$82 | \$80 | \$79 | \$77 | \$76 | \$75 |
| 332 | \$100 | \$98 | \$97 | \$95 | \$94 | \$93 | \$92 | \$92 | \$91 | \$90 |
| 333 | \$89 | \$85 | \$82 | \$80 | \$78 | \$76 | \$74 | \$72 | \$71 | \$70 |
| 334 | \$94 | \$90 | \$88 | \$86 | \$84 | \$82 | \$81 | \$79 | \$78 | \$77 |
| 335 | \$103 | \$101 | \$99 | \$98 | \$97 | \$96 | \$95 | \$94 | \$93 | \$92 |
| 336 | \$80 | \$77 | \$74 | \$72 | \$70 | \$68 | \$67 | \$65 | \$64 | \$63 |
| 337 | \$84 | \$82 | \$79 | \$77 | \$76 | \$74 | \$73 | \$72 | \$71 | \$70 |
| 338 | \$93 | \$91 | \$90 | \$88 | \$87 | \$86 | \$85 | \$85 | \$84 | \$83 |
| 339 |  |  |  |  |  |  |  |  |  |  |
| 340 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 341 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 342 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 343 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 344 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 345 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |


|  | N |  | 0 |  | P |  | Q |  | R |  | S |  | T |  | U |  | V |  | W |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 346 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 347 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 348 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 349 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 350 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 351 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 352 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 353 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 354 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 355 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 356 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 357 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 358 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 359 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 360 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 361 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 362 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 363 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 364 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 365 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 366 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 367 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 368 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 369 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 370 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 371 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 372 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 373 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 374 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 375 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 376 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 377 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 378 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 379 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 380 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 381 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 382 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 383 |  |  |  |  |  |  |  |  |  |  |
| 384 |  |  |  |  |  |  |  |  |  |  |
| 385 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 386 | \$724 | \$685 | \$657 | \$636 | \$618 | \$603 | \$590 | \$579 | \$569 | \$560 |
| 387 | \$780 | \$744 | \$718 | \$697 | \$681 | \$667 | \$655 | \$644 | \$634 | \$626 |
| 388 | \$890 | \$861 | \$842 | \$826 | \$813 | \$803 | \$794 | \$785 | \$778 | \$772 |
| 389 | \$750 | \$709 | \$681 | \$658 | \$640 | \$625 | \$611 | \$600 | \$589 | \$580 |
| 390 | \$809 | \$770 | \$743 | \$722 | \$705 | \$691 | \$678 | \$667 | \$657 | \$648 |
| 391 | \$922 | \$892 | \$872 | \$856 | \$843 | \$832 | \$822 | \$814 | \$806 | \$799 |
| 392 | \$756 | \$715 | \$686 | \$663 | \$645 | \$630 | \$616 | \$604 | \$594 | \$584 |
| 393 | \$815 | \$776 | \$749 | \$728 | \$711 | \$696 | \$683 | \$672 | \$662 | \$653 |
| 394 | \$929 | \$899 | \$878 | \$862 | \$849 | \$838 | \$828 | \$820 | \$812 | \$805 |
| 395 | \$772 | \$731 | \$701 | \$678 | \$659 | \$644 | \$630 | \$618 | \$607 | \$597 |
| 396 | \$833 | \$794 | \$766 | \$744 | \$726 | \$712 | \$699 | \$687 | \$677 | \$668 |
| 397 | \$949 | \$919 | \$898 | \$882 | \$868 | \$857 | \$847 | \$838 | \$830 | \$823 |
| 398 \| | \$880 | \$832 | \$799 | \$773 | \$751 | \$733 | \$718 | \$704 | \$691 | \$680 |
| 399 | \$949 | \$904 | \$872 | \$848 | \$828 | \$811 | \$796 | \$783 | \$771 | \$761 |
| 400 | \$1,081 | \$1,047 | \$1,023 | \$1,004 | \$989 | \$976 | \$965 | \$955 | \$946 | \$938 |
| 401 | \$837 | \$792 | \$760 | \$735 | \$715 | \$698 | \$683 | \$670 | \$658 | \$647 |
| 402 | \$903 | \$860 | \$830 | \$807 | \$787 | \$771 | \$757 | \$745 | \$734 | \$724 |
| 403 | \$1,029 | \$996 | \$973 | \$956 | \$941 | \$929 | \$918 | \$908 | \$900 | \$892 |
| 404 | \$660 | \$624 | \$599 | \$579 | \$563 | \$550 | \$538 | \$528 | \$518 | \$510 |
| 405 | \$711 | \$678 | \$654 | \$636 | \$620 | \$608 | \$597 | \$587 | \$578 | \$570 |
| 406 | \$811 | \$785 | \$767 | \$753 | \$741 | \$732 | \$723 | \$716 | \$709 | \$703 |
| 407 | \$853 | \$809 | \$777 | \$753 | \$733 | \$716 | \$701 | \$688 | \$677 | \$666 |
| 408 | \$918 | \$876 | \$846 | \$823 | \$805 | \$789 | \$775 | \$763 | \$752 | \$742 |
| 409 | \$1,036 | \$1,004 | \$981 | \$963 | \$948 | \$936 | \$925 | \$916 | \$908 | \$900 |
| 410 | \$912 | \$865 | \$831 | \$805 | \$783 | \$765 | \$750 | \$736 | \$724 | \$712 |
| 411 | \$981 | \$936 | \$905 | \$880 | \$860 | \$843 | \$829 | \$816 | \$804 | \$794 |
| 412 <br> 18 | \$1,108 | \$1,073 | \$1,049 | \$1,030 | \$1,014 | \$1,001 | \$989 | \$979 | \$970 | \$962 |
| 413 | \$916 | \$868 | \$834 | \$808 | \$786 | \$768 | \$753 | \$739 | \$726 | \$715 |
| 414 | \$985 | \$940 | \$908 | \$884 | \$863 | \$846 | \$832 | \$819 | \$807 | \$797 |
| 415 | \$1,112 | \$1,077 | \$1,053 | \$1,033 | \$1,018 | \$1,005 | \$993 | \$983 | \$974 | \$966 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 416 | \$1,087 | \$1,030 | \$990 | \$959 | \$933 | \$912 | \$893 | \$877 | \$862 | \$849 |
| 417 | \$1,169 | \$1,116 | \$1,078 | \$1,049 | \$1,025 | \$1,005 | \$987 | \$972 | \$958 | \$945 |
| 418 | \$1,320 | \$1,279 | \$1,249 | \$1,227 | \$1,208 | \$1,192 | \$1,179 | \$1,167 | \$1,156 | \$1,146 |
| 419 | \$1,237 | \$1,172 | \$1,127 | \$1,091 | \$1,062 | \$1,038 | \$1,017 | \$998 | \$981 | \$966 |
| 420 | \$1,330 | \$1,270 | \$1,227 | \$1,194 | \$1,166 | \$1,143 | \$1,123 | \$1,106 | \$1,090 | \$1,076 |
| 421 | \$1,502 | \$1,455 | \$1,422 | \$1,396 | \$1,375 | \$1,357 | \$1,341 | \$1,328 | \$1,316 | \$1,305 |
| 422 | \$1,354 | \$1,283 | \$1,233 | \$1,194 | \$1,163 | \$1,136 | \$1,113 | \$1,092 | \$1,074 | \$1,057 |
| 423 | \$1,456 | \$1,390 | \$1,343 | \$1,306 | \$1,277 | \$1,251 | \$1,230 | \$1,210 | \$1,193 | \$1,178 |
| 424 | \$1,644 | \$1,593 | \$1,556 | \$1,528 | \$1,505 | \$1,485 | \$1,468 | \$1,453 | \$1,440 | \$1,428 |
| 425 | \$1,085 | \$1,029 | \$988 | \$957 | \$932 | \$910 | \$892 | \$875 | \$861 | \$847 |
| 426 | \$1,167 | \$1,114 | \$1,076 | \$1,047 | \$1,023 | \$1,003 | \$986 | \$970 | \$956 | \$944 |
| 427 | \$1,318 | \$1,277 | \$1,247 | \$1,225 | \$1,206 | \$1,190 | \$1,177 | \$1,165 | \$1,154 | \$1,144 |
| 428 |  |  |  |  |  |  |  |  |  |  |
| 429 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 430 | \$724 | \$685 | \$657 | \$636 | \$618 | \$603 | \$590 | \$579 | \$569 | \$560 |
| 431 | \$780 | \$744 | \$718 | \$697 | \$681 | \$667 | \$655 | \$644 | \$634 | \$626 |
| 432 | \$890 | \$861 | \$842 | \$826 | \$813 | \$803 | \$794 | \$785 | \$778 | \$772 |
| 433 | \$750 | \$709 | \$681 | \$658 | \$640 | \$625 | \$611 | \$600 | \$589 | \$580 |
| 434 | \$809 | \$770 | \$743 | \$722 | \$705 | \$691 | \$678 | \$667 | \$657 | \$648 |
| 435 | \$922 | \$892 | \$872 | \$856 | \$843 | \$832 | \$822 | \$814 | \$806 | \$799 |
| 436 | \$756 | \$715 | \$686 | \$663 | \$645 | \$630 | \$616 | \$604 | \$594 | \$584 |
| 437 | \$815 | \$776 | \$749 | \$728 | \$711 | \$696 | \$683 | \$672 | \$662 | \$653 |
| 438 | \$929 | \$899 | \$878 | \$862 | \$849 | \$838 | \$828 | \$820 | \$812 | \$805 |
| 439 | \$772 | \$731 | \$701 | \$678 | \$659 | \$644 | \$630 | \$618 | \$607 | \$597 |
| 440 | \$833 | \$794 | \$766 | \$744 | \$726 | \$712 | \$699 | \$687 | \$677 | \$668 |
| 441 | \$949 | \$919 | \$898 | \$882 | \$868 | \$857 | \$847 | \$838 | \$830 | \$823 |
| 442 | \$880 | \$832 | \$799 | \$773 | \$751 | \$733 | \$718 | \$704 | \$691 | \$680 |
| 443 | \$949 | \$904 | \$872 | \$848 | \$828 | \$811 | \$796 | \$783 | \$771 | \$761 |
| 444 | \$1,081 | \$1,047 | \$1,023 | \$1,004 | \$989 | \$976 | \$965 | \$955 | \$946 | \$938 |
| 445 | \$837 | \$792 | \$760 | \$735 | \$715 | \$698 | \$683 | \$670 | \$658 | \$647 |
| 446 | \$903 | \$860 | \$830 | \$807 | \$787 | \$771 | \$757 | \$745 | \$734 | \$724 |
| 447 | \$1,029 | \$996 | \$973 | \$956 | \$941 | \$929 | \$918 | \$908 | \$900 | \$892 |
| 448 | \$660 | \$624 | \$599 | \$579 | \$563 | \$550 | \$538 | \$528 | \$518 | \$510 |
| 449 | \$711 | \$678 | \$654 | \$636 | \$620 | \$608 | \$597 | \$587 | \$578 | \$570 |
| 450 | \$811 | \$785 | \$767 | \$753 | \$741 | \$732 | \$723 | \$716 | \$709 | \$703 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 451 | \$853 | \$809 | \$777 | \$753 | \$733 | \$716 | \$701 | \$688 | \$677 | \$666 |
| 452 | \$918 | \$876 | \$846 | \$823 | \$805 | \$789 | \$775 | \$763 | \$752 | \$742 |
| 453 | \$1,036 | \$1,004 | \$981 | \$963 | \$948 | \$936 | \$925 | \$916 | \$908 | \$900 |
| 454 | \$912 | \$865 | \$831 | \$805 | \$783 | \$765 | \$750 | \$736 | \$724 | \$712 |
| 455 | \$981 | \$936 | \$905 | \$880 | \$860 | \$843 | \$829 | \$816 | \$804 | \$794 |
| 456 | \$1,108 | \$1,073 | \$1,049 | \$1,030 | \$1,014 | \$1,001 | \$989 | \$979 | \$970 | \$962 |
| 457 | \$916 | \$868 | \$834 | \$808 | \$786 | \$768 | \$753 | \$739 | \$726 | \$715 |
| 458 | \$985 | \$940 | \$908 | \$884 | \$863 | \$846 | \$832 | \$819 | \$807 | \$797 |
| 459 | \$1,112 | \$1,077 | \$1,053 | \$1,033 | \$1,018 | \$1,005 | \$993 | \$983 | \$974 | \$966 |
| 460 | \$1,087 | \$1,030 | \$990 | \$959 | \$933 | \$912 | \$893 | \$877 | \$862 | \$849 |
| 461 | \$1,169 | \$1,116 | \$1,078 | \$1,049 | \$1,025 | \$1,005 | \$987 | \$972 | \$958 | \$945 |
| 462 | \$1,320 | \$1,279 | \$1,249 | \$1,227 | \$1,208 | \$1,192 | \$1,179 | \$1,167 | \$1,156 | \$1,146 |
| 463 | \$1,237 | \$1,172 | \$1,127 | \$1,091 | \$1,062 | \$1,038 | \$1,017 | \$998 | \$981 | \$966 |
| 464 | \$1,330 | \$1,270 | \$1,227 | \$1,194 | \$1,166 | \$1,143 | \$1,123 | \$1,106 | \$1,090 | \$1,076 |
| 465 | \$1,502 | \$1,455 | \$1,422 | \$1,396 | \$1,375 | \$1,357 | \$1,341 | \$1,328 | \$1,316 | \$1,305 |
| 466 | \$1,354 | \$1,283 | \$1,233 | \$1,194 | \$1,163 | \$1,136 | \$1,113 | \$1,092 | \$1,074 | \$1,057 |
| 467 | \$1,456 | \$1,390 | \$1,343 | \$1,306 | \$1,277 | \$1,251 | \$1,230 | \$1,210 | \$1,193 | \$1,178 |
| 468 | \$1,644 | \$1,593 | \$1,556 | \$1,528 | \$1,505 | \$1,485 | \$1,468 | \$1,453 | \$1,440 | \$1,428 |
| 469 | \$1,085 | \$1,029 | \$988 | \$957 | \$932 | \$910 | \$892 | \$875 | \$861 | \$847 |
| 470 | \$1,167 | \$1,114 | \$1,076 | \$1,047 | \$1,023 | \$1,003 | \$986 | \$970 | \$956 | \$944 |
| 471 | \$1,318 | \$1,277 | \$1,247 | \$1,225 | \$1,206 | \$1,190 | \$1,177 | \$1,165 | \$1,154 | \$1,144 |
| 472 |  |  |  |  |  |  |  |  |  |  |
| 473 |  |  |  |  |  |  |  |  |  |  |
| 474 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 475 | \$60 | \$56 | \$53 | \$50 | \$48 | \$46 | \$45 | \$43 | \$42 | \$41 |
| 476 | \$64 | \$61 | \$58 | \$56 | \$54 | \$52 | \$51 | \$50 | \$48 | \$47 |
| 477 | \$75 | \$72 | \$70 | \$69 | \$67 | \$66 | \$65 | \$64 | \$63 | \$63 |
| 478 | \$62 | \$58 | \$55 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$43 |
| 479 | \$67 | \$63 | \$61 | \$58 | \$56 | \$54 | \$53 | \$52 | \$50 | \$49 |
| 480 | \$78 | \$75 | \$73 | \$72 | \$70 | \$69 | \$68 | \$67 | \$66 | \$65 |
| 481 | \$64 | \$59 | \$56 | \$54 | \$51 | \$49 | \$48 | \$46 | \$45 | \$44 |
| 482 | \$69 | \$65 | \$62 | \$60 | \$58 | \$56 | \$54 | \$53 | \$52 | \$50 |
| 483 | \$80 | \$77 | \$75 | \$73 | \$72 | \$71 | \$70 | \$69 | \$68 | \$67 |
| 484 | \$66 | \$61 | \$58 | \$55 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 |
| 485 | \$71 | \$67 | \$64 | \$61 | \$59 | \$58 | \$56 | \$54 | \$53 | \$52 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 486 | \$82 | \$79 | \$77 | \$76 | \$74 | \$73 | \$72 | \$71 | \$70 | \$69 |
| 487 | \$69 | \$65 | \$61 | \$58 | \$56 | \$54 | \$52 | \$50 | \$49 | \$48 |
| 488 | \$75 | \$71 | \$68 | \$65 | \$63 | \$61 | \$59 | \$58 | \$56 | \$55 |
| 489 | \$87 | \$84 | \$82 | \$80 | \$78 | \$77 | \$76 | \$75 | \$74 | \$73 |
| 490 | \$80 | \$74 | \$70 | \$67 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 |
| 491 | \$86 | \$82 | \$78 | \$75 | \$72 | \$70 | \$68 | \$66 | \$64 | \$63 |
| 492 | \$100 | \$97 | \$94 | \$92 | \$90 | \$89 | \$87 | \$86 | \$85 | \$84 |
| 493 | \$102 | \$95 | \$89 | \$85 | \$81 | \$78 | \$75 | \$72 | \$70 | \$68 |
| 494 | \$110 | \$104 | \$99 | \$95 | \$91 | \$88 | \$85 | \$83 | \$81 | \$79 |
| 495 | \$128 | \$124 | \$120 | \$118 | \$115 | \$113 | \$111 | \$110 | \$108 | \$107 |
| 496 | \$61 | \$58 | \$55 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$44 |
| 497 | \$66 | \$63 | \$60 | \$58 | \$56 | \$55 | \$53 | \$52 | \$51 | \$50 |
| 498 | \$75 | \$73 | \$71 | \$70 | \$68 | \$67 | \$66 | \$66 | \$65 | \$64 |
| 499 | \$64 | \$60 | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$47 | \$46 |
| 500 | \$69 | \$65 | \$63 | \$60 | \$59 | \$57 | \$56 | \$54 | \$53 | \$52 |
| 501 | \$78 | \$76 | \$74 | \$72 | \$71 | \$70 | \$69 | \$68 | \$67 | \$67 |
| 502 | \$67 | \$63 | \$60 | \$57 | \$55 | \$53 | \$52 | \$50 | \$49 | \$48 |
| 503 | \$72 | \$68 | \$65 | \$63 | \$61 | \$60 | \$58 | \$57 | \$56 | \$55 |
| 504 | \$82 | \$79 | \$77 | \$76 | \$74 | \$73 | \$72 | \$71 | \$70 | \$70 |
| 505 | \$73 | \$68 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$52 |
| 506 | \$78 | \$74 | \$71 | \$69 | \$67 | \$65 | \$63 | \$62 | \$61 | \$59 |
| 507 | \$89 | \$86 | \$84 | \$82 | \$81 | \$80 | \$79 | \$78 | \$77 | \$76 |
| 508 | \$80 | \$75 | \$71 | \$68 | \$66 | \$64 | \$62 | \$60 | \$58 | \$57 |
| 509 | \$87 | \$82 | \$79 | \$76 | \$74 | \$72 | \$70 | \$69 | \$67 | \$66 |
| 510 | \$99 | \$96 | \$93 | \$92 | \$90 | \$89 | \$87 | \$86 | \$85 | \$84 |
| 511 | \$104 | \$97 | \$92 | \$88 | \$85 | \$82 | \$79 | \$77 | \$75 | \$73 |
| 512 | \$112 | \$106 | \$101 | \$98 | \$95 | \$92 | \$89 | \$87 | \$85 | \$83 |
| 513 | \$127 | \$123 | \$120 | \$118 | \$115 | \$114 | \$112 | \$110 | \$109 | \$108 |
| 514 | \$124 | \$116 | \$110 | \$105 | \$100 | \$97 | \$93 | \$90 | \$88 | \$85 |
| 515 | \$134 | \$126 | \$121 | \$116 | \$112 | \$109 | \$106 | \$103 | \$100 | \$98 |
| 516 | \$152 | \$147 | \$143 | \$140 | \$138 | \$135 | \$133 | \$132 | \$130 | \$128 |
| 517 |  |  |  |  |  |  |  |  |  |  |
| 518 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 519 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 520 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |


|  | N | O | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 521 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 522 | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 523 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 |
| 524 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 |
| 525 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 |
| 526 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 527 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 528 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 529 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 530 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 |
| 531 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 |
| 532 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 |
| 533 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 |
| 534 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 |
| 535 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 |
| 536 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 537 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 |
| 538 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 |
| 539 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 |
| 540 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 |
| 541 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 |
| 542 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 |
| 543 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 544 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 |
| 545 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 |
| 546 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 |
| 547 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 |
| 548 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 |
| 549 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 |
| 550 |  |  |  |  |  |  |  |  |  |  |
| 551 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 552 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 |
| 553 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 |
| 554 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 |
| 555 |  |  |  |  |  |  |  |  |  |  |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 556 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 |
| 557 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 |
| 558 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 |
| 559 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 560 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 561 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 562 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 563 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 564 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 565 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 566 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 567 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 568 |  |  |  |  |  |  |  |  |  |  |
| 569 |  |  |  |  |  |  |  |  |  |  |
| 570 |  |  |  |  |  |  |  |  |  |  |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |  |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 42 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 43 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 44 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 45 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 46 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 47 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 48 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 49 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 51 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 52 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 53 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 54 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 55 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 56 | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% |
| 57 | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% |
| 58 | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% |
| 59 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 60 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 61 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 62 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 63 | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% |
| 64 | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% |
| 65 | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66 | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% |
| 67 | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% |
| 68 | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% |
| 69 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 70 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 71 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 72 |  |  |  |  |  |  |  |  |  |  |
| 73 |  |  |  |  |  |  |  |  |  |  |
| 74 |  |  |  |  |  |  |  |  |  |  |
| 75 |  |  |  |  |  |  |  |  |  |  |
| 76 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 77 | 53\% | 53\% | 54\% | 54\% | 54\% | 54\% | 54\% | 55\% | 55\% | 55\% |
| 78 | 51\% | 51\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 53\% | 53\% |
| 79 | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 48\% | 48\% | 48\% | 48\% |
| 80 | 52\% | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% | 54\% | 54\% |
| 81 | 50\% | 50\% | 50\% | 50\% | 51\% | 51\% | 51\% | 51\% | 51\% | 52\% |
| 82 | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 47\% | 47\% |
| 83 | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% | 54\% | 54\% | 54\% | 54\% |
| 84 | 50\% | 50\% | 51\% | 51\% | 51\% | 51\% | 51\% | 52\% | 52\% | 52\% |
| 85 | 46\% | 46\% | 46\% | 46\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% |
| 86 | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% | 54\% | 54\% | 54\% |
| 87 | 50\% | 50\% | 50\% | 51\% | 51\% | 51\% | 51\% | 51\% | 52\% | 52\% |
| 88 | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 47\% | 47\% | 47\% |
| 89 | 51\% | 51\% | 52\% | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% |
| 90 | 49\% | 49\% | 50\% | 50\% | 50\% | 50\% | 50\% | 51\% | 51\% | 51\% |
| 91 | 45\% | 45\% | 45\% | 45\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% |
| 92 | 44\% | 45\% | 45\% | 45\% | 45\% | 46\% | 46\% | 46\% | 46\% | 46\% |
| 93 | 43\% | 43\% | 43\% | 43\% | 43\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 94 | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 40\% | 40\% | 40\% |
| 95 | 35\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 37\% | 37\% | 37\% |
| 96 | 34\% | 34\% | 34\% | 34\% | 34\% | 35\% | 35\% | 35\% | 35\% | 35\% |
| 97 | 30\% | 30\% | 30\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |
| 98 | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 59\% | 59\% | 59\% | 59\% |
| 99 | 56\% | 56\% | 56\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 100 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 54\% | 54\% | 54\% |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 101 | 56\% | 56\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 58\% | 58\% |
| 102 | 55\% | 55\% | 55\% | 55\% | 55\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 103 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% |
| 104 | 55\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 57\% | 57\% | 57\% |
| 105 | 54\% | 54\% | 54\% | 54\% | 54\% | 55\% | 55\% | 55\% | 55\% | 55\% |
| 106 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 52\% |
| 107 | 55\% | 55\% | 55\% | 55\% | 55\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 108 | 53\% | 53\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 109 | 50\% | 50\% | 50\% | 50\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 110 | 52\% | 52\% | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 111 | 50\% | 50\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 52\% |
| 112 | 47\% | 47\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 113 | 42\% | 42\% | 42\% | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% | 44\% |
| 114 | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% | 42\% | 42\% | 42\% | 42\% |
| 115 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 39\% | 39\% |
| 116 | 35\% | 35\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 37\% | 37\% |
| 117 | 34\% | 34\% | 34\% | 34\% | 35\% | 35\% | 35\% | 35\% | 35\% | 35\% |
| 118 | 31\% | 31\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 119 |  |  |  |  |  |  |  |  |  |  |
| 120 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 121 | 4,642 | 4,665 | 4,687 | 4,708 | 4,728 | 4,748 | 4,768 | 4,787 | 4,806 | 4,824 |
| 122 | 4,477 | 4,495 | 4,513 | 4,530 | 4,546 | 4,563 | 4,578 | 4,594 | 4,609 | 4,624 |
| 123 | 4,113 | 4,122 | 4,131 | 4,139 | 4,147 | 4,155 | 4,163 | 4,171 | 4,178 | 4,185 |
| 124 | 4,533 | 4,555 | 4,577 | 4,598 | 4,618 | 4,638 | 4,657 | 4,676 | 4,695 | 4,713 |
| 125 | 4,370 | 4,388 | 4,405 | 4,422 | 4,438 | 4,454 | 4,470 | 4,485 | 4,500 | 4,515 |
| 126 | 4,011 | 4,020 | 4,028 | 4,036 | 4,044 | 4,052 | 4,060 | 4,067 | 4,075 | 4,082 |
| 127 | 4,564 | 4,587 | 4,608 | 4,629 | 4,650 | 4,669 | 4,689 | 4,708 | 4,726 | 4,745 |
| 128 | 4,400 | 4,418 | 4,436 | 4,453 | 4,469 | 4,485 | 4,501 | 4,516 | 4,531 | 4,546 |
| 129 | 4,040 | 4,049 | 4,058 | 4,066 | 4,074 | 4,082 | 4,089 | 4,097 | 4,104 | 4,111 |
| 130 | 4,545 | 4,568 | 4,589 | 4,610 | 4,630 | 4,650 | 4,669 | 4,688 | 4,707 | 4,725 |
| 131 | 4,382 | 4,400 | 4,417 | 4,434 | 4,450 | 4,466 | 4,482 | 4,497 | 4,512 | 4,527 |
| 132 | 4,022 | 4,031 | 4,040 | 4,048 | 4,056 | 4,064 | 4,071 | 4,079 | 4,086 | 4,093 |
| 133 | 4,478 | 4,500 | 4,521 | 4,542 | 4,562 | 4,582 | 4,601 | 4,620 | 4,638 | 4,656 |
| 134 | 4,315 | 4,333 | 4,351 | 4,367 | 4,384 | 4,399 | 4,415 | 4,430 | 4,445 | 4,460 |
| 135 | 3,959 | 3,968 | 3,976 | 3,984 | 3,992 | 4,000 | 4,008 | 4,015 | 4,022 | 4,029 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 136 | 3,896 | 3,916 | 3,936 | 3,955 | 3,974 | 3,993 | 4,011 | 4,028 | 4,046 | 4,063 |
| 137 | 3,743 | 3,760 | 3,776 | 3,792 | 3,807 | 3,822 | 3,836 | 3,851 | 3,865 | 3,878 |
| 138 | 3,412 | 3,420 | 3,428 | 3,436 | 3,443 | 3,450 | 3,457 | 3,464 | 3,471 | 3,478 |
| 139 | 3,092 | 3,110 | 3,128 | 3,145 | 3,162 | 3,179 | 3,195 | 3,212 | 3,228 | 3,243 |
| 140 | 2,954 | 2,968 | 2,983 | 2,997 | 3,011 | 3,024 | 3,037 | 3,050 | 3,063 | 3,076 |
| 141 | 2,657 | 2,664 | 2,671 | 2,678 | 2,685 | 2,691 | 2,698 | 2,704 | 2,711 | 2,717 |
| 142 | 5,042 | 5,059 | 5,075 | 5,091 | 5,106 | 5,122 | 5,137 | 5,152 | 5,166 | 5,181 |
| 143 | 4,917 | 4,930 | 4,943 | 4,956 | 4,968 | 4,981 | 4,993 | 5,005 | 5,017 | 5,029 |
| 144 | 4,649 | 4,655 | 4,662 | 4,668 | 4,674 | 4,681 | 4,687 | 4,693 | 4,698 | 4,704 |
| 145 | 4,928 | 4,944 | 4,960 | 4,976 | 4,991 | 5,007 | 5,022 | 5,036 | 5,051 | 5,065 |
| 146 | 4,803 | 4,816 | 4,829 | 4,842 | 4,855 | 4,867 | 4,879 | 4,891 | 4,903 | 4,914 |
| 147 | 4,537 | 4,544 | 4,550 | 4,557 | 4,563 | 4,569 | 4,575 | 4,581 | 4,587 | 4,592 |
| 148 | 4,847 | 4,863 | 4,879 | 4,895 | 4,910 | 4,925 | 4,940 | 4,955 | 4,969 | 4,984 |
| 149 | 4,723 | 4,736 | 4,749 | 4,762 | 4,774 | 4,786 | 4,798 | 4,810 | 4,822 | 4,833 |
| 150 | 4,458 | 4,465 | 4,471 | 4,478 | 4,484 | 4,490 | 4,496 | 4,502 | 4,508 | 4,513 |
| 151 | 4,786 | 4,802 | 4,818 | 4,834 | 4,849 | 4,864 | 4,879 | 4,894 | 4,908 | 4,923 |
| 152 | 4,663 | 4,676 | 4,689 | 4,701 | 4,713 | 4,726 | 4,738 | 4,749 | 4,761 | 4,773 |
| 153 | 4,399 | 4,406 | 4,412 | 4,419 | 4,425 | 4,431 | 4,437 | 4,443 | 4,448 | 4,454 |
| 154 | 4,530 | 4,546 | 4,562 | 4,577 | 4,592 | 4,607 | 4,622 | 4,636 | 4,650 | 4,665 |
| 155 | 4,409 | 4,422 | 4,434 | 4,447 | 4,459 | 4,471 | 4,482 | 4,494 | 4,506 | 4,517 |
| 156 | 4,150 | 4,157 | 4,163 | 4,169 | 4,175 | 4,181 | 4,187 | 4,193 | 4,199 | 4,204 |
| 157 | 3,686 | 3,701 | 3,716 | 3,730 | 3,744 | 3,758 | 3,772 | 3,786 | 3,799 | 3,813 |
| 158 | 3,571 | 3,583 | 3,595 | 3,606 | 3,618 | 3,629 | 3,640 | 3,651 | 3,662 | 3,673 |
| 159 | 3,328 | 3,334 | 3,340 | 3,346 | 3,352 | 3,357 | 3,363 | 3,368 | 3,374 | 3,379 |
| 160 | 3,094 | 3,108 | 3,122 | 3,136 | 3,150 | 3,163 | 3,176 | 3,190 | 3,203 | 3,216 |
| 161 | 2,983 | 2,995 | 3,006 | 3,017 | 3,028 | 3,039 | 3,050 | 3,060 | 3,071 | 3,081 |
| 162 | 2,752 | 2,758 | 2,763 | 2,769 | 2,774 | 2,780 | 2,785 | 2,790 | 2,796 | 2,801 |
| 163 |  |  |  |  |  |  |  |  |  |  |
| 164 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 165 | \$2,218 | \$2,187 | \$2,158 | \$2,131 | \$2,106 | \$2,083 | \$2,061 | \$2,040 | \$2,020 | \$2,001 |
| 166 | \$2,486 | \$2,457 | \$2,430 | \$2,405 | \$2,381 | \$2,359 | \$2,338 | \$2,318 | \$2,300 | \$2,282 |
| 167 | \$3,080 | \$3,058 | \$3,037 | \$3,018 | \$3,000 | \$2,983 | \$2,967 | \$2,952 | \$2,938 | \$2,925 |
| 168 | \$2,244 | \$2,213 | \$2,184 | \$2,157 | \$2,131 | \$2,108 | \$2,085 | \$2,064 | \$2,044 | \$2,025 |
| 169 | \$2,516 | \$2,486 | \$2,459 | \$2,433 | \$2,409 | \$2,387 | \$2,366 | \$2,346 | \$2,327 | \$2,309 |
| 170 | \$3,117 | \$3,094 | \$3,073 | \$3,054 | \$3,036 | \$3,019 | \$3,003 | \$2,987 | \$2,973 | \$2,959 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 171 | \$2,334 | \$2,301 | \$2,271 | \$2,243 | \$2,216 | \$2,192 | \$2,168 | \$2,146 | \$2,125 | \$2,105 |
| 172 | \$2,616 | \$2,585 | \$2,557 | \$2,530 | \$2,505 | \$2,482 | \$2,460 | \$2,439 | \$2,420 | \$2,401 |
| 173 | \$3,241 | \$3,218 | \$3,196 | \$3,176 | \$3,157 | \$3,139 | \$3,122 | \$3,106 | \$3,091 | \$3,077 |
| 174 | \$2,423 | \$2,389 | \$2,358 | \$2,329 | \$2,301 | \$2,276 | \$2,251 | \$2,229 | \$2,207 | \$2,186 |
| 175 | \$2,716 | \$2,685 | \$2,655 | \$2,627 | \$2,602 | \$2,578 | \$2,555 | \$2,533 | \$2,513 | \$2,493 |
| 176 | \$3,366 | \$3,341 | \$3,319 | \$3,298 | \$3,278 | \$3,260 | \$3,242 | \$3,226 | \$3,210 | \$3,195 |
| 177 | \$2,543 | \$2,507 | \$2,474 | \$2,444 | \$2,415 | \$2,388 | \$2,363 | \$2,338 | \$2,316 | \$2,294 |
| 178 | \$2,850 | \$2,817 | \$2,786 | \$2,757 | \$2,730 | \$2,705 | \$2,681 | \$2,658 | \$2,637 | \$2,616 |
| 179 | \$3,532 | \$3,506 | \$3,482 | \$3,460 | \$3,440 | \$3,420 | \$3,402 | \$3,385 | \$3,369 | \$3,353 |
| 180 | \$2,525 | \$2,489 | \$2,457 | \$2,426 | \$2,398 | \$2,371 | \$2,346 | \$2,322 | \$2,299 | \$2,278 |
| 181 | \$2,830 | \$2,797 | \$2,766 | \$2,738 | \$2,711 | \$2,686 | \$2,662 | \$2,639 | \$2,618 | \$2,598 |
| 182 | \$3,507 | \$3,481 | \$3,458 | \$3,436 | \$3,415 | \$3,396 | \$3,378 | \$3,361 | \$3,345 | \$3,329 |
| 183 | \$2,548 | \$2,512 | \$2,479 | \$2,448 | \$2,419 | \$2,392 | \$2,367 | \$2,343 | \$2,320 | \$2,298 |
| 184 | \$2,856 | \$2,822 | \$2,791 | \$2,762 | \$2,735 | \$2,710 | \$2,686 | \$2,663 | \$2,642 | \$2,621 |
| 185 | \$3,538 | \$3,513 | \$3,489 | \$3,467 | \$3,446 | \$3,427 | \$3,408 | \$3,391 | \$3,375 | \$3,359 |
| 186 | \$3,211 | \$3,168 | \$3,128 | \$3,092 | \$3,057 | \$3,024 | \$2,994 | \$2,965 | \$2,937 | \$2,911 |
| 187 | \$3,585 | \$3,544 | \$3,507 | \$3,472 | \$3,440 | \$3,409 | \$3,381 | \$3,353 | \$3,328 | \$3,303 |
| 188 | \$4,365 | \$4,334 | \$4,305 | \$4,278 | \$4,253 | \$4,229 | \$4,207 | \$4,185 | \$4,165 | \$4,146 |
| 189 | \$3,269 | \$3,226 | \$3,185 | \$3,148 | \$3,112 | \$3,079 | \$3,048 | \$3,019 | \$2,991 | \$2,964 |
| 190 | \$3,650 | \$3,609 | \$3,571 | \$3,535 | \$3,502 | \$3,471 | \$3,442 | \$3,414 | \$3,388 | \$3,363 |
| 191 | \$4,445 | \$4,413 | \$4,383 | \$4,356 | \$4,330 | \$4,306 | \$4,283 | \$4,261 | \$4,241 | \$4,222 |
| 192 | \$3,341 | \$3,297 | \$3,255 | \$3,217 | \$3,181 | \$3,147 | \$3,115 | \$3,085 | \$3,057 | \$3,029 |
| 193 | \$3,730 | \$3,688 | \$3,649 | \$3,613 | \$3,580 | \$3,548 | \$3,518 | \$3,490 | \$3,463 | \$3,437 |
| 194 | \$4,542 | \$4,510 | \$4,480 | \$4,452 | \$4,425 | \$4,401 | \$4,377 | \$4,355 | \$4,334 | \$4,315 |
| 195 | \$3,577 | \$3,530 | \$3,485 | \$3,444 | \$3,406 | \$3,370 | \$3,335 | \$3,303 | \$3,273 | \$3,243 |
| 196 | \$3,994 | \$3,949 | \$3,907 | \$3,869 | \$3,832 | \$3,798 | \$3,766 | \$3,736 | \$3,707 | \$3,680 |
| 197 | \$4,863 | \$4,828 | \$4,796 | \$4,766 | \$4,738 | \$4,711 | \$4,687 | \$4,663 | \$4,641 | \$4,619 |
| 198 | \$3,730 | \$3,680 | \$3,634 | \$3,591 | \$3,551 | \$3,514 | \$3,478 | \$3,444 | \$3,412 | \$3,382 |
| 199 | \$4,164 | \$4,117 | \$4,074 | \$4,034 | \$3,996 | \$3,961 | \$3,927 | \$3,896 | \$3,866 | \$3,837 |
| 200 | \$5,071 | \$5,035 | \$5,001 | \$4,970 | \$4,940 | \$4,913 | \$4,887 | \$4,862 | \$4,839 | \$4,817 |
| 201 | \$3,830 | \$3,779 | \$3,731 | \$3,687 | \$3,646 | \$3,607 | \$3,571 | \$3,536 | \$3,504 | \$3,472 |
| 202 | \$4,276 | \$4,227 | \$4,183 | \$4,142 | \$4,103 | \$4,067 | \$4,032 | \$4,000 | \$3,969 | \$3,940 |
| 203 | \$5,207 | \$5,169 | \$5,135 | \$5,102 | \$5,072 | \$5,044 | \$5,017 | \$4,992 | \$4,968 | \$4,945 |
| 204 | \$3,875 | \$3,823 | \$3,775 | \$3,730 | \$3,689 | \$3,649 | \$3,613 | \$3,578 | \$3,544 | \$3,513 |
| 205 | \$4,325 | \$4,277 | \$4,232 | \$4,190 | \$4,151 | \$4,114 | \$4,079 | \$4,046 | \$4,015 | \$3,986 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 206 | \$5,267 | \$5,229 | \$5,194 | \$5,162 | \$5,131 | \$5,103 | \$5,076 | \$5,050 | \$5,026 | \$5,003 |
| 207 |  |  |  |  |  |  |  |  |  |  |
| 208 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 209 | \$154 | \$152 | \$150 | \$148 | \$147 | \$145 | \$143 | \$142 | \$141 | \$139 |
| 210 | \$173 | \$171 | \$169 | \$167 | \$166 | \$164 | \$163 | \$161 | \$160 | \$159 |
| 211 | \$214 | \$213 | \$211 | \$210 | \$209 | \$208 | \$207 | \$205 | \$204 | \$204 |
| 212 | \$156 | \$154 | \$152 | \$150 | \$148 | \$147 | \$145 | \$144 | \$142 | \$141 |
| 213 | \$175 | \$173 | \$171 | \$169 | \$168 | \$166 | \$165 | \$163 | \$162 | \$161 |
| 214 | \$217 | \$215 | \$214 | \$213 | \$211 | \$210 | \$209 | \$208 | \$207 | \$206 |
| 215 | \$162 | \$160 | \$158 | \$156 | \$154 | \$153 | \$151 | \$149 | \$148 | \$147 |
| 216 | \$182 | \$180 | \$178 | \$176 | \$174 | \$173 | \$171 | \$170 | \$168 | \$167 |
| 217 | \$226 | \$224 | \$222 | \$221 | \$220 | \$218 | \$217 | \$216 | \$215 | \$214 |
| 218 | \$169 | \$166 | \$164 | \$162 | \$160 | \$158 | \$157 | \$155 | \$154 | \$152 |
| 219 | \$189 | \$187 | \$185 | \$183 | \$181 | \$179 | \$178 | \$176 | \$175 | \$174 |
| 220 | \$234 | \$233 | \$231 | \$230 | \$228 | \$227 | \$226 | \$224 | \$223 | \$222 |
| 221 | \$177 | \$174 | \$172 | \$170 | \$168 | \$166 | \$164 | \$163 | \$161 | \$160 |
| 222 | \$198 | \$196 | \$194 | \$192 | \$190 | \$188 | \$187 | \$185 | \$183 | \$182 |
| 223 | \$246 | \$244 | \$242 | \$241 | \$239 | \$238 | \$237 | \$236 | \$234 | \$233 |
| 224 | \$176 | \$173 | \$171 | \$169 | \$167 | \$165 | \$163 | \$162 | \$160 | \$159 |
| 225 | \$197 | \$195 | \$193 | \$191 | \$189 | \$187 | \$185 | \$184 | \$182 | \$181 |
| 226 | \$244 | \$242 | \$241 | \$239 | \$238 | \$236 | \$235 | \$234 | \$233 | \$232 |
| 227 | \$177 | \$175 | \$173 | \$170 | \$168 | \$166 | \$165 | \$163 | \$161 | \$160 |
| 228 | \$199 | \$196 | \$194 | \$192 | \$190 | \$189 | \$187 | \$185 | \$184 | \$182 |
| 229 | \$246 | \$244 | \$243 | \$241 | \$240 | \$238 | \$237 | \$236 | \$235 | \$234 |
| 230 | \$223 | \$220 | \$218 | \$215 | \$213 | \$210 | \$208 | \$206 | \$204 | \$203 |
| 231 | \$249 | \$247 | \$244 | \$242 | \$239 | \$237 | \$235 | \$233 | \$232 | \$230 |
| 232 | \$304 | \$302 | \$300 | \$298 | \$296 | \$294 | \$293 | \$291 | \$290 | \$289 |
| 233 | \$228 | \$224 | \$222 | \$219 | \$217 | \$214 | \$212 | \$210 | \$208 | \$206 |
| 234 | \$254 | \$251 | \$249 | \$246 | \$244 | \$242 | \$240 | \$238 | \$236 | \$234 |
| 235 | \$309 | \$307 | \$305 | \$303 | \$301 | \$300 | \$298 | \$297 | \$295 | \$294 |
| 236 | \$233 | \$229 | \$227 | \$224 | \$221 | \$219 | \$217 | \$215 | \$213 | \$211 |
| 237 | \$260 | \$257 | \$254 | \$251 | \$249 | \$247 | \$245 | \$243 | \$241 | \$239 |
| 238 | \$316 | \$314 | \$312 | \$310 | \$308 | \$306 | \$305 | \$303 | \$302 | \$300 |
| 239 | \$249 | \$246 | \$243 | \$240 | \$237 | \$235 | \$232 | \$230 | \$228 | \$226 |
| 240 | \$278 | \$275 | \$272 | \$269 | \$267 | \$264 | \$262 | \$260 | \$258 | \$256 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 241 | \$338 | \$336 | \$334 | \$332 | \$330 | \$328 | \$326 | \$325 | \$323 | \$321 |
| 242 | \$260 | \$256 | \$253 | \$250 | \$247 | \$245 | \$242 | \$240 | \$237 | \$235 |
| 243 | \$290 | \$287 | \$284 | \$281 | \$278 | \$276 | \$273 | \$271 | \$269 | \$267 |
| 244 | \$353 | \$350 | \$348 | \$346 | \$344 | \$342 | \$340 | \$338 | \$337 | \$335 |
| 245 | \$267 | \$263 | \$260 | \$257 | \$254 | \$251 | \$249 | \$246 | \$244 | \$242 |
| 246 | \$298 | \$294 | \$291 | \$288 | \$286 | \$283 | \$281 | \$278 | \$276 | \$274 |
| 247 | \$362 | \$360 | \$357 | \$355 | \$353 | \$351 | \$349 | \$347 | \$346 | \$344 |
| 248 | \$270 | \$266 | \$263 | \$260 | \$257 | \$254 | \$251 | \$249 | \$247 | \$244 |
| 249 | \$301 | \$298 | \$295 | \$292 | \$289 | \$286 | \$284 | \$282 | \$279 | \$277 |
| 250 | \$367 | \$364 | \$362 |  | \$357 | \$355 | \$353 | \$351 | \$350 | \$348 |
| 251 |  |  |  | \$359 |  |  |  |  |  |  |
| 252 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 253 | \$1,512 | \$1,491 | \$1,472 | \$1,453 | \$1,436 | \$1,420 | \$1,405 | \$1,391 | \$1,377 | \$1,364 |
| 254 | \$1,695 | \$1,675 | \$1,657 | \$1,640 | \$1,624 | \$1,609 | \$1,594 | \$1,581 | \$1,568 | \$1,556 |
| 255 | \$2,100 | \$2,085 | \$2,071 | \$2,058 | \$2,046 | \$2,034 | \$2,023 | \$2,013 | \$2,003 | \$1,994 |
| 256 | \$1,517 | \$1,496 | \$1,476 | \$1,458 | \$1,441 | \$1,425 | \$1,409 | \$1,395 | \$1,382 | \$1,369 |
| 257 | \$1,701 | \$1,681 | \$1,662 | \$1,645 | \$1,629 | \$1,614 | \$1,599 | \$1,586 | \$1,573 | \$1,561 |
| 258 | \$2,107 | \$2,092 | \$2,078 | \$2,064 | \$2,052 | \$2,041 | \$2,030 | \$2,019 | \$2,010 | \$2,000 |
| 259 | \$1,596 | \$1,574 | \$1,553 | \$1,534 | \$1,516 | \$1,499 | \$1,483 | \$1,468 | \$1,453 | \$1,440 |
| 260 | \$1,789 | \$1,768 | \$1,749 | \$1,730 | \$1,713 | \$1,697 | \$1,682 | \$1,668 | \$1,655 | \$1,642 |
| 261 | \$2,217 | \$2,200 | \$2,186 | \$2,172 | \$2,159 | \$2,147 | \$2,135 | \$2,124 | \$2,114 | \$2,104 |
| 262 | \$1,666 | \$1,643 | \$1,622 | \$1,601 | \$1,583 | \$1,565 | \$1,548 | \$1,533 | \$1,518 | \$1,503 |
| 263 | \$1,868 | \$1,846 | \$1,826 | \$1,807 | \$1,789 | \$1,773 | \$1,757 | \$1,742 | \$1,728 | \$1,715 |
| 264 | \$2,314 | \$2,298 | \$2,282 | \$2,268 | \$2,254 | \$2,242 | \$2,230 | \$2,218 | \$2,208 | \$2,197 |
| 265 | \$1,696 | \$1,672 | \$1,650 | \$1,630 | \$1,611 | \$1,593 | \$1,576 | \$1,560 | \$1,544 | \$1,530 |
| 266 | \$1,901 | \$1,879 | \$1,858 | \$1,839 | \$1,821 | \$1,804 | \$1,788 | \$1,773 | \$1,758 | \$1,745 |
| 267 | \$2,355 | \$2,338 | \$2,322 | \$2,308 | \$2,294 | \$2,281 | \$2,269 | \$2,257 | \$2,247 | \$2,236 |
| 268 | \$1,712 | \$1,688 | \$1,665 | \$1,645 | \$1,625 | \$1,607 | \$1,590 | \$1,574 | \$1,559 | \$1,544 |
| 269 | \$1,919 | \$1,896 | \$1,875 | \$1,856 | \$1,838 | \$1,820 | \$1,804 | \$1,789 | \$1,775 | \$1,761 |
| 270 | \$2,377 | \$2,360 | \$2,344 | \$2,329 | \$2,315 | \$2,302 | \$2,290 | \$2,278 | \$2,267 | \$2,257 |
| 271 | \$1,868 | \$1,842 | \$1,818 | \$1,795 | \$1,774 | \$1,754 | \$1,735 | \$1,718 | \$1,701 | \$1,685 |
| 272 | \$2,094 | \$2,069 | \$2,046 | \$2,025 | \$2,005 | \$1,987 | \$1,969 | \$1,953 | \$1,937 | \$1,922 |
| 273 | \$2,594 | \$2,575 | \$2,558 | \$2,542 | \$2,527 | \$2,513 | \$2,499 | \$2,486 | \$2,474 | \$2,463 |
| 274 | \$2,331 | \$2,300 | \$2,271 | \$2,244 | \$2,219 | \$2,195 | \$2,173 | \$2,152 | \$2,132 | \$2,113 |
| 275 | \$2,602 | \$2,573 | \$2,546 | \$2,520 | \$2,497 | \$2,475 | \$2,454 | \$2,434 | \$2,415 | \$2,398 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 276 | \$3,169 | \$3,146 | \$3,125 | \$3,105 | \$3,087 | \$3,070 | \$3,053 | \$3,038 | \$3,023 | \$3,010 |
| 277 | \$2,340 | \$2,308 | \$2,279 | \$2,253 | \$2,227 | \$2,204 | \$2,181 | \$2,160 | \$2,140 | \$2,121 |
| 278 | \$2,612 | \$2,582 | \$2,555 | \$2,530 | \$2,506 | \$2,484 | \$2,463 | \$2,443 | \$2,425 | \$2,407 |
| 279 | \$3,181 | \$3,158 | \$3,137 | \$3,117 | \$3,098 | \$3,081 | \$3,065 | \$3,049 | \$3,035 | \$3,021 |
| 280 | \$2,404 | \$2,372 | \$2,342 | \$2,314 | \$2,289 | \$2,264 | \$2,241 | \$2,220 | \$2,199 | \$2,180 |
| 281 | \$2,684 | \$2,653 | \$2,626 | \$2,600 | \$2,575 | \$2,552 | \$2,531 | \$2,511 | \$2,491 | \$2,473 |
| 282 | \$3,268 | \$3,245 | \$3,223 | \$3,203 | \$3,184 | \$3,166 | \$3,149 | \$3,133 | \$3,118 | \$3,104 |
| 283 | \$2,492 | \$2,459 | \$2,428 | \$2,399 | \$2,372 | \$2,347 | \$2,323 | \$2,301 | \$2,279 | \$2,259 |
| 284 | \$2,782 | \$2,750 | \$2,722 | \$2,695 | \$2,669 | \$2,646 | \$2,623 | \$2,602 | \$2,582 | \$2,563 |
| 285 | \$3,387 | \$3,363 | \$3,341 | \$3,320 | \$3,300 | \$3,282 | \$3,264 | \$3,248 | \$3,232 | \$3,217 |
| 286 | \$2,518 | \$2,485 | \$2,454 | \$2,425 | \$2,398 | \$2,372 | \$2,348 | \$2,325 | \$2,304 | \$2,283 |
| 287 | \$2,811 | \$2,780 | \$2,751 | \$2,723 | \$2,698 | \$2,674 | \$2,651 | \$2,630 | \$2,610 | \$2,591 |
| 288 | \$3,424 | \$3,399 | \$3,376 | \$3,355 | \$3,335 | \$3,317 | \$3,299 | \$3,283 | \$3,267 | \$3,252 |
| 289 | \$2,521 | \$2,488 | \$2,456 | \$2,427 | \$2,400 | \$2,375 | \$2,351 | \$2,328 | \$2,306 | \$2,286 |
| 290 | \$2,815 | \$2,783 | \$2,754 | \$2,726 | \$2,701 | \$2,677 | \$2,654 | \$2,633 | \$2,613 | \$2,593 |
| 291 | \$3,427 | \$3,403 | \$3,380 | \$3,359 | \$3,339 | \$3,320 | \$3,303 | \$3,286 | \$3,270 | \$3,255 |
| 292 | \$2,770 | \$2,733 | \$2,698 | \$2,667 | \$2,637 | \$2,609 | \$2,582 | \$2,557 | \$2,534 | \$2,511 |
| 293 | \$3,092 | \$3,057 | \$3,025 | \$2,995 | \$2,967 | \$2,941 | \$2,916 | \$2,892 | \$2,870 | \$2,849 |
| 294 | \$3,765 | \$3,738 | \$3,713 | \$3,690 | \$3,668 | \$3,648 | \$3,628 | \$3,610 | \$3,593 | \$3,576 |
| 295 |  |  |  |  |  |  |  |  |  |  |
| 296 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 297 | \$74 | \$72 | \$71 | \$70 | \$69 | \$68 | \$67 | \$66 | \$65 | \$64 |
| 298 | \$82 | \$81 | \$80 | \$79 | \$78 | \$77 | \$76 | \$75 | \$74 | \$74 |
| 299 | \$99 | \$98 | \$98 | \$97 | \$96 | \$96 | \$95 | \$95 | \$94 | \$94 |
| 300 | \$75 | \$74 | \$73 | \$72 | \$70 | \$69 | \$68 | \$68 | \$67 | \$66 |
| 301 | \$84 | \$82 | \$81 | \$80 | \$79 | \$78 | \$78 | \$77 | \$76 | \$75 |
| 302 | \$101 | \$100 | \$100 | \$99 | \$98 | \$98 | \$97 | \$97 | \$96 | \$96 |
| 303 | \$77 | \$75 | \$74 | \$73 | \$72 | \$71 | \$70 | \$69 | \$68 | \$67 |
| 304 | \$85 | \$84 | \$83 | \$82 | \$81 | \$80 | \$79 | \$78 | \$77 | \$77 |
| 305 | \$103 | \$102 | \$101 | \$101 | \$100 | \$99 | \$99 | \$98 | \$98 | \$97 |
| 306 | \$77 | \$76 | \$75 | \$74 | \$72 | \$71 | \$70 | \$69 | \$69 | \$68 |
| 307 | \$86 | \$85 | \$84 | \$82 | \$81 | \$81 | \$80 | \$79 | \$78 | \$77 |
| 308 | \$104 | \$103 | \$102 | \$102 | \$101 | \$100 | \$100 | \$99 | \$99 | \$98 |
| 309 | \$79 | \$78 | \$77 | \$76 | \$74 | \$73 | \$72 | \$71 | \$70 | \$70 |
| 310 | \$88 | \$87 | \$86 | \$85 | \$84 | \$83 | \$82 | \$81 | \$80 | \$79 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 311 | \$107 | \$106 | \$105 | \$104 | \$104 | \$103 | \$103 | \$102 | \$101 | \$101 |
| 312 | \$78 | \$77 | \$76 | \$75 | \$73 | \$72 | \$71 | \$70 | \$69 | \$69 |
| 313 | \$87 | \$86 | \$85 | \$84 | \$83 | \$82 | \$81 | \$80 | \$79 | \$78 |
| 314 | \$105 | \$104 | \$104 | \$103 | \$102 | \$102 | \$101 | \$101 | \$100 | \$99 |
| 315 | \$75 | \$74 | \$72 | \$71 | \$70 | \$69 | \$68 | \$67 | \$66 | \$65 |
| 316 | \$83 | \$82 | \$81 | \$80 | \$79 | \$78 | \$77 | \$76 | \$76 | \$75 |
| 317 | \$101 | \$100 | \$99 | \$98 | \$98 | \$97 | \$97 | \$96 | \$96 | \$95 |
| 318 | \$55 | \$54 | \$53 | \$53 | \$52 | \$51 | \$51 | \$50 | \$49 | \$49 |
| 319 | \$61 | \$60 | \$60 | \$59 | \$58 | \$58 | \$57 | \$57 | \$56 | \$56 |
| 320 | \$74 | \$73 | \$73 | \$72 | \$72 | \$72 | \$71 | \$71 | \$71 | \$70 |
| 321 | \$56 | \$55 | \$54 | \$53 | \$53 | \$52 | \$51 | \$50 | \$50 | \$49 |
| 322 | \$62 | \$61 | \$60 | \$60 | \$59 | \$58 | \$58 | \$57 | \$57 | \$56 |
| 323 | \$75 | \$74 | \$74 | \$73 | \$73 | \$72 | \$72 | \$72 | \$71 | \$71 |
| 324 | \$58 | \$57 | \$56 | \$55 | \$55 | \$54 | \$53 | \$53 | \$52 | \$51 |
| 325 | \$64 | \$64 | \$63 | \$62 | \$61 | \$61 | \$60 | \$60 | \$59 | \$58 |
| 326 | \$78 | \$77 | \$77 | \$76 | \$76 | \$75 | \$75 | \$75 | \$74 | \$74 |
| 327 | \$63 | \$62 | \$61 | \$60 | \$59 | \$58 | \$58 | \$57 | \$56 | \$56 |
| 328 | \$70 | \$69 | \$68 | \$67 | \$66 | \$66 | \$65 | \$64 | \$64 | \$63 |
| 329 | \$84 | \$84 | \$83 | \$83 | \$82 | \$82 | \$81 | \$81 | \$80 | \$80 |
| 330 | \$64 | \$63 | \$62 | \$61 | \$60 | \$59 | \$58 | \$58 | \$57 | \$56 |
| 331 | \$74 | \$73 | \$72 | \$71 | \$71 | \$70 | \$69 | \$69 | \$68 | \$67 |
| 332 | \$89 | \$89 | \$88 | \$88 | \$87 | \$87 | \$86 | \$86 | \$86 | \$85 |
| 333 | \$69 | \$67 | \$66 | \$65 | \$64 | \$64 | \$63 | \$62 | \$61 | \$61 |
| 334 | \$76 | \$75 | \$74 | \$73 | \$72 | \$72 | \$71 | \$70 | \$70 | \$69 |
| 335 | \$92 | \$91 | \$91 | \$90 | \$89 | \$89 | \$89 | \$88 | \$88 | \$87 |
| 336 | \$62 | \$61 | \$60 | \$59 | \$58 | \$57 | \$57 | \$56 | \$55 | \$55 |
| 337 | \$69 | \$68 | \$67 | \$66 | \$65 | \$65 | \$64 | \$63 | \$63 | \$62 |
| 338 | \$83 | \$82 | \$82 | \$81 | \$81 | \$80 | \$80 | \$80 | \$79 | \$79 |
| 339 |  |  |  |  |  |  |  |  |  |  |
| 340 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 341 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 342 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 343 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 344 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 345 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 381 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 382 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 383 |  |  |  |  |  |  |  |  |  |  |
| 384 |  |  |  |  |  |  |  |  |  |  |
| 385 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 386 | \$551 | \$543 | \$536 | \$530 | \$523 | \$518 | \$512 | \$507 | \$502 | \$497 |
| 387 | \$618 | \$611 | \$604 | \$598 | \$592 | \$586 | \$581 | \$576 | \$572 | \$567 |
| 388 | \$766 | \$760 | \$755 | \$750 | \$746 | \$741 | \$737 | \$734 | \$730 | \$727 |
| 389 | \$571 | \$563 | \$556 | \$549 | \$542 | \$536 | \$531 | \$525 | \$520 | \$515 |
| 390 | \$640 | \$633 | \$626 | \$619 | \$613 | \$607 | \$602 | \$597 | \$592 | \$587 |
| 391 | \$793 | \$787 | \$782 | \$777 | \$772 | \$768 | \$764 | \$760 | \$756 | \$753 |
| 392 | \$575 | \$567 | \$560 | \$553 | \$546 | \$540 | \$535 | \$529 | \$524 | \$519 |
| 393 | \$645 | \$637 | \$630 | \$624 | \$618 | \$612 | \$607 | \$601 | \$597 | \$592 |
| 394 | \$799 | \$793 | \$788 | \$783 | \$778 | \$774 | \$770 | \$766 | \$762 | \$759 |
| 395 | \$588 | \$580 | \$572 | \$565 | \$559 | \$552 | \$546 | \$541 | \$536 | \$531 |
| 396 | \$659 | \$652 | \$644 | \$638 | \$632 | \$626 | \$620 | \$615 | \$610 | \$605 |
| 397 | \$817 | \$811 | \$806 | \$800 | \$796 | \$791 | \$787 | \$783 | \$779 | \$776 |
| 398 | \$670 | \$661 | \$652 | \$644 | \$636 | \$629 | \$623 | \$616 | \$610 | \$604 |
| 399 | \$751 | \$742 | \$734 | \$726 | \$719 | \$713 | \$706 | \$700 | \$695 | \$689 |
| 400 | \$931 | \$924 | \$918 | \$912 | \$906 | \$901 | \$896 | \$892 | \$888 | \$883 |
| 401 | \$638 | \$629 | \$620 | \$613 | \$605 | \$599 | \$592 | \$586 | \$581 | \$575 |
| 402 | \$715 | \$706 | \$699 | \$691 | \$684 | \$678 | \$672 | \$666 | \$661 | \$656 |
| 403 | \$885 | \$879 | \$873 | \$868 | \$862 | \$858 | \$853 | \$849 | \$845 | \$841 |
| 404 | \$502 | \$495 | \$489 | \$483 | \$477 | \$472 | \$467 | \$462 | \$457 | \$453 |
| 405 | \$563 | \$557 | \$550 | \$545 | \$539 | \$534 | \$530 | \$525 | \$521 | \$517 |
| 406 | \$698 | \$693 | \$688 | \$684 | \$680 | \$676 | \$672 | \$669 | \$665 | \$662 |
| 407 | \$657 | \$648 | \$640 | \$632 | \$625 | \$619 | \$612 | \$606 | \$601 | \$596 |
| 408 | \$733 | \$725 | \$717 | \$710 | \$704 | \$697 | \$692 | \$686 | \$681 | \$676 |
| 409 | \$893 | \$887 | \$881 | \$875 | \$870 | \$865 | \$860 | \$856 | \$852 | \$848 |
| 410 | \$702 | \$693 | \$684 | \$676 | \$669 | \$661 | \$655 | \$648 | \$642 | \$637 |
| 411 | \$784 | \$775 | \$767 | \$759 | \$752 | \$746 | \$739 | \$733 | \$728 | \$722 |
| 412 | \$955 | \$948 | \$941 | \$936 | \$930 | \$925 | \$920 | \$915 | \$911 | \$907 |
| 413 | \$705 | \$695 | \$687 | \$679 | \$671 | \$664 | \$657 | \$651 | \$645 | \$639 |
| 414 | \$787 | \$778 | \$770 | \$762 | \$755 | \$748 | \$742 | \$736 | \$730 | \$725 |
| 415 | \$958 | \$951 | \$945 | \$939 | \$934 | \$928 | \$923 | \$919 | \$914 | \$910 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 416 | \$837 | \$826 | \$815 | \$806 | \$797 | \$788 | \$780 | \$773 | \$765 | \$759 |
| 417 | \$934 | \$924 | \$914 | \$905 | \$896 | \$888 | \$881 | \$874 | \$867 | \$861 |
| 418 | \$1,137 | \$1,129 | \$1,122 | \$1,115 | \$1,108 | \$1,102 | \$1,096 | \$1,091 | \$1,085 | \$1,080 |
| 419 | \$952 | \$939 | \$928 | \$917 | \$906 | \$897 | \$888 | \$879 | \$871 | \$863 |
| 420 | \$1,063 | \$1,051 | \$1,040 | \$1,030 | \$1,020 | \$1,011 | \$1,002 | \$994 | \$987 | \$979 |
| 421 | \$1,294 | \$1,285 | \$1,277 | \$1,269 | \$1,261 | \$1,254 | \$1,247 | \$1,241 | \$1,235 | \$1,229 |
| 422 | \$1,042 | \$1,028 | \$1,015 | \$1,003 | \$992 | \$982 | \$972 | \$962 | \$953 | \$945 |
| 423 | \$1,163 | \$1,150 | \$1,138 | \$1,127 | \$1,116 | \$1,107 | \$1,097 | \$1,088 | \$1,080 | \$1,072 |
| 424 | \$1,417 | \$1,407 | \$1,397 | \$1,388 | \$1,380 | \$1,373 | \$1,365 | \$1,358 | \$1,352 | \$1,346 |
| 425 | \$835 | \$824 | \$814 | \$804 | \$795 | \$787 | \$779 | \$771 | \$764 | \$757 |
| 426 | \$932 | \$922 | \$912 | \$903 | \$895 | \$887 | \$879 | \$872 | \$866 | \$859 |
| 427 | \$1,136 | \$1,127 | \$1,120 | \$1,113 | \$1,106 | \$1,100 | \$1,094 | \$1,089 | \$1,084 | \$1,079 |
| 428 |  |  |  |  |  |  |  |  |  |  |
| 429 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 430 | \$551 | \$543 | \$536 | \$530 | \$523 | \$518 | \$512 | \$507 | \$502 | \$497 |
| 431 | \$618 | \$611 | \$604 | \$598 | \$592 | \$586 | \$581 | \$576 | \$572 | \$567 |
| 432 | \$766 | \$760 | \$755 | \$750 | \$746 | \$741 | \$737 | \$734 | \$730 | \$727 |
| 433 | \$571 | \$563 | \$556 | \$549 | \$542 | \$536 | \$531 | \$525 | \$520 | \$515 |
| 434 | \$640 | \$633 | \$626 | \$619 | \$613 | \$607 | \$602 | \$597 | \$592 | \$587 |
| 435 | \$793 | \$787 | \$782 | \$777 | \$772 | \$768 | \$764 | \$760 | \$756 | \$753 |
| 436 | \$575 | \$567 | \$560 | \$553 | \$546 | \$540 | \$535 | \$529 | \$524 | \$519 |
| 437 | \$645 | \$637 | \$630 | \$624 | \$618 | \$612 | \$607 | \$601 | \$597 | \$592 |
| 438 | \$799 | \$793 | \$788 | \$783 | \$778 | \$774 | \$770 | \$766 | \$762 | \$759 |
| 439 | \$588 | \$580 | \$572 | \$565 | \$559 | \$552 | \$546 | \$541 | \$536 | \$531 |
| 440 | \$659 | \$652 | \$644 | \$638 | \$632 | \$626 | \$620 | \$615 | \$610 | \$605 |
| 441 | \$817 | \$811 | \$806 | \$800 | \$796 | \$791 | \$787 | \$783 | \$779 | \$776 |
| 442 | \$670 | \$661 | \$652 | \$644 | \$636 | \$629 | \$623 | \$616 | \$610 | \$604 |
| 443 | \$751 | \$742 | \$734 | \$726 | \$719 | \$713 | \$706 | \$700 | \$695 | \$689 |
| 444 | \$931 | \$924 | \$918 | \$912 | \$906 | \$901 | \$896 | \$892 | \$888 | \$883 |
| 445 | \$638 | \$629 | \$620 | \$613 | \$605 | \$599 | \$592 | \$586 | \$581 | \$575 |
| 446 | \$715 | \$706 | \$699 | \$691 | \$684 | \$678 | \$672 | \$666 | \$661 | \$656 |
| 447 | \$885 | \$879 | \$873 | \$868 | \$862 | \$858 | \$853 | \$849 | \$845 | \$841 |
| 448 | \$502 | \$495 | \$489 | \$483 | \$477 | \$472 | \$467 | \$462 | \$457 | \$453 |
| 449 | \$563 | \$557 | \$550 | \$545 | \$539 | \$534 | \$530 | \$525 | \$521 | \$517 |
| 450 | \$698 | \$693 | \$688 | \$684 | \$680 | \$676 | \$672 | \$669 | \$665 | \$662 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 451 | \$657 | \$648 | \$640 | \$632 | \$625 | \$619 | \$612 | \$606 | \$601 | \$596 |
| 452 | \$733 | \$725 | \$717 | \$710 | \$704 | \$697 | \$692 | \$686 | \$681 | \$676 |
| 453 | \$893 | \$887 | \$881 | \$875 | \$870 | \$865 | \$860 | \$856 | \$852 | \$848 |
| 454 | \$702 | \$693 | \$684 | \$676 | \$669 | \$661 | \$655 | \$648 | \$642 | \$637 |
| 455 | \$784 | \$775 | \$767 | \$759 | \$752 | \$746 | \$739 | \$733 | \$728 | \$722 |
| 456 | \$955 | \$948 | \$941 | \$936 | \$930 | \$925 | \$920 | \$915 | \$911 | \$907 |
| 457 | \$705 | \$695 | \$687 | \$679 | \$671 | \$664 | \$657 | \$651 | \$645 | \$639 |
| 458 | \$787 | \$778 | \$770 | \$762 | \$755 | \$748 | \$742 | \$736 | \$730 | \$725 |
| 459 | \$958 | \$951 | \$945 | \$939 | \$934 | \$928 | \$923 | \$919 | \$914 | \$910 |
| 460 | \$837 | \$826 | \$815 | \$806 | \$797 | \$788 | \$780 | \$773 | \$765 | \$759 |
| 461 | \$934 | \$924 | \$914 | \$905 | \$896 | \$888 | \$881 | \$874 | \$867 | \$861 |
| 462 | \$1,137 | \$1,129 | \$1,122 | \$1,115 | \$1,108 | \$1,102 | \$1,096 | \$1,091 | \$1,085 | \$1,080 |
| 463 | \$952 | \$939 | \$928 | \$917 | \$906 | \$897 | \$888 | \$879 | \$871 | \$863 |
| 464 | \$1,063 | \$1,051 | \$1,040 | \$1,030 | \$1,020 | \$1,011 | \$1,002 | \$994 | \$987 | \$979 |
| 465 | \$1,294 | \$1,285 | \$1,277 | \$1,269 | \$1,261 | \$1,254 | \$1,247 | \$1,241 | \$1,235 | \$1,229 |
| 466 | \$1,042 | \$1,028 | \$1,015 | \$1,003 | \$992 | \$982 | \$972 | \$962 | \$953 | \$945 |
| 467 | \$1,163 | \$1,150 | \$1,138 | \$1,127 | \$1,116 | \$1,107 | \$1,097 | \$1,088 | \$1,080 | \$1,072 |
| 468 | \$1,417 | \$1,407 | \$1,397 | \$1,388 | \$1,380 | \$1,373 | \$1,365 | \$1,358 | \$1,352 | \$1,346 |
| 469 | \$835 | \$824 | \$814 | \$804 | \$795 | \$787 | \$779 | \$771 | \$764 | \$757 |
| 470 | \$932 | \$922 | \$912 | \$903 | \$895 | \$887 | \$879 | \$872 | \$866 | \$859 |
| 471 | \$1,136 | \$1,127 | \$1,120 | \$1,113 | \$1,106 | \$1,100 | \$1,094 | \$1,089 | \$1,084 | \$1,079 |
| 472 |  |  |  |  |  |  |  |  |  |  |
| 473 |  |  |  |  |  |  |  |  |  |  |
| 474 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 475 | \$40 | \$39 | \$39 | \$38 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 |
| 476 | \$46 | \$46 | \$45 | \$44 | \$44 | \$43 | \$42 | \$42 | \$41 | \$41 |
| 477 | \$62 | \$61 | \$61 | \$60 | \$60 | \$59 | \$59 | \$59 | \$58 | \$58 |
| 478 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 | \$37 | \$37 | \$36 | \$36 |
| 479 | \$48 | \$48 | \$47 | \$46 | \$45 | \$45 | \$44 | \$44 | \$43 | \$43 |
| 480 | \$65 | \$64 | \$63 | \$63 | \$62 | \$62 | \$61 | \$61 | \$61 | \$60 |
| 481 | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$38 | \$37 | \$37 |
| 482 | \$49 | \$49 | \$48 | \$47 | \$46 | \$46 | \$45 | \$45 | \$44 | \$44 |
| 483 | \$66 | \$66 | \$65 | \$64 | \$64 | \$63 | \$63 | \$62 | \$62 | \$62 |
| 484 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$38 |
| 485 | \$51 | \$50 | \$49 | \$49 | \$48 | \$47 | \$47 | \$46 | \$46 | \$45 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 486 | \$68 | \$68 | \$67 | \$66 | \$66 | \$65 | \$65 | \$64 | \$64 | \$64 |
| 487 | \$47 | \$46 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$41 | \$40 |
| 488 | \$54 | \$53 | \$52 | \$51 | \$51 | \$50 | \$49 | \$49 | \$48 | \$48 |
| 489 | \$72 | \$72 | \$71 | \$70 | \$70 | \$69 | \$69 | \$68 | \$68 | \$67 |
| 490 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$47 | \$46 | \$45 |
| 491 | \$62 | \$61 | \$60 | \$59 | \$58 | \$57 | \$56 | \$55 | \$55 | \$54 |
| 492 | \$83 | \$82 | \$81 | \$81 | \$80 | \$79 | \$79 | \$78 | \$78 | \$77 |
| 493 | \$66 | \$65 | \$63 | \$62 | \$61 | \$60 | \$59 | \$58 | \$57 | \$56 |
| 494 | \$77 | \$76 | \$75 | \$73 | \$72 | \$71 | \$70 | \$69 | \$68 | \$68 |
| 495 | \$105 | \$104 | \$103 | \$102 | \$102 | \$101 | \$100 | \$99 | \$98 | \$98 |
| 496 | \$43 | \$42 | \$42 | \$41 | \$41 | \$40 | \$39 | \$39 | \$38 | \$38 |
| 497 | \$49 | \$49 | \$48 | \$47 | \$47 | \$46 | \$46 | \$45 | \$45 | \$44 |
| 498 | \$64 | \$63 | \$62 | \$62 | \$62 | \$61 | \$61 | \$60 | \$60 | \$60 |
| 499 | \$45 | \$44 | \$43 | \$43 | \$42 | \$42 | \$41 | \$40 | \$40 | \$39 |
| 500 | \$51 | \$51 | \$50 | \$49 | \$49 | \$48 | \$48 | \$47 | \$47 | \$46 |
| 501 | \$66 | \$66 | \$65 | \$65 | \$64 | \$64 | \$63 | \$63 | \$62 | \$62 |
| 502 | \$47 | \$46 | \$45 | \$45 | \$44 | \$43 | \$43 | \$42 | \$42 | \$41 |
| 503 | \$54 | \$53 | \$52 | \$52 | \$51 | \$50 | \$50 | \$49 | \$49 | \$48 |
| 504 | \$69 | \$69 | \$68 | \$67 | \$67 | \$67 | \$66 | \$66 | \$65 | \$65 |
| 505 | \$51 | \$50 | \$49 | \$49 | \$48 | \$47 | \$46 | \$46 | \$45 | \$45 |
| 506 | \$58 | \$58 | \$57 | \$56 | \$55 | \$55 | \$54 | \$53 | \$53 | \$52 |
| 507 | \$75 | \$75 | \$74 | \$73 | \$73 | \$72 | \$72 | \$71 | \$71 | \$71 |
| 508 | \$56 | \$55 | \$54 | \$53 | \$52 | \$52 | \$51 | \$50 | \$49 | \$49 |
| 509 | \$65 | \$64 | \$63 | \$62 | \$61 | \$61 | \$60 | \$59 | \$59 | \$58 |
| 510 | \$84 | \$83 | \$82 | \$82 | \$81 | \$80 | \$80 | \$79 | \$79 | \$78 |
| 511 | \$71 | \$70 | \$69 | \$68 | \$67 | \$66 | \$65 | \$64 | \$63 | \$62 |
| 512 | \$82 | \$81 | \$80 | \$79 | \$78 | \$77 | \$76 | \$75 | \$74 | \$73 |
| 513 | \$107 | \$106 | \$105 | \$104 | \$103 | \$103 | \$102 | \$101 | \$101 | \$100 |
| 514 | \$84 | \$82 | \$81 | \$79 | \$78 | \$77 | \$76 | \$74 | \$73 | \$72 |
| 515 | \$97 | \$95 | \$94 | \$92 | \$91 | \$90 | \$89 | \$88 | \$87 | \$86 |
| 516 | \$127 | \$126 | \$125 | \$124 | \$123 | \$122 | \$121 | \$120 | \$119 | \$119 |
| 517 |  |  |  |  |  |  |  |  |  |  |
| 518 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 519 <br> 520 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 520 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 521 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 522 | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 523 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 |
| 524 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 |
| 525 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 |
| 526 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 527 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 528 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 529 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 530 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 |
| 531 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 |
| 532 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 |
| 533 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 |
| 534 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 |
| 535 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 |
| 536 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 537 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 |
| 538 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 |
| 539 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 |
| 540 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 |
| 541 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 |
| 542 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 |
| 543 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 544 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 |
| 545 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 |
| 546 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 |
| 547 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 |
| 548 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 |
| 549 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 |
| 550 |  |  |  |  |  |  |  |  |  |  |
| 551 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 552 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 |
| 553 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 |
| 554 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 |
| 555 |  |  |  |  |  |  |  |  |  |  |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 556 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 |
| 557 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 |
| 558 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 |
| 559 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 560 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 561 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 562 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 563 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 564 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 565 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 566 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 567 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 568 |  |  |  |  |  |  |  |  |  |  |
| 569 |  |  |  |  |  |  |  |  |  |  |
| 570 |  |  |  |  |  |  |  |  |  |  |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |  |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 42 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 43 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 44 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 45 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 46 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 47 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 48 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 49 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 51 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 52 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 53 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 54 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 55 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 56 | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% |
| 57 | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% |
| 58 | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% | 68.5\% |
| 59 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 60 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 61 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 62 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 63 | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% |
| 64 | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% |
| 65 | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% | 2.6\% |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66 | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% |
| 67 | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% |
| 68 | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% | 6.6\% |
| 69 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 70 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 71 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 72 |  |  |  |  |  |  |  |  |  |  |
| 73 |  |  |  |  |  |  |  |  |  |  |
| 74 |  |  |  |  |  |  |  |  |  |  |
| 75 |  |  |  |  |  |  |  |  |  |  |
| 76 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 77 | 55\% | 55\% | 56\% | 56\% | 56\% | 56\% | 56\% | 57\% | 57\% | 57\% |
| 78 | 53\% | 53\% | 53\% | 53\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 79 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 49\% |
| 80 | 54\% | 54\% | 54\% | 55\% | 55\% | 55\% | 55\% | 55\% | 56\% | 56\% |
| 81 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% |
| 82 | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% |
| 83 | 54\% | 55\% | 55\% | 55\% | 55\% | 55\% | 56\% | 56\% | 56\% | 56\% |
| 84 | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 85 | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 48\% | 48\% | 48\% |
| 86 | 54\% | 54\% | 55\% | 55\% | 55\% | 55\% | 55\% | 55\% | 56\% | 56\% |
| 87 | 52\% | 52\% | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 88 | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% |
| 89 | 53\% | 54\% | 54\% | 54\% | 54\% | 54\% | 55\% | 55\% | 55\% | 55\% |
| 90 | 51\% | 51\% | 51\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% |
| 91 | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 47\% | 47\% | 47\% | 47\% |
| 92 | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 48\% | 48\% | 48\% | 48\% |
| 93 | 44\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 46\% | 46\% |
| 94 | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% |
| 95 | 37\% | 37\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 39\% | 39\% |
| 96 | 35\% | 35\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% |
| 97 | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 32\% | 32\% | 32\% |
| 98 | 59\% | 59\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 61\% | 61\% |
| 99 | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 59\% | 59\% |
| 100 | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 101 | 58\% | 58\% | 58\% | 58\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 102 | 56\% | 56\% | 56\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 103 | 52\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 104 | 57\% | 57\% | 57\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% |
| 105 | 55\% | 55\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 106 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% |
| 107 | 56\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 58\% | 58\% |
| 108 | 55\% | 55\% | 55\% | 55\% | 55\% | 55\% | 55\% | 55\% | 56\% | 56\% |
| 109 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 110 | 53\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 55\% | 55\% |
| 111 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% |
| 112 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 49\% | 49\% |
| 113 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 45\% | 45\% | 45\% | 45\% |
| 114 | 42\% | 42\% | 42\% | 42\% | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% |
| 115 | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% |
| 116 | 37\% | 37\% | 37\% | 37\% | 37\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 117 | 35\% | 35\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% |
| 118 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 33\% |
| 119 |  |  |  |  |  |  |  |  |  |  |
| 120 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 121 | 4,842 | 4,860 | 4,877 | 4,895 | 4,912 | 4,929 | 4,945 | 4,962 | 4,978 | 4,994 |
| 122 | 4,638 | 4,653 | 4,667 | 4,681 | 4,694 | 4,708 | 4,721 | 4,735 | 4,748 | 4,761 |
| 123 | 4,192 | 4,199 | 4,206 | 4,213 | 4,220 | 4,227 | 4,233 | 4,240 | 4,246 | 4,252 |
| 124 | 4,731 | 4,748 | 4,766 | 4,783 | 4,800 | 4,816 | 4,833 | 4,849 | 4,865 | 4,881 |
| 125 | 4,529 | 4,543 | 4,557 | 4,571 | 4,585 | 4,598 | 4,612 | 4,625 | 4,638 | 4,651 |
| 126 | 4,089 | 4,096 | 4,103 | 4,110 | 4,116 | 4,123 | 4,129 | 4,136 | 4,142 | 4,148 |
| 127 | 4,763 | 4,780 | 4,798 | 4,815 | 4,832 | 4,848 | 4,865 | 4,881 | 4,898 | 4,914 |
| 128 | 4,560 | 4,575 | 4,589 | 4,603 | 4,616 | 4,630 | 4,643 | 4,656 | 4,669 | 4,682 |
| 129 | 4,119 | 4,126 | 4,132 | 4,139 | 4,146 | 4,152 | 4,159 | 4,165 | 4,172 | 4,178 |
| 130 | 4,743 | 4,761 | 4,778 | 4,795 | 4,812 | 4,829 | 4,845 | 4,862 | 4,878 | 4,894 |
| 131 | 4,541 | 4,556 | 4,570 | 4,583 | 4,597 | 4,610 | 4,624 | 4,637 | 4,650 | 4,663 |
| 132 | 4,100 | 4,107 | 4,114 | 4,121 | 4,128 | 4,134 | 4,141 | 4,147 | 4,154 | 4,160 |
| 133 | 4,674 | 4,692 | 4,709 | 4,726 | 4,743 | 4,759 | 4,776 | 4,792 | 4,808 | 4,824 |
| 134 | 4,474 | 4,488 | 4,502 | 4,516 | 4,529 | 4,543 | 4,556 | 4,569 | 4,582 | 4,595 |
| 135 | 4,037 | 4,043 | 4,050 | 4,057 | 4,064 | 4,070 | 4,077 | 4,083 | 4,089 | 4,096 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 136 | 4,080 | 4,096 | 4,113 | 4,129 | 4,145 | 4,161 | 4,176 | 4,192 | 4,207 | 4,222 |
| 137 | 3,892 | 3,905 | 3,918 | 3,931 | 3,944 | 3,957 | 3,970 | 3,982 | 3,994 | 4,007 |
| 138 | 3,485 | 3,491 | 3,498 | 3,504 | 3,511 | 3,517 | 3,523 | 3,529 | 3,535 | 3,541 |
| 139 | 3,259 | 3,274 | 3,289 | 3,304 | 3,319 | 3,334 | 3,348 | 3,363 | 3,377 | 3,391 |
| 140 | 3,088 | 3,101 | 3,113 | 3,125 | 3,137 | 3,149 | 3,160 | 3,172 | 3,183 | 3,195 |
| 141 | 2,723 | 2,729 | 2,735 | 2,741 | 2,747 | 2,753 | 2,758 | 2,764 | 2,770 | 2,776 |
| 142 | 5,195 | 5,209 | 5,224 | 5,238 | 5,251 | 5,265 | 5,279 | 5,292 | 5,306 | 5,319 |
| 143 | 5,040 | 5,052 | 5,063 | 5,074 | 5,085 | 5,097 | 5,108 | 5,119 | 5,129 | 5,140 |
| 144 | 4,710 | 4,716 | 4,721 | 4,727 | 4,733 | 4,738 | 4,744 | 4,749 | 4,754 | 4,760 |
| 145 | 5,080 | 5,094 | 5,108 | 5,122 | 5,136 | 5,149 | 5,163 | 5,176 | 5,190 | 5,203 |
| 146 | 4,926 | 4,937 | 4,948 | 4,960 | 4,971 | 4,982 | 4,993 | 5,004 | 5,014 | 5,025 |
| 147 | 4,598 | 4,604 | 4,609 | 4,615 | 4,621 | 4,626 | 4,632 | 4,637 | 4,642 | 4,648 |
| 148 | 4,998 | 5,012 | 5,026 | 5,040 | 5,054 | 5,067 | 5,081 | 5,094 | 5,108 | 5,121 |
| 149 | 4,845 | 4,856 | 4,867 | 4,879 | 4,890 | 4,901 | 4,912 | 4,922 | 4,933 | 4,944 |
| 150 | 4,519 | 4,525 | 4,530 | 4,536 | 4,541 | 4,547 | 4,552 | 4,558 | 4,563 | 4,568 |
| 151 | 4,937 | 4,951 | 4,965 | 4,979 | 4,992 | 5,006 | 5,019 | 5,033 | 5,046 | 5,060 |
| 152 | 4,784 | 4,795 | 4,807 | 4,818 | 4,829 | 4,840 | 4,851 | 4,862 | 4,872 | 4,883 |
| 153 | 4,460 | 4,465 | 4,471 | 4,477 | 4,482 | 4,488 | 4,493 | 4,498 | 4,504 | 4,509 |
| 154 | 4,679 | 4,693 | 4,706 | 4,720 | 4,733 | 4,747 | 4,760 | 4,774 | 4,787 | 4,800 |
| 155 | 4,528 | 4,540 | 4,551 | 4,562 | 4,573 | 4,583 | 4,594 | 4,605 | 4,615 | 4,626 |
| 156 | 4,210 | 4,215 | 4,221 | 4,226 | 4,232 | 4,237 | 4,243 | 4,248 | 4,253 | 4,258 |
| 157 | 3,826 | 3,840 | 3,853 | 3,866 | 3,879 | 3,892 | 3,905 | 3,918 | 3,930 | 3,943 |
| 158 | 3,684 | 3,695 | 3,705 | 3,716 | 3,726 | 3,737 | 3,747 | 3,757 | 3,768 | 3,778 |
| 159 | 3,385 | 3,390 | 3,395 | 3,401 | 3,406 | 3,411 | 3,416 | 3,421 | 3,426 | 3,431 |
| 160 | 3,229 | 3,242 | 3,254 | 3,267 | 3,280 | 3,292 | 3,305 | 3,318 | 3,330 | 3,342 |
| 161 | 3,092 | 3,102 | 3,112 | 3,123 | 3,133 | 3,143 | 3,153 | 3,163 | 3,173 | 3,183 |
| 162 | 2,806 | 2,811 | 2,816 | 2,821 | 2,827 | 2,832 | 2,837 | 2,842 | 2,847 | 2,852 |
| 163 |  |  |  |  |  |  |  |  |  |  |
| 164 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 165 | \$1,983 | \$1,966 | \$1,949 | \$1,933 | \$1,918 | \$1,903 | \$1,889 | \$1,876 | \$1,863 | \$1,850 |
| 166 | \$2,265 | \$2,249 | \$2,233 | \$2,218 | \$2,204 | \$2,190 | \$2,177 | \$2,164 | \$2,152 | \$2,140 |
| 167 | \$2,912 | \$2,899 | \$2,887 | \$2,876 | \$2,865 | \$2,855 | \$2,844 | \$2,835 | \$2,825 | \$2,816 |
| 168 | \$2,006 | \$1,989 | \$1,972 | \$1,956 | \$1,941 | \$1,926 | \$1,912 | \$1,898 | \$1,885 | \$1,872 |
| 169 | \$2,292 | \$2,275 | \$2,260 | \$2,245 | \$2,230 | \$2,216 | \$2,203 | \$2,190 | \$2,177 | \$2,165 |
| 170 | \$2,946 | \$2,934 | \$2,922 | \$2,910 | \$2,899 | \$2,888 | \$2,878 | \$2,868 | \$2,859 | \$2,849 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 171 | \$2,086 | \$2,068 | \$2,051 | \$2,034 | \$2,018 | \$2,003 | \$1,988 | \$1,974 | \$1,960 | \$1,946 |
| 172 | \$2,383 | \$2,366 | \$2,350 | \$2,334 | \$2,319 | \$2,304 | \$2,290 | \$2,277 | \$2,264 | \$2,251 |
| 173 | \$3,064 | \$3,050 | \$3,038 | \$3,026 | \$3,015 | \$3,004 | \$2,993 | \$2,983 | \$2,973 | \$2,963 |
| 174 | \$2,166 | \$2,148 | \$2,130 | \$2,112 | \$2,096 | \$2,080 | \$2,064 | \$2,049 | \$2,035 | \$2,021 |
| 175 | \$2,475 | \$2,457 | \$2,440 | \$2,424 | \$2,408 | \$2,393 | \$2,378 | \$2,364 | \$2,351 | \$2,338 |
| 176 | \$3,181 | \$3,168 | \$3,155 | \$3,142 | \$3,130 | \$3,119 | \$3,108 | \$3,097 | \$3,087 | \$3,077 |
| 177 | \$2,273 | \$2,254 | \$2,235 | \$2,216 | \$2,199 | \$2,182 | \$2,166 | \$2,150 | \$2,135 | \$2,121 |
| 178 | \$2,597 | \$2,578 | \$2,560 | \$2,543 | \$2,527 | \$2,511 | \$2,496 | \$2,481 | \$2,467 | \$2,453 |
| 179 | \$3,338 | \$3,324 | \$3,310 | \$3,297 | \$3,285 | \$3,273 | \$3,261 | \$3,250 | \$3,239 | \$3,229 |
| 180 | \$2,257 | \$2,238 | \$2,219 | \$2,201 | \$2,183 | \$2,167 | \$2,151 | \$2,135 | \$2,120 | \$2,106 |
| 181 | \$2,578 | \$2,560 | \$2,542 | \$2,525 | \$2,509 | \$2,493 | \$2,478 | \$2,463 | \$2,449 | \$2,436 |
| 182 | \$3,314 | \$3,300 | \$3,287 | \$3,274 | \$3,261 | \$3,249 | \$3,238 | \$3,227 | \$3,216 | \$3,206 |
| 183 | \$2,278 | \$2,258 | \$2,239 | \$2,221 | \$2,203 | \$2,186 | \$2,170 | \$2,154 | \$2,139 | \$2,125 |
| 184 | \$2,602 | \$2,583 | \$2,565 | \$2,548 | \$2,531 | \$2,516 | \$2,500 | \$2,486 | \$2,471 | \$2,458 |
| 185 | \$3,344 | \$3,330 | \$3,316 | \$3,303 | \$3,291 | \$3,279 | \$3,267 | \$3,256 | \$3,245 | \$3,235 |
| 186 | \$2,886 | \$2,863 | \$2,840 | \$2,818 | \$2,797 | \$2,777 | \$2,757 | \$2,738 | \$2,720 | \$2,703 |
| 187 | \$3,280 | \$3,257 | \$3,236 | \$3,215 | \$3,196 | \$3,177 | \$3,158 | \$3,141 | \$3,124 | \$3,107 |
| 188 | \$4,128 | \$4,111 | \$4,094 | \$4,078 | \$4,063 | \$4,048 | \$4,034 | \$4,020 | \$4,007 | \$3,994 |
| 189 | \$2,939 | \$2,915 | \$2,891 | \$2,869 | \$2,848 | \$2,827 | \$2,807 | \$2,788 | \$2,770 | \$2,752 |
| 190 | \$3,339 | \$3,316 | \$3,295 | \$3,274 | \$3,254 | \$3,234 | \$3,216 | \$3,198 | \$3,180 | \$3,164 |
| 191 | \$4,203 | \$4,185 | \$4,168 | \$4,152 | \$4,136 | \$4,121 | \$4,107 | \$4,093 | \$4,079 | \$4,066 |
| 192 | \$3,004 | \$2,979 | \$2,955 | \$2,932 | \$2,910 | \$2,889 | \$2,869 | \$2,850 | \$2,831 | \$2,812 |
| 193 | \$3,413 | \$3,390 | \$3,367 | \$3,346 | \$3,325 | \$3,306 | \$3,287 | \$3,268 | \$3,250 | \$3,233 |
| 194 | \$4,296 | \$4,277 | \$4,260 | \$4,243 | \$4,228 | \$4,212 | \$4,197 | \$4,183 | \$4,169 | \$4,156 |
| 195 | \$3,216 | \$3,189 | \$3,164 | \$3,139 | \$3,116 | \$3,093 | \$3,072 | \$3,051 | \$3,031 | \$3,011 |
| 196 | \$3,654 | \$3,629 | \$3,605 | \$3,582 | \$3,560 | \$3,539 | \$3,519 | \$3,499 | \$3,480 | \$3,462 |
| 197 | \$4,599 | \$4,580 | \$4,561 | \$4,543 | \$4,526 | \$4,510 | \$4,494 | \$4,479 | \$4,464 | \$4,449 |
| 198 | \$3,353 | \$3,325 | \$3,299 | \$3,273 | \$3,249 | \$3,226 | \$3,203 | \$3,181 | \$3,160 | \$3,140 |
| 199 | \$3,810 | \$3,784 | \$3,759 | \$3,735 | \$3,712 | \$3,690 | \$3,669 | \$3,648 | \$3,629 | \$3,609 |
| 200 | \$4,795 | \$4,775 | \$4,756 | \$4,737 | \$4,719 | \$4,702 | \$4,686 | \$4,670 | \$4,654 | \$4,640 |
| 201 | \$3,443 | \$3,414 | \$3,387 | \$3,361 | \$3,336 | \$3,312 | \$3,289 | \$3,266 | \$3,244 | \$3,224 |
| 202 | \$3,912 | \$3,885 | \$3,860 | \$3,835 | \$3,812 | \$3,789 | \$3,767 | \$3,746 | \$3,726 | \$3,706 |
| 203 | \$4,924 | \$4,903 | \$4,883 | \$4,864 | \$4,846 | \$4,828 | \$4,811 | \$4,795 | \$4,779 | \$4,764 |
| 204 | \$3,483 | \$3,454 | \$3,427 | \$3,400 | \$3,375 | \$3,350 | \$3,327 | \$3,304 | \$3,282 | \$3,261 |
| 205 | \$3,957 | \$3,930 | \$3,905 | \$3,880 | \$3,856 | \$3,833 | \$3,811 | \$3,790 | \$3,769 | \$3,749 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 206 | \$4,981 | \$4,960 | \$4,940 | \$4,921 | \$4,902 | \$4,884 | \$4,867 | \$4,851 | \$4,835 | \$4,819 |
| 207 |  |  |  |  |  |  |  |  |  |  |
| 208 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 209 | \$138 | \$137 | \$136 | \$135 | \$133 | \$132 | \$131 | \$131 | \$130 | \$129 |
| 210 | \$158 | \$156 | \$155 | \$154 | \$153 | \$152 | \$151 | \$151 | \$150 | \$149 |
| 211 | \$203 | \$202 | \$201 | \$200 | \$199 | \$199 | \$198 | \$197 | \$197 | \$196 |
| 212 | \$140 | \$138 | \$137 | \$136 | \$135 | \$134 | \$133 | \$132 | \$131 | \$130 |
| 213 | \$159 | \$158 | \$157 | \$156 | \$155 | \$154 | \$153 | \$152 | \$152 | \$151 |
| 214 | \$205 | \$204 | \$203 | \$203 | \$202 | \$201 | \$200 | \$200 | \$199 | \$198 |
| 215 | \$145 | \$144 | \$143 | \$142 | \$140 | \$139 | \$138 | \$137 | \$136 | \$135 |
| 216 | \$166 | \$165 | \$164 | \$162 | \$161 | \$160 | \$159 | \$158 | \$158 | \$157 |
| 217 | \$213 | \$212 | \$211 | \$211 | \$210 | \$209 | \$208 | \$208 | \$207 | \$206 |
| 218 | \$151 | \$149 | \$148 | \$147 | \$146 | \$145 | \$144 | \$143 | \$142 | \$141 |
| 219 | \$172 | \$171 | \$170 | \$169 | \$168 | \$167 | \$166 | \$165 | \$164 | \$163 |
| 220 | \$221 | \$220 | \$220 | \$219 | \$218 | \$217 | \$216 | \$216 | \$215 | \$214 |
| 221 | \$158 | \$157 | \$156 | \$154 | \$153 | \$152 | \$151 | \$150 | \$149 | \$148 |
| 222 | \$181 | \$179 | \$178 | \$177 | \$176 | \$175 | \$174 | \$173 | \$172 | \$171 |
| 223 | \$232 | \$231 | \$230 | \$229 | \$229 | \$228 | \$227 | \$226 | \$225 | \$225 |
| 224 | \$157 | \$156 | \$154 | \$153 | \$152 | \$151 | \$150 | \$149 | \$148 | \$147 |
| 225 | \$179 | \$178 | \$177 | \$176 | \$175 | \$174 | \$172 | \$171 | \$170 | \$170 |
| 226 | \$231 | \$230 | \$229 | \$228 | \$227 | \$226 | \$225 | \$225 | \$224 | \$223 |
| 227 | \$159 | \$157 | \$156 | \$155 | \$153 | \$152 | \$151 | \$150 | \$149 | \$148 |
| 228 | \$181 | \$180 | \$179 | \$177 | \$176 | \$175 | \$174 | \$173 | \$172 | \$171 |
| 229 | \$233 | \$232 | \$231 | \$230 | \$229 | \$228 | \$227 | \$227 | \$226 | \$225 |
| 230 | \$201 | \$199 | \$198 | \$196 | \$195 | \$193 | \$192 | \$191 | \$189 | \$188 |
| 231 | \$228 | \$227 | \$225 | \$224 | \$222 | \$221 | \$220 | \$219 | \$217 | \$216 |
| 232 | \$287 | \$286 | \$285 | \$284 | \$283 | \$282 | \$281 | \$280 | \$279 | \$278 |
| 233 | \$205 | \$203 | \$201 | \$200 | \$198 | \$197 | \$195 | \$194 | \$193 | \$192 |
| 234 | \$232 | \$231 | \$229 | \$228 | \$226 | \$225 | \$224 | \$223 | \$221 | \$220 |
| 235 | \$293 | \$291 | \$290 | \$289 | \$288 | \$287 | \$286 | \$285 | \$284 | \$283 |
| 236 | \$209 | \$207 | \$206 | \$204 | \$203 | \$201 | \$200 | \$198 | \$197 | \$196 |
| 237 | \$238 | \$236 | \$234 | \$233 | \$231 | \$230 | \$229 | \$227 | \$226 | \$225 |
| 238 | \$299 | \$298 | \$296 | \$295 | \$294 | \$293 | \$292 | \$291 | \$290 | \$289 |
| 239 | \$224 | \$222 | \$220 | \$218 | \$217 | \$215 | \$214 | \$212 | \$211 | \$210 |
| 240 | \$254 | \$253 | \$251 | \$249 | \$248 | \$246 | \$245 | \$244 | \$242 | \$241 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 241 | \$320 | \$319 | \$317 | \$316 | \$315 | \$314 | \$313 | \$312 | \$311 | \$310 |
| 242 | \$233 | \$231 | \$230 | \$228 | \$226 | \$224 | \$223 | \$221 | \$220 | \$218 |
| 243 | \$265 | \$263 | \$262 | \$260 | \$258 | \$257 | \$255 | \$254 | \$253 | \$251 |
| 244 | \$334 | \$332 | \$331 | \$330 | \$328 | \$327 | \$326 | \$325 | \$324 | \$323 |
| 245 | \$240 | \$238 | \$236 | \$234 | \$232 | \$230 | \$229 | \$227 | \$226 | \$224 |
| 246 | \$272 | \$270 | \$269 | \$267 | \$265 | \$264 | \$262 | \$261 | \$259 | \$258 |
| 247 | \$343 | \$341 | \$340 | \$339 | \$337 | \$336 | \$335 | \$334 | \$333 | \$332 |
| 248 | \$242 | \$240 | \$238 | \$237 | \$235 | \$233 | \$232 | \$230 | \$228 | \$227 |
| 249 | \$275 | \$274 | \$272 | \$270 | \$268 | \$267 | \$265 | \$264 | \$262 | \$261 |
| 250 | \$347 | \$345 | \$344 | \$342 | \$341 | \$340 | \$339 | \$338 | \$336 | \$335 |
| 251 |  |  |  |  |  |  |  |  |  |  |
| 252 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 253 | \$1,352 | \$1,340 | \$1,329 | \$1,318 | \$1,308 | \$1,298 | \$1,288 | \$1,279 | \$1,270 | \$1,261 |
| 254 | \$1,544 | \$1,533 | \$1,523 | \$1,513 | \$1,503 | \$1,493 | \$1,484 | \$1,476 | \$1,467 | \$1,459 |
| 255 | \$1,985 | \$1,977 | \$1,969 | \$1,961 | \$1,954 | \$1,946 | \$1,940 | \$1,933 | \$1,926 | \$1,920 |
| 256 | \$1,356 | \$1,344 | \$1,333 | \$1,322 | \$1,312 | \$1,302 | \$1,292 | \$1,283 | \$1,274 | \$1,265 |
| 257 | \$1,549 | \$1,538 | \$1,527 | \$1,517 | \$1,507 | \$1,498 | \$1,489 | \$1,480 | \$1,472 | \$1,464 |
| 258 | \$1,991 | \$1,983 | \$1,975 | \$1,967 | \$1,960 | \$1,952 | \$1,946 | \$1,939 | \$1,932 | \$1,926 |
| 259 | \$1,427 | \$1,414 | \$1,402 | \$1,391 | \$1,380 | \$1,370 | \$1,359 | \$1,350 | \$1,340 | \$1,331 |
| 260 | \$1,630 | \$1,618 | \$1,607 | \$1,596 | \$1,586 | \$1,576 | \$1,566 | \$1,557 | \$1,548 | \$1,540 |
| 261 | \$2,095 | \$2,086 | \$2,078 | \$2,069 | \$2,062 | \$2,054 | \$2,047 | \$2,040 | \$2,033 | \$2,026 |
| 262 | \$1,490 | \$1,477 | \$1,464 | \$1,453 | \$1,441 | \$1,430 | \$1,420 | \$1,409 | \$1,399 | \$1,390 |
| 263 | \$1,702 | \$1,690 | \$1,678 | \$1,667 | \$1,656 | \$1,646 | \$1,636 | \$1,626 | \$1,617 | \$1,608 |
| 264 | \$2,188 | \$2,178 | \$2,169 | \$2,161 | \$2,153 | \$2,145 | \$2,137 | \$2,130 | \$2,123 | \$2,116 |
| 265 | \$1,516 | \$1,503 | \$1,490 | \$1,478 | \$1,467 | \$1,455 | \$1,445 | \$1,434 | \$1,424 | \$1,414 |
| 266 | \$1,732 | \$1,719 | \$1,708 | \$1,696 | \$1,685 | \$1,675 | \$1,664 | \$1,655 | \$1,645 | \$1,636 |
| 267 | \$2,226 | \$2,217 | \$2,208 | \$2,199 | \$2,191 | \$2,183 | \$2,175 | \$2,167 | \$2,160 | \$2,153 |
| 268 | \$1,530 | \$1,517 | \$1,504 | \$1,492 | \$1,480 | \$1,469 | \$1,458 | \$1,447 | \$1,437 | \$1,428 |
| 269 | \$1,748 | \$1,735 | \$1,723 | \$1,712 | \$1,701 | \$1,690 | \$1,680 | \$1,670 | \$1,660 | \$1,651 |
| 270 | \$2,247 | \$2,237 | \$2,228 | \$2,219 | \$2,211 | \$2,203 | \$2,195 | \$2,187 | \$2,180 | \$2,173 |
| 271 | \$1,670 | \$1,655 | \$1,641 | \$1,628 | \$1,615 | \$1,603 | \$1,591 | \$1,580 | \$1,569 | \$1,558 |
| 272 | \$1,907 | \$1,894 | \$1,881 | \$1,868 | \$1,856 | \$1,845 | \$1,833 | \$1,823 | \$1,812 | \$1,802 |
| 273 | \$2,452 | \$2,442 | \$2,432 | \$2,422 | \$2,413 | \$2,404 | \$2,395 | \$2,387 | \$2,379 | \$2,372 |
| 274 | \$2,095 | \$2,078 | \$2,061 | \$2,045 | \$2,030 | \$2,015 | \$2,001 | \$1,988 | \$1,974 | \$1,962 |
| 275 | \$2,381 | \$2,364 | \$2,349 | \$2,334 | \$2,320 | \$2,306 | \$2,292 | \$2,280 | \$2,267 | \$2,255 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 276 | \$2,996 | \$2,984 | \$2,972 | \$2,960 | \$2,949 | \$2,938 | \$2,928 | \$2,918 | \$2,908 | \$2,899 |
| 277 | \$2,103 | \$2,086 | \$2,069 | \$2,053 | \$2,038 | \$2,023 | \$2,009 | \$1,995 | \$1,982 | \$1,969 |
| 278 | \$2,390 | \$2,373 | \$2,358 | \$2,343 | \$2,328 | \$2,315 | \$2,301 | \$2,288 | \$2,276 | \$2,264 |
| 279 | \$3,008 | \$2,995 | \$2,983 | \$2,971 | \$2,960 | \$2,949 | \$2,939 | \$2,929 | \$2,919 | \$2,910 |
| 280 | \$2,161 | \$2,143 | \$2,126 | \$2,110 | \$2,094 | \$2,079 | \$2,064 | \$2,050 | \$2,036 | \$2,023 |
| 281 | \$2,455 | \$2,439 | \$2,423 | \$2,407 | \$2,392 | \$2,378 | \$2,364 | \$2,351 | \$2,338 | \$2,326 |
| 282 | \$3,090 | \$3,077 | \$3,065 | \$3,053 | \$3,041 | \$3,030 | \$3,020 | \$3,009 | \$3,000 | \$2,990 |
| 283 | \$2,240 | \$2,221 | \$2,204 | \$2,187 | \$2,170 | \$2,155 | \$2,140 | \$2,125 | \$2,111 | \$2,097 |
| 284 | \$2,545 | \$2,528 | \$2,511 | \$2,495 | \$2,480 | \$2,465 | \$2,451 | \$2,437 | \$2,424 | \$2,411 |
| 285 | \$3,203 | \$3,190 | \$3,177 | \$3,165 | \$3,153 | \$3,141 | \$3,130 | \$3,119 | \$3,109 | \$3,099 |
| 286 | \$2,264 | \$2,245 | \$2,227 | \$2,210 | \$2,194 | \$2,178 | \$2,162 | \$2,148 | \$2,133 | \$2,120 |
| 287 | \$2,572 | \$2,555 | \$2,538 | \$2,522 | \$2,506 | \$2,491 | \$2,477 | \$2,463 | \$2,450 | \$2,437 |
| 288 | \$3,238 | \$3,224 | \$3,211 | \$3,198 | \$3,186 | \$3,175 | \$3,164 | \$3,153 | \$3,142 | \$3,132 |
| 289 | \$2,266 | \$2,248 | \$2,230 | \$2,212 | \$2,196 | \$2,180 | \$2,165 | \$2,150 | \$2,136 | \$2,122 |
| 290 | \$2,575 | \$2,557 | \$2,541 | \$2,525 | \$2,509 | \$2,494 | \$2,480 | \$2,466 | \$2,453 | \$2,440 |
| 291 | \$3,241 | \$3,227 | \$3,214 | \$3,202 | \$3,190 | \$3,178 | \$3,167 | \$3,156 | \$3,146 | \$3,136 |
| 292 | \$2,490 | \$2,469 | \$2,449 | \$2,430 | \$2,412 | \$2,395 | \$2,378 | \$2,362 | \$2,346 | \$2,331 |
| 293 | \$2,829 | \$2,810 | \$2,791 | \$2,773 | \$2,756 | \$2,740 | \$2,724 | \$2,709 | \$2,694 | \$2,680 |
| 294 | \$3,561 | \$3,546 | \$3,531 | \$3,517 | \$3,504 | \$3,491 | \$3,479 | \$3,467 | \$3,456 | \$3,445 |
| 295 |  |  |  |  |  |  |  |  |  |  |
| 296 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 297 | \$64 | \$63 | \$62 | \$61 | \$61 | \$60 | \$60 | \$59 | \$58 | \$58 |
| 298 | \$73 | \$72 | \$72 | \$71 | \$70 | \$70 | \$69 | \$69 | \$68 | \$68 |
| 299 | \$93 | \$93 | \$92 | \$92 | \$91 | \$91 | \$91 | \$90 | \$90 | \$90 |
| 300 | \$65 | \$64 | \$64 | \$63 | \$62 | \$61 | \$61 | \$60 | \$60 | \$59 |
| 301 | \$74 | \$74 | \$73 | \$72 | \$72 | \$71 | \$71 | \$70 | \$70 | \$69 |
| 302 | \$95 | \$95 | \$94 | \$94 | \$93 | \$93 | \$93 | \$92 | \$92 | \$91 |
| 303 | \$66 | \$65 | \$65 | \$64 | \$63 | \$63 | \$62 | \$61 | \$61 | \$60 |
| 304 | \$76 | \$75 | \$74 | \$74 | \$73 | \$73 | \$72 | \$71 | \$71 | \$70 |
| 305 | \$97 | \$96 | \$96 | \$95 | \$95 | \$95 | \$94 | \$94 | \$93 | \$93 |
| 306 | \$67 | \$66 | \$65 | \$65 | \$64 | \$63 | \$62 | \$62 | \$61 | \$61 |
| 307 | \$76 | \$76 | \$75 | \$74 | \$74 | \$73 | \$73 | \$72 | \$71 | \$71 |
| 308 | \$98 | \$97 | \$97 | \$96 | \$96 | \$95 | \$95 | \$95 | \$94 | \$94 |
| 309 | \$69 | \$68 | \$67 | \$66 | \$66 | \$65 | \$64 | \$64 | \$63 | \$62 |
| 310 | \$79 | \$78 | \$77 | \$76 | \$76 | \$75 | \$75 | \$74 | \$73 | \$73 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 311 | \$100 | \$100 | \$99 | \$99 | \$99 | \$98 | \$98 | \$97 | \$97 | \$97 |
| 312 | \$68 | \$67 | \$66 | \$65 | \$65 | \$64 | \$63 | \$63 | \$62 | \$61 |
| 313 | \$77 | \$77 | \$76 | \$75 | \$75 | \$74 | \$74 | \$73 | \$72 | \$72 |
| 314 | \$99 | \$98 | \$98 | \$98 | \$97 | \$97 | \$96 | \$96 | \$96 | \$95 |
| 315 | \$65 | \$64 | \$63 | \$62 | \$62 | \$61 | \$60 | \$60 | \$59 | \$59 |
| 316 | \$74 | \$73 | \$73 | \$72 | \$71 | \$71 | \$70 | \$70 | \$69 | \$69 |
| 317 | \$95 | \$94 | \$94 | \$93 | \$93 | \$92 | \$92 | \$92 | \$91 | \$91 |
| 318 | \$48 | \$48 | \$47 | \$47 | \$46 | \$46 | \$45 | \$45 | \$44 | \$44 |
| 319 | \$55 | \$55 | \$54 | \$54 | \$53 | \$53 | \$53 | \$52 | \$52 | \$51 |
| 320 | \$70 | \$70 | \$69 | \$69 | \$69 | \$69 | \$68 | \$68 | \$68 | \$68 |
| 321 | \$49 | \$48 | \$48 | \$47 | \$47 | \$46 | \$46 | \$45 | \$45 | \$45 |
| 322 | \$56 | \$55 | \$55 | \$54 | \$54 | \$54 | \$53 | \$53 | \$52 | \$52 |
| 323 | \$71 | \$70 | \$70 | \$70 | \$70 | \$69 | \$69 | \$69 | \$69 | \$68 |
| 324 | \$51 | \$50 | \$50 | \$49 | \$49 | \$48 | \$48 | \$47 | \$47 | \$46 |
| 325 | \$58 | \$57 | \$57 | \$57 | \$56 | \$56 | \$55 | \$55 | \$55 | \$54 |
| 326 | \$74 | \$73 | \$73 | \$73 | \$72 | \$72 | \$72 | \$72 | \$71 | \$71 |
| 327 | \$55 | \$54 | \$54 | \$53 | \$53 | \$52 | \$52 | \$51 | \$51 | \$50 |
| 328 | \$63 | \$62 | \$62 | \$61 | \$61 | \$60 | \$60 | \$59 | \$59 | \$59 |
| 329 | \$80 | \$79 | \$79 | \$79 | \$78 | \$78 | \$78 | \$78 | \$77 | \$77 |
| 330 | \$56 | \$55 | \$54 | \$54 | \$53 | \$53 | \$52 | \$52 | \$51 | \$51 |
| 331 | \$67 | \$66 | \$66 | \$65 | \$65 | \$64 | \$64 | \$63 | \$63 | \$62 |
| 332 | \$85 | \$84 | \$84 | \$84 | \$83 | \$83 | \$83 | \$83 | \$82 | \$82 |
| 333 | \$60 | \$59 | \$59 | \$58 | \$57 | \$57 | \$56 | \$56 | \$55 | \$55 |
| 334 | \$68 | \$68 | \$67 | \$67 | \$66 | \$66 | \$65 | \$65 | \$64 | \$64 |
| 335 | \$87 | \$87 | \$86 | \$86 | \$86 | \$85 | \$85 | \$85 | \$84 | \$84 |
| 336 | \$54 | \$53 | \$53 | \$52 | \$52 | \$51 | \$51 | \$50 | \$50 | \$49 |
| 337 | \$62 | \$61 | \$61 | \$60 | \$60 | \$59 | \$59 | \$58 | \$58 | \$58 |
| 338 | \$78 | \$78 | \$78 | \$78 | \$77 | \$77 | \$77 | \$76 | \$76 | \$76 |
| 339 |  |  |  |  |  |  |  |  |  |  |
| 340 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 341 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 342 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 343 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 344 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 345 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 381 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 382 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 383 |  |  |  |  |  |  |  |  |  |  |
| 384 |  |  |  |  |  |  |  |  |  |  |
| 385 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 386 | \$493 | \$488 | \$484 | \$480 | \$477 | \$473 | \$470 | \$466 | \$463 | \$460 |
| 387 | \$563 | \$559 | \$555 | \$551 | \$548 | \$544 | \$541 | \$538 | \$535 | \$532 |
| 388 | \$724 | \$720 | \$718 | \$715 | \$712 | \$709 | \$707 | \$704 | \$702 | \$700 |
| 389 | \$510 | \$506 | \$502 | \$498 | \$494 | \$490 | \$486 | \$483 | \$480 | \$476 |
| 390 | \$583 | \$579 | \$575 | \$571 | \$567 | \$564 | \$560 | \$557 | \$554 | \$551 |
| 391 | \$750 | \$746 | \$743 | \$740 | \$738 | \$735 | \$732 | \$730 | \$727 | \$725 |
| 392 | \$514 | \$510 | \$506 | \$502 | \$498 | \$494 | \$490 | \$487 | \$483 | \$480 |
| 393 | \$588 | \$583 | \$579 | \$575 | \$572 | \$568 | \$565 | \$561 | \$558 | \$555 |
| 394 | \$755 | \$752 | \$749 | \$746 | \$743 | \$740 | \$738 | \$735 | \$733 | \$731 |
| 395 | \$526 | \$521 | \$517 | \$513 | \$509 | \$505 | \$501 | \$497 | \$494 | \$491 |
| 396 | \$601 | \$596 | \$592 | \$588 | \$584 | \$581 | \$577 | \$574 | \$571 | \$567 |
| 397 | \$772 | \$769 | \$766 | \$763 | \$760 | \$757 | \$754 | \$752 | \$749 | \$747 |
| 398 \| | \$599 | \$594 | \$589 | \$584 | \$579 | \$575 | \$571 | \$567 | \$563 | \$559 |
| 399 | \$684 | \$679 | \$675 | \$670 | \$666 | \$662 | \$658 | \$654 | \$650 | \$646 |
| 400 | \$880 | \$876 | \$872 | \$869 | \$865 | \$862 | \$859 | \$856 | \$853 | \$851 |
| 401 | \$570 | \$565 | \$560 | \$556 | \$551 | \$547 | \$543 | \$539 | \$535 | \$532 |
| 402 | \$651 | \$646 | \$642 | \$638 | \$634 | \$630 | \$626 | \$622 | \$619 | \$615 |
| 403 | \$837 | \$833 | \$830 | \$827 | \$824 | \$821 | \$818 | \$815 | \$812 | \$809 |
| 404 | \$449 | \$445 | \$441 | \$438 | \$434 | \$431 | \$428 | \$425 | \$422 | \$419 |
| 405 | \$513 | \$509 | \$506 | \$502 | \$499 | \$496 | \$493 | \$490 | \$487 | \$485 |
| 406 | \$659 | \$657 | \$654 | \$651 | \$649 | \$647 | \$644 | \$642 | \$640 | \$638 |
| 407 | \$590 | \$586 | \$581 | \$576 | \$572 | \$568 | \$564 | \$560 | \$556 | \$553 |
| 408 | \$671 | \$666 | \$662 | \$658 | \$654 | \$650 | \$646 | \$642 | \$639 | \$636 |
| 409 | \$844 | \$841 | \$837 | \$834 | \$831 | \$828 | \$825 | \$822 | \$820 | \$817 |
| 410 | \$631 | \$626 | \$621 | \$616 | \$612 | \$607 | \$603 | \$599 | \$595 | \$591 |
| 411 | \$717 | \$712 | \$708 | \$703 | \$699 | \$695 | \$691 | \$687 | \$683 | \$680 |
| 412 | \$903 | \$899 | \$895 | \$892 | \$888 | \$885 | \$882 | \$879 | \$876 | \$873 |
| 413 | \$634 | \$628 | \$623 | \$619 | \$614 | \$610 | \$605 | \$601 | \$597 | \$593 |
| 414 | \$720 | \$715 | \$710 | \$706 | \$702 | \$697 | \$693 | \$689 | \$686 | \$682 |
| 415 | \$906 | \$902 | \$899 | \$895 | \$892 | \$889 | \$885 | \$882 | \$880 | \$877 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 416 | \$752 | \$746 | \$740 | \$734 | \$729 | \$723 | \$718 | \$714 | \$709 | \$704 |
| 417 | \$855 | \$849 | \$843 | \$838 | \$833 | \$828 | \$823 | \$818 | \$814 | \$810 |
| 418 | \$1,076 | \$1,071 | \$1,067 | \$1,063 | \$1,059 | \$1,055 | \$1,051 | \$1,047 | \$1,044 | \$1,041 |
| 419 | \$856 | \$849 | \$842 | \$836 | \$829 | \$823 | \$818 | \$812 | \$807 | \$801 |
| 420 | \$973 | \$966 | \$960 | \$953 | \$948 | \$942 | \$937 | \$931 | \$926 | \$921 |
| 421 | \$1,224 | \$1,219 | \$1,214 | \$1,209 | \$1,205 | \$1,200 | \$1,196 | \$1,192 | \$1,188 | \$1,184 |
| 422 | \$937 | \$929 | \$922 | \$915 | \$908 | \$901 | \$895 | \$889 | \$883 | \$877 |
| 423 | \$1,064 | \$1,057 | \$1,050 | \$1,044 | \$1,037 | \$1,031 | \$1,025 | \$1,019 | \$1,014 | \$1,008 |
| 424 | \$1,340 | \$1,334 | \$1,329 | \$1,324 | \$1,319 | \$1,314 | \$1,309 | \$1,305 | \$1,300 | \$1,296 |
| 425 | \$751 | \$745 | \$739 | \$733 | \$728 | \$722 | \$717 | \$712 | \$708 | \$703 |
| 426 | \$853 | \$847 | \$842 | \$836 | \$831 | \$826 | \$822 | \$817 | \$813 | \$808 |
| 427 | \$1,074 | \$1,069 | \$1,065 | \$1,061 | \$1,057 | \$1,053 | \$1,049 | \$1,046 | \$1,042 | \$1,039 |
| 428 |  |  |  |  |  |  |  |  |  |  |
| 429 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 430 | \$493 | \$488 | \$484 | \$480 | \$477 | \$473 | \$470 | \$466 | \$463 | \$460 |
| 431 | \$563 | \$559 | \$555 | \$551 | \$548 | \$544 | \$541 | \$538 | \$535 | \$532 |
| 432 | \$724 | \$720 | \$718 | \$715 | \$712 | \$709 | \$707 | \$704 | \$702 | \$700 |
| 433 | \$510 | \$506 | \$502 | \$498 | \$494 | \$490 | \$486 | \$483 | \$480 | \$476 |
| 434 | \$583 | \$579 | \$575 | \$571 | \$567 | \$564 | \$560 | \$557 | \$554 | \$551 |
| 435 | \$750 | \$746 | \$743 | \$740 | \$738 | \$735 | \$732 | \$730 | \$727 | \$725 |
| 436 | \$514 | \$510 | \$506 | \$502 | \$498 | \$494 | \$490 | \$487 | \$483 | \$480 |
| 437 | \$588 | \$583 | \$579 | \$575 | \$572 | \$568 | \$565 | \$561 | \$558 | \$555 |
| 438 | \$755 | \$752 | \$749 | \$746 | \$743 | \$740 | \$738 | \$735 | \$733 | \$731 |
| 439 | \$526 | \$521 | \$517 | \$513 | \$509 | \$505 | \$501 | \$497 | \$494 | \$491 |
| 440 | \$601 | \$596 | \$592 | \$588 | \$584 | \$581 | \$577 | \$574 | \$571 | \$567 |
| 441 | \$772 | \$769 | \$766 | \$763 | \$760 | \$757 | \$754 | \$752 | \$749 | \$747 |
| 442 | \$599 | \$594 | \$589 | \$584 | \$579 | \$575 | \$571 | \$567 | \$563 | \$559 |
| 443 | \$684 | \$679 | \$675 | \$670 | \$666 | \$662 | \$658 | \$654 | \$650 | \$646 |
| 444 | \$880 | \$876 | \$872 | \$869 | \$865 | \$862 | \$859 | \$856 | \$853 | \$851 |
| 445 | \$570 | \$565 | \$560 | \$556 | \$551 | \$547 | \$543 | \$539 | \$535 | \$532 |
| 446 | \$651 | \$646 | \$642 | \$638 | \$634 | \$630 | \$626 | \$622 | \$619 | \$615 |
| 447 | \$837 | \$833 | \$830 | \$827 | \$824 | \$821 | \$818 | \$815 | \$812 | \$809 |
| 448 | \$449 | \$445 | \$441 | \$438 | \$434 | \$431 | \$428 | \$425 | \$422 | \$419 |
| 449 | \$513 | \$509 | \$506 | \$502 | \$499 | \$496 | \$493 | \$490 | \$487 | \$485 |
| 450 | \$659 | \$657 | \$654 | \$651 | \$649 | \$647 | \$644 | \$642 | \$640 | \$638 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 451 | \$590 | \$586 | \$581 | \$576 | \$572 | \$568 | \$564 | \$560 | \$556 | \$553 |
| 452 | \$671 | \$666 | \$662 | \$658 | \$654 | \$650 | \$646 | \$642 | \$639 | \$636 |
| 453 | \$844 | \$841 | \$837 | \$834 | \$831 | \$828 | \$825 | \$822 | \$820 | \$817 |
| 454 | \$631 | \$626 | \$621 | \$616 | \$612 | \$607 | \$603 | \$599 | \$595 | \$591 |
| 455 | \$717 | \$712 | \$708 | \$703 | \$699 | \$695 | \$691 | \$687 | \$683 | \$680 |
| 456 | \$903 | \$899 | \$895 | \$892 | \$888 | \$885 | \$882 | \$879 | \$876 | \$873 |
| 457 | \$634 | \$628 | \$623 | \$619 | \$614 | \$610 | \$605 | \$601 | \$597 | \$593 |
| 458 | \$720 | \$715 | \$710 | \$706 | \$702 | \$697 | \$693 | \$689 | \$686 | \$682 |
| 459 | \$906 | \$902 | \$899 | \$895 | \$892 | \$889 | \$885 | \$882 | \$880 | \$877 |
| 460 | \$752 | \$746 | \$740 | \$734 | \$729 | \$723 | \$718 | \$714 | \$709 | \$704 |
| 461 | \$855 | \$849 | \$843 | \$838 | \$833 | \$828 | \$823 | \$818 | \$814 | \$810 |
| 462 | \$1,076 | \$1,071 | \$1,067 | \$1,063 | \$1,059 | \$1,055 | \$1,051 | \$1,047 | \$1,044 | \$1,041 |
| 463 | \$856 | \$849 | \$842 | \$836 | \$829 | \$823 | \$818 | \$812 | \$807 | \$801 |
| 464 | \$973 | \$966 | \$960 | \$953 | \$948 | \$942 | \$937 | \$931 | \$926 | \$921 |
| 465 | \$1,224 | \$1,219 | \$1,214 | \$1,209 | \$1,205 | \$1,200 | \$1,196 | \$1,192 | \$1,188 | \$1,184 |
| 466 | \$937 | \$929 | \$922 | \$915 | \$908 | \$901 | \$895 | \$889 | \$883 | \$877 |
| 467 | \$1,064 | \$1,057 | \$1,050 | \$1,044 | \$1,037 | \$1,031 | \$1,025 | \$1,019 | \$1,014 | \$1,008 |
| 468 | \$1,340 | \$1,334 | \$1,329 | \$1,324 | \$1,319 | \$1,314 | \$1,309 | \$1,305 | \$1,300 | \$1,296 |
| 469 | \$751 | \$745 | \$739 | \$733 | \$728 | \$722 | \$717 | \$712 | \$708 | \$703 |
| 470 | \$853 | \$847 | \$842 | \$836 | \$831 | \$826 | \$822 | \$817 | \$813 | \$808 |
| 471 | \$1,074 | \$1,069 | \$1,065 | \$1,061 | \$1,057 | \$1,053 | \$1,049 | \$1,046 | \$1,042 | \$1,039 |
| 472 |  |  |  |  |  |  |  |  |  |  |
| 473 |  |  |  |  |  |  |  |  |  |  |
| 474 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 475 | \$34 | \$33 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 | \$31 | \$30 |
| 476 | \$40 | \$40 | \$40 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 |
| 477 | \$57 | \$57 | \$57 | \$56 | \$56 | \$56 | \$55 | \$55 | \$55 | \$55 |
| 478 ¢ | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 | \$33 | \$32 | \$32 | \$32 |
| 479 | \$42 | \$42 | \$41 | \$41 | \$40 | \$40 | \$40 | \$39 | \$39 | \$38 |
| 480 | \$60 | \$59 | \$59 | \$59 | \$58 | \$58 | \$58 | \$57 | \$57 | \$57 |
| 481 | \$36 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 | \$33 | \$32 |
| 482 | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 | \$40 | \$39 |
| 483 | \$61 | \$61 | \$60 | \$60 | \$60 | \$59 | \$59 | \$59 | \$59 | \$58 |
| 484 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$34 | \$34 | \$34 | \$33 |
| 485 | \$44 | \$44 | \$44 | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 486 | \$63 | \$63 | \$62 | \$62 | \$62 | \$61 | \$61 | \$61 | \$60 | \$60 |
| 487 | \$39 | \$39 | \$38 | \$38 | \$37 | \$37 | \$36 | \$36 | \$36 | \$35 |
| 488 | \$47 | \$46 | \$46 | \$46 | \$45 | \$45 | \$44 | \$44 | \$43 | \$43 |
| 489 | \$67 | \$66 | \$66 | \$66 | \$65 | \$65 | \$65 | \$64 | \$64 | \$64 |
| 490 | \$45 | \$44 | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$40 | \$40 |
| 491 | \$54 | \$53 | \$52 | \$52 | \$51 | \$51 | \$50 | \$50 | \$49 | \$49 |
| 492 | \$77 | \$76 | \$76 | \$75 | \$75 | \$74 | \$74 | \$74 | \$73 | \$73 |
| 493 | \$55 | \$54 | \$54 | \$53 | \$52 | \$52 | \$51 | \$50 | \$50 | \$49 |
| 494 | \$67 | \$66 | \$65 | \$64 | \$64 | \$63 | \$62 | \$62 | \$61 | \$61 |
| 495 | \$97 | \$96 | \$96 | \$95 | \$95 | \$94 | \$93 | \$93 | \$92 | \$92 |
| 496 | \$37 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 497 | \$44 | \$44 | \$43 | \$43 | \$42 | \$42 | \$42 | \$41 | \$41 | \$41 |
| 498 | \$59 | \$59 | \$59 | \$58 | \$58 | \$58 | \$58 | \$57 | \$57 | \$57 |
| 499 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$36 | \$36 | \$36 | \$35 |
| 500 | \$46 | \$45 | \$45 | \$44 | \$44 | \$44 | \$43 | \$43 | \$43 | \$42 |
| 501 | \$62 | \$61 | \$61 | \$61 | \$60 | \$60 | \$60 | \$60 | \$59 | \$59 |
| 502 | \$41 | \$40 | \$40 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 |
| 503 | \$48 | \$47 | \$47 | \$46 | \$46 | \$46 | \$45 | \$45 | \$44 | \$44 |
| 504 | \$65 | \$64 | \$64 | \$63 | \$63 | \$63 | \$63 | \$62 | \$62 | \$62 |
| 505 | \$44 | \$44 | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$40 | \$40 |
| 506 | \$52 | \$51 | \$51 | \$50 | \$50 | \$50 | \$49 | \$49 | \$48 | \$48 |
| 507 | \$70 | \$70 | \$69 | \$69 | \$69 | \$68 | \$68 | \$68 | \$67 | \$67 |
| 508 | \$48 | \$48 | \$47 | \$47 | \$46 | \$46 | \$45 | \$45 | \$44 | \$44 |
| 509 | \$57 | \$57 | \$56 | \$56 | \$55 | \$55 | \$54 | \$54 | \$53 | \$53 |
| 510 | \$78 | \$77 | \$77 | \$77 | \$76 | \$76 | \$76 | \$75 | \$75 | \$75 |
| 511 | \$61 | \$61 | \$60 | \$59 | \$58 | \$58 | \$57 | \$57 | \$56 | \$55 |
| 512 | \$72 | \$72 | \$71 | \$70 | \$70 | \$69 | \$68 | \$68 | \$67 | \$67 |
| 513 | \$99 | \$99 | \$98 | \$98 | \$97 | \$97 | \$96 | \$96 | \$95 | \$95 |
| 514 | \$71 | \$71 | \$70 | \$69 | \$68 | \$67 | \$66 | \$66 | \$65 | \$64 |
| 515 | \$85 | \$84 | \$83 | \$82 | \$81 | \$81 | \$80 | \$79 | \$79 | \$78 |
| 516 | \$118 | \$117 | \$117 | \$116 | \$115 | \$115 | \$114 | \$113 | \$113 | \$112 |
| 517 |  |  |  |  |  |  |  |  |  |  |
| 518 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 519 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 520 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 521 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 522 | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 523 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 |
| 524 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 |
| 525 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 | 0.870 |
| 526 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 527 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 528 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 529 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 530 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 |
| 531 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 |
| 532 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 |
| 533 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 |
| 534 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 |
| 535 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 |
| 536 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 537 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 |
| 538 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 |
| 539 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 |
| 540 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 |
| 541 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 |
| 542 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 |
| 543 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 544 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 | 0.9507 |
| 545 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 | 0.9038 |
| 546 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 | 0.8593 |
| 547 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 | 0.8169 |
| 548 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 | 0.7767 |
| 549 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 | 0.7384 |
| 550 |  |  |  |  |  |  |  |  |  |  |
| 551 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 552 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 |
| 553 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 |
| 554 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 | 1.075 |
| 555 |  |  |  |  |  |  |  |  |  |  |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
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| 556 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 |
| 557 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 |
| 558 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 |
| 559 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 560 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 561 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 562 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 563 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 564 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 565 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 566 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 567 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 568 |  |  |  |  |  |  |  |  |  |  |
| 569 |  |  |  |  |  |  |  |  |  |  |
| 570 |  |  |  |  |  |  |  |  |  |  |



|  | A |  | CD | E F |  | H | I | J | K |  |
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| 33 |  |  |  |  |  |  |  | Year | Capital |  |
| 34 |  |  |  |  |  |  |  | Index | Fraction |  |
| 35 |  |  |  |  |  |  |  | 0 |  | 80\% |
| 36 |  |  |  |  |  |  |  | 1 |  | 10\% |
| 37 |  |  |  |  |  |  |  | 2 |  | 10\% |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  |  | Inflation Rate |  |
| 42 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 43 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 44 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 45 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 46 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 47 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 48 |  |  |  |  |  | © |  |  | Interest During Construction - Nominal |  |
| 49 |  |  |  |  |  | ¢ |  |  | Rate of Return on Equity Nominal |  |
| 50 |  |  |  |  |  | ¢ |  |  | Rate of Return on Equity Nominal |  |
| 51 |  |  |  |  |  |  |  |  | Rate of Return on Equity Nominal |  |
| 52 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  |
| 53 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  |
| 54 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  |
| 55 |  |  |  |  |  |  |  | Assumptions | Debt Fraction |  |
| 56 |  |  |  |  |  |  |  |  | Debt Fraction |  |
| 57 |  |  |  |  |  |  |  |  | Debt Fraction |  |
| 58 |  |  |  |  |  |  |  |  | Tax Rate (Federal and State) |  |
| 59 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 60 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 61 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 62 |  |  |  |  |  |  |  |  | WACC Real |  |
| 63 |  |  |  |  |  |  |  |  | WACC Real |  |
| 64 |  |  |  |  |  |  |  |  | WACC Real |  |
| 65 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |  |
| 66 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |  |
| 67 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |  |


|  | A | B | CD | EF | FG | H | I | J | K |
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| 68 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |
| 69 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |
| 70 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |
| 71 |  |  |  |  |  |  |  |  |  |
| 72 |  |  |  |  |  |  |  |  |  |
| 73 |  |  | X | , |  |  |  |  |  |
| 74 |  |  |  |  |  |  |  |  |  |
| 75 |  |  |  |  |  |  |  |  |  |
| 76 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |
| 77 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |
| 78 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |
| 79 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |
| 80 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |
| 81 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |
| 82 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |
| 83 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |
| 84 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |
| 85 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |
| 86 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |
| 87 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |
| 88 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |
| 89 <br> 90 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |
| 90 |  |  |  |  |  |  |  | Net Capacity | Land-Based Wind - Class 5 |
| 91 |  |  |  |  |  |  |  | Factor (\%) | Land-Based Wind - Class 6 |
| 92 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 6 |
| 93 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 6 |
| 94 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |
| 95 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |
| 968 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |
| 97 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |
| 98 <br> 98 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |
| 99 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |
| 100 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |
| 101 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |
| 102 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |





|  | A | B ${ }^{\text {a }}$ |  | E | FG | H | I | J |  | K |
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| 208 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 209 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 210 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 211 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 212 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 213 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 214 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 215 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 216 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |  |
| 217 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |  |
| 218 \| |  |  |  |  |  |  |  | Overnight Capital | Land-Based Wind - Class 5 |  |
| 219 |  |  |  |  |  |  |  | Cost (\$/kW) | Land-Based Wind - Class 6 |  |
| 220 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 6 |  |
| 221 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 6 |  |
| 222 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 223 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 224 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 225 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 226 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 227 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 228 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 229 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 230 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 231 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 232 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 233 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 234 |  |  |  |  |  |  |  |  |  |  |
| 235 |  |  |  |  |  |  |  |  |  |  |
| 236 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 237 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 238 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 239 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 240 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 241 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 242 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |


|  | A | B ${ }^{\text {a }}$ |  | E | FG | H | I | J |  | K |
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| 243 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 244 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 245 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 246 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 247 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 248 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |  |
| 249 |  |  |  |  |  |  |  | Fixed Operation | Land-Based Wind - Class 5 |  |
| 250 |  |  |  |  |  |  |  | and Maintenance | Land-Based Wind - Class 5 |  |
| 251 |  |  |  |  |  |  |  | Expenses (\$/kW- | Land-Based Wind - Class 6 |  |
| 252 |  |  |  |  |  |  |  | yr) | Land-Based Wind - Class 6 |  |
| 253 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 6 |  |
| 254 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 255 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 256 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 257 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 258 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 259 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 260 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 261 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 262 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 263 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 264 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 265 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 266 |  |  |  |  |  |  |  |  |  |  |
| 267 |  |  |  |  |  |  |  |  |  |  |
| 268 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 269 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 270 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 271 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 272 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 273 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 274 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 275 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 276 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 277 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |


|  | A | B | CD | E/F | G | H | I | J | K | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 278 |  |  |  |  |  |  |  | Variable Operation and Maintenance Expenses (\$/MWh) | Land-Based Wind - Class 4 |  |
| 279 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 280 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |  |
| 281 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |  |
| 282 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |  |
| 283 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 6 |  |
| 284 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 6 |  |
| 285 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 6 |  |
| 286 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 287 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 288 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 289 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 290 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 291 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 292 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 293 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 294 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 295 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 296 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 297 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 298 |  |  |  |  |  |  |  |  |  |  |
| 299 |  |  |  |  |  |  |  |  |  |  |
| 300 |  |  |  |  |  |  |  |  |  |  |
| 301 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 302 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 303 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 304 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 305 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 306 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 307 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 308 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 309 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 310 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 311 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 312 |  |  |  |  |  | $\stackrel{n}{0}$ |  |  | Land-Based Wind - Class 4 |  |


|  | A | B | CD | EF | FG | H | I | J |  | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 313 |  |  |  |  |  | ¢ |  |  | Land-Based Wind - Class 5 |  |
| 314 |  |  |  |  |  | $\bigcirc$ |  | Grid Connection | Land-Based Wind - Class 5 |  |
| 315 |  |  |  |  |  | \% |  |  | Land-Based Wind - Class 5 |  |
| 316 |  |  |  |  |  | $\stackrel{0}{\square}$ |  | (\$/kW) | Land-Based Wind - Class 6 |  |
| 317 |  |  |  |  |  | ¢ |  |  | Land-Based Wind - Class 6 |  |
| 318 |  |  |  |  |  | - |  |  | Land-Based Wind - Class 6 |  |
| 319 |  |  |  |  |  | ৩- |  |  | Land-Based Wind - Class 7 |  |
| 320 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 321 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 7 |  |
| 322 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 323 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 324 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 8 |  |
| 325 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 326 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 327 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 9 |  |
| 328 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 329 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 330 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 10 |  |
| 331 |  |  |  |  |  |  |  |  |  |  |
| 332 |  |  |  |  |  |  |  |  |  |  |
| 333 |  |  |  |  |  |  |  |  |  |  |
| 334 <br> 335 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 335 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 336 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 1 |  |
| 337 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 338 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 339 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 2 |  |
| 340 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 341 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 342 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 3 |  |
| 343 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 344 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 345 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 4 |  |
| 346 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |  |
| 347 |  |  |  |  |  |  |  |  | Land-Based Wind - Class 5 |  |


|  | A | BICD | EFG | H | 1 | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 348 |  |  |  | - |  | Levelized Cost of | Land-Based Wind - Class 5 |
| 349 |  |  |  | U |  | Energy (\$/MWh) | Land-Based Wind - Class 6 |
| 350 |  |  |  |  |  |  | Land-Based Wind - Class 6 |
| 351 |  |  |  |  |  |  | Land-Based Wind - Class 6 |
| 352 |  |  |  |  |  |  | Land-Based Wind - Class 7 |
| 353 |  |  |  |  |  |  | Land-Based Wind - Class 7 |
| 354 |  |  |  |  |  |  | Land-Based Wind - Class 7 |
| 355 |  |  |  |  |  |  | Land-Based Wind - Class 8 |
| 356 |  |  |  |  |  |  | Land-Based Wind - Class 8 |
| 357 |  |  |  |  |  |  | Land-Based Wind - Class 8 |
| 358 |  |  |  |  |  |  | Land-Based Wind - Class 9 |
| 359 |  |  |  |  |  |  | Land-Based Wind - Class 9 |
| 360 |  |  |  |  |  |  | Land-Based Wind - Class 9 |
| 361 |  |  |  |  |  |  | Land-Based Wind - Class 10 |
| 362 |  |  |  |  |  |  | Land-Based Wind - Class 10 |
| 363 |  |  |  |  |  |  | Land-Based Wind - Class 10 |
| 364 |  |  |  |  |  |  |  |
| 365 |  |  |  |  |  |  |  |
| 366 |  |  |  |  |  |  |  |
| 367 |  |  |  |  |  |  | 10 year CRF |
| 368 |  |  |  | $\stackrel{\bar{U}}{0}$ |  |  | 10 year CRF |
| 369 |  |  |  | 厄ّ |  |  | 10 year CRF |
| 370 |  |  |  | $\overline{ }$ |  | Tax Credit | PTC Schedule |
| 371 |  |  |  | 읓 |  |  | PTC |
| 372 |  |  |  | 훔 |  |  | PTC |
| 373 |  |  |  |  |  |  | PTC |
| 374 |  |  |  |  |  |  | PVD |
| 375 |  |  |  |  |  |  | PVD |
| 376 |  |  |  |  |  |  | PVD |
| 377 |  |  |  |  |  |  | PFF |
| 378 |  |  |  |  |  |  | PFF |
| 379 |  |  |  |  |  |  | PFF |
| 380 |  |  |  |  | MACRS |  | Year (Advanced) |
| 381 |  |  |  |  | 0.2 |  | 1 |


|  | A | B CD ${ }^{\text {c }}$ | EFG | H | 1 | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 382 |  |  |  |  | 0.32 |  | 2 |
| 383 |  |  |  |  | 0.192 |  | 3 |
| 384 |  |  |  |  | 0.1152 |  | 4 |
| 385 |  |  |  |  | 0.1152 |  | 5 |
| 386 |  |  |  |  | 0.0576 |  | 6 |
| 387 |  |  |  |  |  |  | Year (Moderate) |
| 388 |  |  |  |  |  |  | 1 |
| 389 |  |  |  |  |  |  | 2 |
| 390 |  |  |  |  |  |  | 3 |
| 391 |  |  |  |  |  |  | 4 |
| 392 |  |  |  |  |  |  | 5 |
| 393 |  |  |  |  |  |  | 6 |
| 394 |  |  |  |  |  |  | Year (Conservative) |
| 395 |  |  |  |  |  |  | 1 |
| 396 |  |  |  |  |  |  | 2 |
| 397 |  |  |  |  |  |  | 3 |
| 398 |  |  |  |  |  |  | 4 |
| 399 |  |  |  |  |  |  | 5 |
| 400 |  |  |  |  |  |  | 6 |
| 401 |  |  |  |  |  |  |  |
| 402 |  |  |  |  |  |  |  |
| 403 |  |  |  |  |  |  | CFF |
| 404 |  |  |  |  |  | Finance Factor | CFF |
| 405 |  |  |  |  |  |  | CFF |
| 406 |  |  |  |  |  |  |  |
| 407 |  |  |  |  |  |  | Accumulated Interest - Year 1 |
| 408 |  |  |  |  |  |  | Accumulated Interest - Year 2 |
| 409 |  |  |  |  |  |  | Accumulated Interest - Year 3 |
| 410 |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 |
| 411 |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 |
| 412 |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 |
| 413 |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 |
| 414 |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 |
| 415 |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 |
| 416 |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 |


|  | A | B | C | D | E | F | G | H |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 417 |  |  |  | I | J | K |  |  |
| 418 |  |  |  |  |  |  |  |  |



|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 33 | Percent of Leverage | Equity During |  |  |  |  |  |  |  |
| 34 | During Construction | Construction |  |  |  |  |  |  |  |
| 35 | 80\% | 20.0\% |  |  |  |  |  |  |  |
| 36 | 80\% | 20.0\% |  |  |  |  |  |  |  |
| 37 | 80\% | 20.0\% |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |
| 40 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 41 | * | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 42 | Advanced | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 43 | Moderate | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 44 | Conservative | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 45 | Advanced | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 46 | Moderate | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 47 | Conservative | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 48 | * | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 49 | Advanced | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 50 | Moderate | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 51 | Conservative | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 52 | Advanced | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 53 | Moderate | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 54 | Conservative | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 55 | Advanced | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 56 | Moderate | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 57 | Conservative | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 58 | * | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 59 | Advanced | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 60 | Moderate | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 61 | Conservative | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 62 | Advanced | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 63 | Moderate | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 64 | Conservative | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 65 | Advanced | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 66 | Moderate | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 67 | Conservative | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 68 | Advanced | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 69 | Moderate | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 70 | Conservative | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 71 |  |  |  |  |  |  |  |  |  |
| 72 |  |  |  |  |  |  |  |  |  |
| 73 | Future Projections |  |  |  |  |  |  |  |  |
| 74 |  | Base Year |  |  |  |  |  |  |  |
| 75 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 76 | Advanced | 48\% | 49\% | 50\% | 51\% | 52\% | 52\% | 53\% | 54\% |
| 77 | Moderate | 48\% | 49\% | 49\% | 50\% | 51\% | 51\% | 52\% | 52\% |
| 78 | Conservative | 48\% | 48\% | 49\% | 49\% | 49\% | 49\% | 50\% | 50\% |
| 79 | Advanced | 46\% | 46\% | 47\% | 48\% | 48\% | 49\% | 50\% | 50\% |
| 80 | Moderate | 46\% | 46\% | 47\% | 47\% | 47\% | 48\% | 48\% | 49\% |
| 81 | Conservative | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% |
| 82 | Advanced | 45\% | 45\% | 46\% | 47\% | 47\% | 48\% | 49\% | 49\% |
| 83 | Moderate | 45\% | 45\% | 45\% | 46\% | 46\% | 47\% | 47\% | 47\% |
| 84 | Conservative | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 85 | Advanced | 44\% | 44\% | 45\% | 46\% | 46\% | 47\% | 47\% | 48\% |
| 86 | Moderate | 44\% | 44\% | 44\% | 45\% | 45\% | 45\% | 46\% | 46\% |
| 87 | Conservative | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 88 | Advanced | 42\% | 43\% | 43\% | 44\% | 45\% | 45\% | 46\% | 46\% |
| 89 | Moderate | 42\% | 43\% | 43\% | 43\% | 44\% | 44\% | 44\% | 44\% |
| 90 | Conservative | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 91 | Advanced | 40\% | 41\% | 41\% | 42\% | 42\% | 43\% | 43\% | 44\% |
| 92 | Moderate | 40\% | 40\% | 41\% | 41\% | 41\% | 42\% | 42\% | 42\% |
| 93 | Conservative | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% |
| 94 | Advanced | 37\% | 37\% | 38\% | 38\% | 39\% | 39\% | 40\% | 40\% |
| 95 | Moderate | 37\% | 37\% | 37\% | 37\% | 38\% | 38\% | 38\% | 38\% |
| 96 | Conservative | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 36\% |
| 97 | Advanced | 32\% | 33\% | 33\% | 34\% | 34\% | 35\% | 35\% | 36\% |
| 98 | Moderate | 32\% | 32\% | 33\% | 33\% | 33\% | 33\% | 34\% | 34\% |
| 99 | Conservative | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 100 | Advanced | 27\% | 28\% | 28\% | 29\% | 29\% | 30\% | 30\% | 31\% |
| 101 | Moderate | 27\% | 27\% | 28\% | 28\% | 28\% | 28\% | 29\% | 29\% |
| 102 | Conservative | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 103 | Advanced | 18\% | 18\% | 18\% | 18\% | 19\% | 19\% | 19\% | 20\% |
| 104 | Moderate | 18\% | 18\% | 18\% | 18\% | 18\% | 18\% | 18\% | 18\% |
| 105 | Conservative | 18\% | 17\% | 17\% | 17\% | 17\% | 17\% | 17\% | 17\% |
| 106 |  |  |  |  |  |  |  |  |  |
| 107 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 108 | Advanced | 4,214 | 4,290 | 4,367 | 4,444 | 4,520 | 4,597 | 4,674 | 4,750 |
| 109 | Moderate | 4,214 | 4,267 | 4,321 | 4,375 | 4,428 | 4,482 | 4,536 | 4,590 |
| 110 | Conservative | 4,214 | 4,238 | 4,263 | 4,287 | 4,312 | 4,336 | 4,361 | 4,385 |
| 111 | Advanced | 4,003 | 4,063 | 4,123 | 4,183 | 4,243 | 4,303 | 4,363 | 4,423 |
| 112 | Moderate | 4,003 | 4,040 | 4,076 | 4,112 | 4,149 | 4,185 | 4,221 | 4,258 |
| 113 | Conservative | 4,003 | 4,012 | 4,020 | 4,029 | 4,037 | 4,046 | 4,054 | 4,063 |
| 114 | Advanced | 3,916 | 3,972 | 4,029 | 4,085 | 4,142 | 4,198 | 4,255 | 4,311 |
| 115 | Moderate | 3,916 | 3,949 | 3,982 | 4,015 | 4,048 | 4,081 | 4,114 | 4,147 |
| 116 | Conservative | 3,916 | 3,921 | 3,927 | 3,932 | 3,938 | 3,944 | 3,949 | 3,955 |
| 117 | Advanced | 3,828 | 3,881 | 3,934 | 3,987 | 4,040 | 4,093 | 4,146 | 4,199 |
| 118 | Moderate | 3,828 | 3,858 | 3,887 | 3,916 | 3,946 | 3,975 | 4,005 | 4,034 |
| 119 | Conservative | 3,828 | 3,831 | 3,833 | 3,836 | 3,839 | 3,841 | 3,844 | 3,847 |
| 120 | Advanced | 3,705 | 3,755 | 3,805 | 3,855 | 3,905 | 3,955 | 4,004 | 4,054 |
| 121 | Moderate | 3,705 | 3,732 | 3,758 | 3,784 | 3,811 | 3,837 | 3,864 | 3,890 |
| 122 | Conservative | 3,705 | 3,706 | 3,706 | 3,706 | 3,707 | 3,707 | 3,707 | 3,708 |
| 123 | Advanced | 3,513 | 3,558 | 3,603 | 3,647 | 3,692 | 3,737 | 3,782 | 3,827 |
| 124 | Moderate | 3,513 | 3,538 | 3,563 | 3,588 | 3,614 | 3,639 | 3,664 | 3,689 |
| 125 | Conservative | 3,513 | 3,510 | 3,507 | 3,503 | 3,500 | 3,497 | 3,494 | 3,491 |
| 126 | Advanced | 3,224 | 3,265 | 3,307 | 3,348 | 3,390 | 3,432 | 3,473 | 3,515 |
| 127 | Moderate | 3,224 | 3,243 | 3,262 | 3,281 | 3,300 | 3,319 | 3,338 | 3,357 |
| 128 | Conservative | 3,224 | 3,220 | 3,215 | 3,211 | 3,207 | 3,203 | 3,199 | 3,195 |
| 129 | Advanced | 2,821 | 2,863 | 2,906 | 2,948 | 2,991 | 3,034 | 3,076 | 3,119 |
| 130 | Moderate | 2,821 | 2,842 | 2,863 | 2,884 | 2,905 | 2,926 | 2,947 | 2,968 |
| 131 | Conservative | 2,821 | 2,821 | 2,821 | 2,821 | 2,821 | 2,821 | 2,821 | 2,821 |
| 132 | Advanced | 2,374 | 2,417 | 2,461 | 2,504 | 2,548 | 2,591 | 2,634 | 2,678 |
| 133 | Moderate | 2,374 | 2,397 | 2,421 | 2,444 | 2,467 | 2,490 | 2,514 | 2,537 |
| 134 | Conservative | 2,374 | 2,379 | 2,383 | 2,388 | 2,393 | 2,397 | 2,402 | 2,407 |
| 135 | Advanced | 1,533 | 1,560 | 1,586 | 1,613 | 1,639 | 1,666 | 1,692 | 1,719 |
| 136 | Moderate | 1,533 | 1,544 | 1,556 | 1,567 | 1,578 | 1,589 | 1,601 | 1,612 |
| 137 | Conservative | 1,533 | 1,532 | 1,530 | 1,529 | 1,528 | 1,527 | 1,525 | 1,524 |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 138 |  |  |  |  |  |  |  |  |  |
| 139 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 140 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 141 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 142 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 143 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 144 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 145 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 146 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 147 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 148 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 149 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 150 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 151 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 152 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 153 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 154 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 155 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 156 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 157 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 158 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 159 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 160 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 161 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 162 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 163 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 164 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 165 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 166 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 167 | Advanced | \$1,462 | \$1,386 | \$1,310 | \$1,233 | \$1,157 | \$1,081 | \$1,005 | \$929 |
| 168 | Moderate | \$1,462 | \$1,411 | \$1,360 | \$1,308 | \$1,257 | \$1,206 | \$1,155 | \$1,104 |
| 169 | Conservative | \$1,462 | \$1,416 | \$1,370 | \$1,323 | \$1,277 | \$1,231 | \$1,185 | \$1,139 |
| 170 |  |  |  |  |  |  |  |  |  |
| 171 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 172 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 173 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 174 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 175 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |
| 176 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 177 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 178 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |
| 179 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 180 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 181 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |
| 182 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 183 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 184 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |
| 185 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 186 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 187 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |
| 188 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 189 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 190 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |
| 191 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 192 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 193 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |
| 194 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 195 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 196 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |
| 197 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 198 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 199 | Advanced | \$57 | \$54 | \$51 | \$48 | \$45 | \$42 | \$39 | \$36 |
| 200 | Moderate | \$57 | \$55 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 201 | Conservative | \$57 | \$55 | \$53 | \$51 | \$50 | \$48 | \$46 | \$44 |
| 202 |  |  |  |  |  |  |  |  |  |
| 203 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 204 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |
| 205 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 206 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 207 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 208 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 209 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 210 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |
| 211 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 212 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 213 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |
| 214 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 215 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 216 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |
| 217 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 218 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 219 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |
| 220 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 221 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 222 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |
| 223 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 224 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 225 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |
| 226 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 227 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 228 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |
| 229 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 230 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 231 | Advanced | \$1,405 | \$1,332 | \$1,259 | \$1,185 | \$1,112 | \$1,039 | \$966 | \$893 |
| 232 | Moderate | \$1,405 | \$1,356 | \$1,307 | \$1,258 | \$1,208 | \$1,159 | \$1,110 | \$1,061 |
| 233 | Conservative | \$1,405 | \$1,361 | \$1,316 | \$1,272 | \$1,228 | \$1,183 | \$1,139 | \$1,094 |
| 234 |  |  |  |  |  |  |  |  |  |
| 235 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 236 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |
| 237 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 238 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 239 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |
| 240 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 241 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 242 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 243 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 244 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 245 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |
| 246 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 247 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 248 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |
| 249 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 250 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 251 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |
| 252 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 253 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 254 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |
| 255 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 256 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 257 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |
| 258 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 259 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 260 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |
| 261 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 262 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 263 | Advanced | \$43 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$37 |
| 264 | Moderate | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$41 | \$40 |
| 265 | Conservative | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 |
| 266 |  |  |  |  |  |  |  |  |  |
| 267 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 268 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 269 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 270 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 271 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 272 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 273 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 274 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 275 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 276 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 277 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 313 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 314 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 315 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 316 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 317 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 318 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 319 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 320 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 321 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 322 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 323 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 324 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 325 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 326 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 327 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 328 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 329 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 330 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 331 |  |  |  |  |  |  |  |  |  |
| 332 |  |  |  |  |  |  |  |  |  |
| 333 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 334 | Advanced | \$27 | \$26 | \$24 | \$23 | \$21 | \$20 | \$19 | \$17 |
| 335 | Moderate | \$27 | \$26 | \$25 | \$24 | \$23 | \$22 | \$21 | \$21 |
| 336 | Conservative | \$27 | \$27 | \$26 | \$25 | \$25 | \$24 | \$23 | \$23 |
| 337 | Advanced | \$29 | \$27 | \$26 | \$24 | \$23 | \$21 | \$20 | \$19 |
| 338 | Moderate | \$29 | \$28 | \$27 | \$26 | \$25 | \$24 | \$23 | \$22 |
| 339 | Conservative | \$29 | \$28 | \$27 | \$27 | \$26 | \$26 | \$25 | \$24 |
| 340 | Advanced | \$29 | \$28 | \$26 | \$25 | \$23 | \$22 | \$20 | \$19 |
| 341 | Moderate | \$29 | \$28 | \$27 | \$26 | \$25 | \$25 | \$24 | \$23 |
| 342 | Conservative | \$29 | \$29 | \$28 | \$27 | \$27 | \$26 | \$26 | \$25 |
| 343 | Advanced | \$30 | \$28 | \$27 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 344 | Moderate | \$30 | \$29 | \$28 | \$27 | \$26 | \$25 | \$24 | \$23 |
| 345 | Conservative | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$26 | \$26 |
| 346 | Advanced | \$31 | \$29 | \$28 | \$26 | \$25 | \$23 | \$22 | \$20 |
| 347 | Moderate | \$31 | \$30 | \$29 | \$28 | \$27 | \$26 | \$25 | \$24 |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 348 | Conservative | \$31 | \$30 | \$30 | \$29 | \$29 | \$28 | \$27 | \$27 |
| 349 | Advanced | \$33 | \$31 | \$29 | \$28 | \$26 | \$25 | \$23 | \$22 |
| 350 | Moderate | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 | \$27 | \$26 |
| 351 | Conservative | \$33 | \$32 | \$31 | \$31 | \$30 | \$30 | \$29 | \$28 |
| 352 | Advanced | \$36 | \$34 | \$32 | \$30 | \$28 | \$27 | \$25 | \$23 |
| 353 | Moderate | \$36 | \$35 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 354 | Conservative | \$36 | \$35 | \$34 | \$34 | \$33 | \$32 | \$32 | \$31 |
| 355 | Advanced | \$41 | \$38 | \$36 | \$34 | \$32 | \$30 | \$28 | \$26 |
| 356 | Moderate | \$41 | \$39 | \$38 | \$37 | \$36 | \$34 | \$33 | \$32 |
| 357 | Conservative | \$41 | \$40 | \$39 | \$38 | \$37 | \$37 | \$36 | \$35 |
| 358 | Advanced | \$48 | \$46 | \$43 | \$40 | \$38 | \$35 | \$33 | \$31 |
| 359 | Moderate | \$48 | \$47 | \$45 | \$43 | \$42 | \$40 | \$39 | \$37 |
| 360 | Conservative | \$48 | \$47 | \$46 | \$45 | \$44 | \$43 | \$42 | \$41 |
| 361 | Advanced | \$75 | \$71 | \$67 | \$63 | \$59 | \$55 | \$52 | \$48 |
| 362 | Moderate | \$75 | \$72 | \$70 | \$68 | \$65 | \$63 | \$61 | \$59 |
| 363 | Conservative | \$75 | \$73 | \$72 | \$71 | \$69 | \$68 | \$66 | \$65 |
| 364 |  |  |  |  |  |  |  |  |  |
| 365 |  |  |  |  |  |  |  |  |  |
| 366 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 367 | Advanced | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 368 | Moderate | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 369 | Conservative | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 370 | * | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 371 | Advanced | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 372 | Moderate | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 373 | Conservative | \$ - | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 374 | Advanced | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 375 | Moderate | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 376 | Conservative | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 377 | Advanced | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 378 | Moderate | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 379 | Conservative | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 380 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 381 |  | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 382 |  | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 383 |  | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 384 |  | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 385 |  | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 386 |  | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 387 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 388 |  | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 389 |  | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 390 |  | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 391 |  | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 392 |  | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 393 |  | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 394 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 395 |  | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 396 |  | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 397 |  | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 398 |  | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 399 |  | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 400 |  | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 401 |  |  |  |  |  |  |  |  |  |
| 402 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 403 | Advanced | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 |
| 404 | Moderate | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 |
| 405 | Conservative | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 |
| 406 |  |  |  |  |  |  |  |  |  |
| 407 | * | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 408 | * | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 409 | * | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 410 | Advanced | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 411 | Advanced | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 412 | Advanced | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 413 | Moderate | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 414 | Moderate | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 415 | Moderate | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 416 | Conservative | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 417 | Conservative | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 418 | Conservative | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 | Inputs |  |  |  |  |  |  |  |  |  |
| 3 | Calculated |  |  |  |  |  |  |  |  |  |
| 4 | Input from |  |  |  |  |  |  |  |  |  |
| 5 | other tab |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |  |
| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 41 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 42 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 43 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 44 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 45 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 46 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 47 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 48 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 49 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 50 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 51 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 52 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 53 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 54 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 55 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 56 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 57 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 58 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 59 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 60 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 61 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 62 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 63 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 64 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 65 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 66 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 67 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 68 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 69 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 70 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 71 |  |  |  |  |  |  |  |  |  |  |
| 72 |  |  |  |  |  |  |  |  |  |  |
| 73 |  |  |  |  |  |  |  |  |  |  |
| 74 |  |  |  |  |  |  |  |  |  |  |
| 75 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 76 | 55\% | 56\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 77 | 53\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 78 | 50\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 79 | 51\% | 52\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 80 | 49\% | 49\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 81 | 46\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% |
| 82 | 50\% | 51\% | 51\% | 51\% | 51\% | 51\% | 52\% | 52\% | 52\% | 52\% |
| 83 | 48\% | 48\% | 48\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% |
| 84 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 85 | 49\% | 49\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 51\% |
| 86 | 46\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% |
| 87 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 88 | 47\% | 47\% | 48\% | 48\% | 48\% | 48\% | 49\% | 49\% | 49\% | 49\% |
| 89 | 45\% | 45\% | 45\% | 45\% | 45\% | 46\% | 46\% | 46\% | 46\% | 46\% |
| 90 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 43\% | 43\% |
| 91 | 44\% | 45\% | 45\% | 45\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% |
| 92 | 42\% | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% | 44\% |
| 93 | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% |
| 94 | 41\% | 41\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 43\% | 43\% |
| 95 | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 40\% |
| 96 | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 37\% | 37\% | 37\% |
| 97 | 36\% | 37\% | 37\% | 37\% | 37\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 98 | 34\% | 34\% | 35\% | 35\% | 35\% | 35\% | 35\% | 35\% | 35\% | 35\% |
| 99 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 100 | 31\% | 32\% | 32\% | 32\% | 32\% | 33\% | 33\% | 33\% | 33\% | 33\% |
| 101 | 29\% | 29\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% |
| 102 | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 103 | 20\% | 20\% | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% |
| 104 | 19\% | 19\% | 19\% | 19\% | 19\% | 19\% | 19\% | 19\% | 19\% | 19\% |
| 105 | 17\% | 17\% | 17\% | 17\% | 17\% | 17\% | 17\% | 17\% | 17\% | 18\% |
| 106 |  |  |  |  |  |  |  |  |  |  |
| 107 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 108 | 4,827 | 4,904 | 4,981 | 4,986 | 4,991 | 4,996 | 5,001 | 5,005 | 5,010 | 5,015 |
| 109 | 4,643 | 4,697 | 4,751 | 4,753 | 4,756 | 4,758 | 4,760 | 4,763 | 4,765 | 4,767 |
| 110 | 4,410 | 4,434 | 4,459 | 4,460 | 4,461 | 4,462 | 4,463 | 4,464 | 4,465 | 4,467 |
| 111 | 4,483 | 4,543 | 4,602 | 4,609 | 4,616 | 4,623 | 4,630 | 4,637 | 4,644 | 4,651 |
| 112 | 4,294 | 4,330 | 4,367 | 4,370 | 4,373 | 4,376 | 4,380 | 4,383 | 4,386 | 4,390 |
| 113 | 4,071 | 4,080 | 4,088 | 4,090 | 4,091 | 4,093 | 4,094 | 4,096 | 4,097 | 4,099 |
| 114 | 4,368 | 4,424 | 4,481 | 4,490 | 4,499 | 4,507 | 4,516 | 4,525 | 4,534 | 4,543 |
| 115 | 4,180 | 4,213 | 4,246 | 4,250 | 4,254 | 4,258 | 4,263 | 4,267 | 4,271 | 4,275 |
| 116 | 3,960 | 3,966 | 3,971 | 3,973 | 3,975 | 3,977 | 3,979 | 3,981 | 3,983 | 3,985 |
| 117 | 4,252 | 4,305 | 4,358 | 4,369 | 4,380 | 4,391 | 4,402 | 4,413 | 4,423 | 4,434 |
| 118 | 4,064 | 4,093 | 4,123 | 4,128 | 4,133 | 4,138 | 4,143 | 4,148 | 4,153 | 4,159 |
| 119 | 3,849 | 3,852 | 3,854 | 3,857 | 3,859 | 3,862 | 3,864 | 3,866 | 3,869 | 3,871 |
| 120 | 4,104 | 4,154 | 4,204 | 4,216 | 4,229 | 4,242 | 4,254 | 4,267 | 4,279 | 4,292 |
| 121 | 3,916 | 3,943 | 3,969 | 3,975 | 3,981 | 3,987 | 3,993 | 3,999 | 4,005 | 4,011 |
| 122 | 3,708 | 3,708 | 3,708 | 3,711 | 3,714 | 3,717 | 3,720 | 3,722 | 3,725 | 3,728 |
| 123 | 3,872 | 3,917 | 3,962 | 3,976 | 3,989 | 4,003 | 4,017 | 4,031 | 4,045 | 4,059 |
| 124 | 3,715 | 3,740 | 3,765 | 3,772 | 3,778 | 3,785 | 3,791 | 3,798 | 3,805 | 3,811 |
| 125 | 3,488 | 3,485 | 3,481 | 3,485 | 3,488 | 3,491 | 3,494 | 3,497 | 3,500 | 3,503 |
| 126 | 3,556 | 3,598 | 3,640 | 3,654 | 3,669 | 3,683 | 3,698 | 3,712 | 3,727 | 3,741 |
| 127 | 3,376 | 3,395 | 3,414 | 3,421 | 3,428 | 3,434 | 3,441 | 3,448 | 3,455 | 3,462 |
| 128 | 3,191 | 3,187 | 3,183 | 3,186 | 3,189 | 3,192 | 3,195 | 3,199 | 3,202 | 3,205 |
| 129 | 3,161 | 3,204 | 3,246 | 3,261 | 3,276 | 3,290 | 3,305 | 3,320 | 3,334 | 3,349 |
| 130 | 2,989 | 3,010 | 3,031 | 3,038 | 3,045 | 3,051 | 3,058 | 3,065 | 3,072 | 3,079 |
| 131 | 2,821 | 2,821 | 2,821 | 2,824 | 2,827 | 2,830 | 2,833 | 2,837 | 2,840 | 2,843 |
| 132 | 2,721 | 2,764 | 2,808 | 2,822 | 2,836 | 2,850 | 2,864 | 2,878 | 2,892 | 2,906 |
| 133 | 2,560 | 2,583 | 2,607 | 2,613 | 2,620 | 2,626 | 2,633 | 2,639 | 2,646 | 2,652 |
| 134 | 2,412 | 2,416 | 2,421 | 2,424 | 2,427 | 2,430 | 2,433 | 2,436 | 2,439 | 2,442 |
| 135 | 1,745 | 1,772 | 1,798 | 1,808 | 1,818 | 1,828 | 1,838 | 1,848 | 1,857 | 1,867 |
| 136 | 1,623 | 1,634 | 1,646 | 1,650 | 1,655 | 1,659 | 1,664 | 1,668 | 1,673 | 1,677 |
| 137 | 1,523 | 1,521 | 1,520 | 1,522 | 1,524 | 1,526 | 1,528 | 1,531 | 1,533 | 1,535 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 138 |  |  |  |  |  |  |  |  |  |  |
| 139 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 140 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 141 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 142 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 143 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 144 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 145 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 146 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 147 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 148 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 149 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 150 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 151 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 152 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 153 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 154 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 155 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 156 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 157 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 158 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 159 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 160 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 161 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 162 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 163 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 164 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 165 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 166 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 167 | \$852 | \$776 | \$700 | \$691 | \$683 | \$674 | \$665 | \$656 | \$648 | \$639 |
| 168 | \$1,052 | \$1,001 | \$950 | \$941 | \$931 | \$922 | \$912 | \$903 | \$893 | \$884 |
| 169 | \$1,092 | \$1,046 | \$1,000 | \$995 | \$990 | \$985 | \$980 | \$975 | \$970 | \$965 |
| 170 |  |  |  |  |  |  |  |  |  |  |
| 171 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 172 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 173 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 174 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 175 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |
| 176 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 177 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 178 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |
| 179 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 180 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 181 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |
| 182 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 183 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 184 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |
| 185 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 186 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 187 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |
| 188 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 189 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 190 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |
| 191 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 192 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 193 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |
| 194 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 195 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 196 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |
| 197 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 198 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 199 | \$33 | \$30 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 |
| 200 | \$41 | \$39 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 |
| 201 | \$42 | \$41 | \$39 | \$39 | \$38 | \$38 | \$38 | \$38 | \$38 | \$38 |
| 202 |  |  |  |  |  |  |  |  |  |  |
| 203 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 204 | \$819 | \$746 | \$673 | \$664 | \$656 | \$648 | \$639 | \$631 | \$622 | \$614 |
| 205 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 206 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
| 207 | \$819 | \$746 | \$673 | \$664 | \$656 | \$648 | \$639 | \$631 | \$622 | \$614 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 208 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 209 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
| 210 | \$819 | \$746 | \$673 | \$664 | \$656 | \$648 | \$639 | \$631 | \$622 | \$614 |
| 211 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 212 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
| 213 | \$819 | \$746 | \$673 | \$664 | \$656 | \$648 | \$639 | \$631 | \$622 | \$614 |
| 214 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 215 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
| 216 | \$819 | \$746 | \$673 | \$664 | \$656 | \$648 | \$639 | \$631 | \$622 | \$614 |
| 217 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 218 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
| 219 | \$819 | \$746 | \$673 | \$664 | \$656 | \$648 | \$639 | \$631 | \$622 | \$614 |
| 220 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 221 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
| 222 | \$819 | \$746 | \$673 | \$664 | \$656 | \$648 | \$639 | \$631 | \$622 | \$614 |
| 223 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 224 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
| 225 | \$819 | \$746 | \$673 | \$664 | \$656 | \$648 | \$639 | \$631 | \$622 | \$614 |
| 226 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 227 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
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| 229 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 230 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
| 231 | \$819 | \$746 | \$673 | \$664 | \$656 | \$648 | \$639 | \$631 | \$622 | \$614 |
| 232 | \$1,011 | \$962 | \$913 | \$904 | \$895 | \$886 | \$877 | \$867 | \$858 | \$849 |
| 233 | \$1,050 | \$1,006 | \$961 | \$956 | \$952 | \$947 | \$942 | \$937 | \$932 | \$927 |
| 234 |  |  |  |  |  |  |  |  |  |  |
| 235 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 236 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 237 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 238 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 239 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 240 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 241 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 242 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 243 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 244 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 245 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 246 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 247 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 248 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 249 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 250 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 251 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 252 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 253 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 254 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 255 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 256 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 257 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 258 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 259 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 260 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 261 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 262 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 263 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 264 | \$40 | \$39 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 |
| 265 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$43 | \$42 | \$42 |
| 266 |  |  |  |  |  |  |  |  |  |  |
| 267 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 268 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 269 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 270 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 271 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 272 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 273 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 274 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 275 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 276 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 277 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 313 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 314 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 315 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 316 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 317 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 318 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 319 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 320 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 321 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 322 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 323 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 324 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 325 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 326 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 327 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 328 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 329 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 330 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 331 |  |  |  |  |  |  |  |  |  |  |
| 332 |  |  |  |  |  |  |  |  |  |  |
| 333 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 334 | \$16 | \$15 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$12 |
| 335 | \$20 | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 |
| 336 | \$22 | \$21 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 337 | \$17 | \$16 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$13 |
| 338 | \$21 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 | \$18 | \$18 |
| 339 | \$24 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 |
| 340 | \$18 | \$17 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 |
| 341 | \$22 | \$21 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 |
| 342 | \$24 | \$24 | \$23 | \$23 | \$23 | \$23 | \$23 | \$23 | \$23 | \$23 |
| 343 | \$18 | \$17 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 |
| 344 | \$23 | \$22 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 |
| 345 | \$25 | \$25 | \$24 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$23 |
| 346 | \$19 | \$18 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$14 |
| 347 | \$23 | \$22 | \$22 | \$21 | \$21 | \$21 | \$21 | \$20 | \$20 | \$20 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 348 | \$26 | \$25 | \$25 | \$25 | \$25 | \$25 | \$24 | \$24 | \$24 | \$24 |
| 349 | \$20 | \$19 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 | \$16 | \$15 |
| 350 | \$25 | \$24 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 351 | \$28 | \$27 | \$26 | \$26 | \$26 | \$26 | \$26 | \$26 | \$26 | \$26 |
| 352 | \$22 | \$20 | \$19 | \$19 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 353 | \$27 | \$26 | \$25 | \$25 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 |
| 354 | \$30 | \$30 | \$29 | \$29 | \$29 | \$29 | \$28 | \$28 | \$28 | \$28 |
| 355 | \$25 | \$23 | \$21 | \$21 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 356 | \$31 | \$29 | \$28 | \$28 | \$28 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 357 | \$34 | \$33 | \$33 | \$33 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 358 \| | \$29 | \$27 | \$24 | \$24 | \$24 | \$23 | \$23 | \$22 | \$22 | \$21 |
| 359 | \$36 | \$34 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 | \$30 |
| 360 | \$40 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 | \$37 | \$37 |
| 361 | \$45 | \$41 | \$38 | \$38 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 |
| 362 | \$56 | \$54 | \$52 | \$51 | \$51 | \$50 | \$50 | \$49 | \$48 | \$48 |
| 363 | \$63 | \$62 | \$61 | \$60 | \$60 | \$60 | \$59 | \$59 | \$59 | \$58 |
| 364 |  |  |  |  |  |  |  |  |  |  |
| 365 |  |  |  |  |  |  |  |  |  |  |
| 366 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 367 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 368 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 369 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 370 | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 371 | \$ - | \$ | \$ | \$ | \$ - | \$ | \$ | \$ | \$ | \$ |
| 372 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 373 | \$ | \$ | \$ | \$ | \$ - | \$ | \$ | \$ | \$ | \$ |
| 374 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 375 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 376 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 377 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 378 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 379 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 380 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 381 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 382 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 383 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 384 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 385 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 386 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 387 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 388 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 389 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 390 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 391 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 392 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 393 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 394 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 395 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 396 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 397 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 398 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 399 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 400 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 401 |  |  |  |  |  |  |  |  |  |  |
| 402 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 403 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 |
| 404 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 |
| 405 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 |
| 406 |  |  |  |  |  |  |  |  |  |  |
| 407 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 408 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 409 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 410 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 411 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 412 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 413 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 414 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 415 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 416 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |


|  | $U$ | $V$ | $W$ | $X$ | $Y$ | $Z$ | $A$ | $A$ | $A$ | $A$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | ---: | ---: | ---: | ---: |
| 417 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 418 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |  |
| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 41 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 42 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 43 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 44 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 45 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 46 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 47 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 48 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 49 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 50 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 51 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 52 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 53 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 54 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 55 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 56 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 57 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 58 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 59 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 60 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 61 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 62 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 63 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 64 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 65 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 66 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 67 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 68 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 69 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 70 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 71 |  |  |  |  |  |  |  |  |  |  |
| 72 |  |  |  |  |  |  |  |  |  |  |
| 73 |  |  |  |  |  |  |  |  |  |  |
| 74 |  |  |  |  |  |  |  |  |  |  |
| 75 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 76 | 57\% | 57\% | 57\% | 57\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% |
| 77 | 54\% | 54\% | 55\% | 55\% | 55\% | 55\% | 55\% | 55\% | 55\% | 55\% |
| 78 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 79 | 53\% | 53\% | 53\% | 53\% | 53\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 80 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 81 | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% |
| 82 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 53\% | 53\% | 53\% | 53\% |
| 83 | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% |
| 84 | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% |
| 85 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 52\% | 52\% | 52\% |
| 86 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 87 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 88 | 49\% | 49\% | 49\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 89 | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% | 46\% |
| 90 | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% | 43\% |
| 91 | 46\% | 47\% | 47\% | 47\% | 47\% | 47\% | 47\% | 48\% | 48\% | 48\% |
| 92 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 93 | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% |
| 94 | 43\% | 43\% | 43\% | 43\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 95 | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% | 40\% |
| 96 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 97 | 38\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 40\% | 40\% | 40\% |
| 98 | 35\% | 35\% | 35\% | 35\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% |
| 99 | 32\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% |
| 100 | 33\% | 33\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 35\% | 35\% |
| 101 | 30\% | 30\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |
| 102 | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 103 | 21\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 104 | 19\% | 19\% | 19\% | 19\% | 19\% | 19\% | 20\% | 20\% | 20\% | 20\% |
| 105 | 18\% | 18\% | 18\% | 18\% | 18\% | 18\% | 18\% | 18\% | 18\% | 18\% |
| 106 |  |  |  |  |  |  |  |  |  |  |
| 107 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 108 | 5,020 | 5,025 | 5,030 | 5,035 | 5,040 | 5,045 | 5,050 | 5,055 | 5,060 | 5,065 |
| 109 | 4,770 | 4,772 | 4,775 | 4,777 | 4,779 | 4,782 | 4,784 | 4,786 | 4,789 | 4,791 |
| 110 | 4,468 | 4,469 | 4,470 | 4,471 | 4,472 | 4,473 | 4,474 | 4,476 | 4,477 | 4,478 |
| 111 | 4,658 | 4,665 | 4,671 | 4,678 | 4,685 | 4,692 | 4,699 | 4,706 | 4,713 | 4,720 |
| 112 | 4,393 | 4,396 | 4,399 | 4,403 | 4,406 | 4,409 | 4,412 | 4,416 | 4,419 | 4,422 |
| 113 | 4,100 | 4,102 | 4,103 | 4,105 | 4,106 | 4,108 | 4,109 | 4,111 | 4,113 | 4,114 |
| 114 | 4,552 | 4,561 | 4,570 | 4,579 | 4,588 | 4,597 | 4,606 | 4,615 | 4,624 | 4,633 |
| 115 | 4,280 | 4,284 | 4,288 | 4,292 | 4,297 | 4,301 | 4,305 | 4,309 | 4,314 | 4,318 |
| 116 | 3,987 | 3,989 | 3,991 | 3,993 | 3,995 | 3,997 | 3,999 | 4,001 | 4,003 | 4,005 |
| 117 | 4,445 | 4,456 | 4,467 | 4,478 | 4,489 | 4,500 | 4,511 | 4,521 | 4,532 | 4,543 |
| 118 | 4,164 | 4,169 | 4,174 | 4,179 | 4,184 | 4,190 | 4,195 | 4,200 | 4,205 | 4,210 |
| 119 | 3,874 | 3,876 | 3,878 | 3,881 | 3,883 | 3,886 | 3,888 | 3,891 | 3,893 | 3,895 |
| 120 | 4,305 | 4,317 | 4,330 | 4,342 | 4,355 | 4,368 | 4,380 | 4,393 | 4,405 | 4,418 |
| 121 | 4,016 | 4,022 | 4,028 | 4,034 | 4,040 | 4,046 | 4,052 | 4,058 | 4,064 | 4,070 |
| 122 | 3,731 | 3,733 | 3,736 | 3,739 | 3,742 | 3,745 | 3,747 | 3,750 | 3,753 | 3,756 |
| 123 | 4,073 | 4,086 | 4,100 | 4,114 | 4,128 | 4,142 | 4,156 | 4,170 | 4,184 | 4,197 |
| 124 | 3,818 | 3,824 | 3,831 | 3,838 | 3,844 | 3,851 | 3,857 | 3,864 | 3,870 | 3,877 |
| 125 | 3,506 | 3,509 | 3,512 | 3,515 | 3,518 | 3,521 | 3,524 | 3,527 | 3,530 | 3,533 |
| 126 | 3,756 | 3,771 | 3,785 | 3,800 | 3,814 | 3,829 | 3,843 | 3,858 | 3,872 | 3,887 |
| 127 | 3,469 | 3,475 | 3,482 | 3,489 | 3,496 | 3,503 | 3,510 | 3,516 | 3,523 | 3,530 |
| 128 | 3,208 | 3,211 | 3,215 | 3,218 | 3,221 | 3,224 | 3,227 | 3,230 | 3,234 | 3,237 |
| 129 | 3,363 | 3,378 | 3,393 | 3,407 | 3,422 | 3,436 | 3,451 | 3,466 | 3,480 | 3,495 |
| 130 | 3,085 | 3,092 | 3,099 | 3,106 | 3,113 | 3,120 | 3,126 | 3,133 | 3,140 | 3,147 |
| 131 | 2,846 | 2,849 | 2,853 | 2,856 | 2,859 | 2,862 | 2,865 | 2,868 | 2,872 | 2,875 |
| 132 | 2,920 | 2,934 | 2,948 | 2,962 | 2,976 | 2,990 | 3,004 | 3,018 | 3,032 | 3,046 |
| 133 | 2,659 | 2,665 | 2,672 | 2,678 | 2,685 | 2,691 | 2,698 | 2,704 | 2,711 | 2,717 |
| 134 | 2,445 | 2,448 | 2,451 | 2,454 | 2,457 | 2,460 | 2,463 | 2,466 | 2,469 | 2,472 |
| 135 | 1,877 | 1,887 | 1,897 | 1,907 | 1,917 | 1,927 | 1,937 | 1,947 | 1,956 | 1,966 |
| 136 | 1,682 | 1,686 | 1,691 | 1,695 | 1,700 | 1,704 | 1,709 | 1,713 | 1,718 | 1,723 |
| 137 | 1,537 | 1,539 | 1,541 | 1,543 | 1,545 | 1,547 | 1,549 | 1,551 | 1,554 | 1,556 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 138 |  |  |  |  |  |  |  |  |  |  |
| 139 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 140 | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 141 | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 142 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 143 | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 144 | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 145 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 146 | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 147 | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 148 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 149 | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 150 | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 151 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 152 | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 153 | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 154 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 155 | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 156 | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 157 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 158 ¢ | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 159 ¢ | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 160 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 161 | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 162 | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 163 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 164 | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 165 | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 166 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 167 | \$630 | \$621 | \$613 | \$604 | \$595 | \$586 | \$578 | \$569 | \$560 | \$551 |
| 168 | \$874 | \$865 | \$855 | \$846 | \$836 | \$827 | \$817 | \$808 | \$798 | \$789 |
| 169 | \$960 | \$955 | \$950 | \$945 | \$940 | \$935 | \$930 | \$925 | \$920 | \$915 |
| 170 |  |  |  |  |  |  |  |  |  |  |
| 171 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 172 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 173 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 174 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 175 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 176 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 177 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 178 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 179 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 180 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 181 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 182 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 183 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 184 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 185 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 186 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 187 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 188 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 189 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 190 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 191 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 192 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 193 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 194 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 195 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 196 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 197 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 198 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 199 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 200 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 201 | \$37 | \$37 | \$37 | \$37 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 |
| 202 |  |  |  |  |  |  |  |  |  |  |
| 203 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 204 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |
| 205 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 206 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 207 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 208 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 209 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 210 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |
| 211 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 212 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 213 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |
| 214 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 215 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 216 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |
| 217 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 218 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 219 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |
| 220 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 221 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 222 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |
| 223 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 224 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 225 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |
| 226 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 227 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 228 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |
| 229 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 230 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 231 | \$606 | \$597 | \$589 | \$580 | \$572 | \$563 | \$555 | \$547 | \$538 | \$530 |
| 232 | \$840 | \$831 | \$822 | \$813 | \$804 | \$794 | \$785 | \$776 | \$767 | \$758 |
| 233 | \$923 | \$918 | \$913 | \$908 | \$903 | \$899 | \$894 | \$889 | \$884 | \$879 |
| 234 |  |  |  |  |  |  |  |  |  |  |
| 235 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 236 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 237 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 238 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 239 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 240 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 241 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 242 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 243 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 244 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 245 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 246 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 247 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 248 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 249 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 250 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 251 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 252 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 253 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 254 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 255 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 256 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 257 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 258 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 259 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 260 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 261 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 262 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 263 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 264 | \$37 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 265 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$42 | \$41 | \$41 |
| 266 |  |  |  |  |  |  |  |  |  |  |
| 267 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 268 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 269 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 270 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 271 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 272 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 273 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 274 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 275 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 276 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 277 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 313 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 314 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 315 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 316 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 317 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 318 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 319 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 320 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 321 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 322 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 323 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 324 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 325 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 326 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 327 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 328 ¢ | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 329 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 330 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 331 |  |  |  |  |  |  |  |  |  |  |
| 332 |  |  |  |  |  |  |  |  |  |  |
| 333 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 334 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 |
| 335 | \$17 | \$17 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 |
| 336 <br> 337 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 337 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 338 <br> 339 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 |
| 339 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$21 | \$21 | \$21 |
| 340 | \$13 | \$13 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 341 | \$19 | \$18 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 |
| 342 <br> 3 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 |
| 343 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 |
| 344 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 |
| 345 | \$23 | \$23 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 |
| 346 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 |
| 347 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 348 | \$24 | \$24 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$23 | \$23 |
| 349 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 350 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 |
| 351 | \$25 | \$25 | \$25 | \$25 | \$25 | \$25 | \$25 | \$25 | \$25 | \$24 |
| 352 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 |
| 353 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$21 |
| 354 | \$28 | \$28 | \$28 | \$27 | \$27 | \$27 | \$27 | \$27 | \$27 | \$27 |
| 355 | \$18 | \$18 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 | \$15 | \$15 |
| 356 | \$26 | \$25 | \$25 | \$25 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 |
| 357 | \$31 | \$31 | \$31 | \$31 | \$31 | \$31 | \$30 | \$30 | \$30 | \$30 |
| 358 \| | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 | \$18 | \$18 | \$18 | \$17 |
| 359 | \$30 | \$30 | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 360 | \$37 | \$36 | \$36 | \$36 | \$36 | \$36 | \$35 | \$35 | \$35 | \$35 |
| 361 | \$33 | \$32 | \$31 | \$31 | \$30 | \$29 | \$29 | \$28 | \$27 | \$27 |
| 362 | \$47 | \$47 | \$46 | \$46 | \$45 | \$44 | \$44 | \$43 | \$43 | \$42 |
| 363 | \$58 | \$58 | \$58 | \$57 | \$57 | \$57 | \$56 | \$56 | \$56 | \$55 |
| 364 |  |  |  |  |  |  |  |  |  |  |
| 365 |  |  |  |  |  |  |  |  |  |  |
| 366 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 367 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 368 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 369 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 370 | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 371 | \$ - | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 372 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 373 | \$ - | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 374 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 375 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 376 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 377 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 378 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 379 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 380 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 381 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 382 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 383 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 384 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 385 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 386 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 387 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 388 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 389 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 390 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 391 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 392 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 393 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 394 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 395 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 396 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 397 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 398 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 399 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 400 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 401 |  |  |  |  |  |  |  |  |  |  |
| 402 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 403 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 |
| 404 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 |
| 405 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 | 1.040 |
| 406 |  |  |  |  |  |  |  |  |  |  |
| 407 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 408 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 409 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 410 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 411 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 412 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 413 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 414 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 415 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 416 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 417 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 418 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |


|  | AO | AP | AQ |
| :---: | :--- | :--- | :--- |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |
| 8 |  |  |  |
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| 11 |  |  |  |
| 12 |  |  |  |
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| 13 |  |  |  |
| 14 |  |  |  |
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| 17 |  |  |  |
| 18 |  |  |  |
| 19 |  |  |  |
| 20 |  |  |  |
| 21 |  |  |  |
| 22 |  |  |  |
| 23 |  |  |  |
| 24 |  |  |  |
| 25 |  |  |  |
| 26 |  |  |  |
| 27 |  |  |  |
| 28 |  |  |  |
| 29 |  |  |  |
| 30 |  |  |  |
| 31 |  |  |  |
| 32 |  |  |  |
|  |  |  |  |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 33 |  |  |  |
| 34 |  |  |  |
| 35 |  |  |  |
| 36 |  |  |  |
| 37 |  |  |  |
| 38 |  |  |  |
| 39 |  |  |  |
| 40 | 2048 | 2049 | 2050 |
| 41 | 2.5\% | 2.5\% | 2.5\% |
| 42 | 4.0\% | 4.0\% | 4.0\% |
| 43 | 4.0\% | 4.0\% | 4.0\% |
| 44 | 4.0\% | 4.0\% | 4.0\% |
| 45 | 1.5\% | 1.5\% | 1.5\% |
| 46 | 1.5\% | 1.5\% | 1.5\% |
| 47 | 1.5\% | 1.5\% | 1.5\% |
| 48 | 3.5\% | 3.5\% | 3.5\% |
| 49 | 9.0\% | 9.0\% | 9.0\% |
| 50 | 9.0\% | 9.0\% | 9.0\% |
| 51 | 9.0\% | 9.0\% | 9.0\% |
| 52 | 6.3\% | 6.3\% | 6.3\% |
| 53 | 6.3\% | 6.3\% | 6.3\% |
| 54 | 6.3\% | 6.3\% | 6.3\% |
| 55 | 67.1\% | 67.1\% | 67.1\% |
| 56 | 67.1\% | 67.1\% | 67.1\% |
| 57 | 67.1\% | 67.1\% | 67.1\% |
| 58 | 25.7\% | 25.7\% | 25.7\% |
| 59 | 5.0\% | 5.0\% | 5.0\% |
| 60 | 5.0\% | 5.0\% | 5.0\% |
| 61 | 5.0\% | 5.0\% | 5.0\% |
| 62 | 2.4\% | 2.4\% | 2.4\% |
| 63 | 2.4\% | 2.4\% | 2.4\% |
| 64 | 2.4\% | 2.4\% | 2.4\% |
| 65 | 6.5\% | 6.5\% | 6.5\% |
| 66 | 6.5\% | 6.5\% | 6.5\% |
| 67 | 6.5\% | 6.5\% | 6.5\% |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 68 | 4.7\% | 4.7\% | 4.7\% |
| 69 | 4.7\% | 4.7\% | 4.7\% |
| 70 | 4.7\% | 4.7\% | 4.7\% |
| 71 |  |  |  |
| 72 |  |  |  |
| 73 |  |  |  |
| 74 |  |  |  |
| 75 | 2048 | 2049 | 2050 |
| 76 | 58\% | 58\% | 58\% |
| 77 | 55\% | 55\% | 55\% |
| 78 | 51\% | 51\% | 51\% |
| 79 | 54\% | 54\% | 54\% |
| 80 | 51\% | 51\% | 51\% |
| 81 | 47\% | 47\% | 47\% |
| 82 | 53\% | 53\% | 53\% |
| 83 | 49\% | 49\% | 49\% |
| 84 | 46\% | 46\% | 46\% |
| 85 | 52\% | 52\% | 52\% |
| 86 | 48\% | 48\% | 48\% |
| 87 | 44\% | 45\% | 45\% |
| 88 | 51\% | 51\% | 51\% |
| 89 | 47\% | 47\% | 47\% |
| 90 | 43\% | 43\% | 43\% |
| 91 | 48\% | 48\% | 48\% |
| 92 | 44\% | 44\% | 44\% |
| 93 | 40\% | 40\% | 40\% |
| 94 | 45\% | 45\% | 45\% |
| 95 | 40\% | 40\% | 41\% |
| 96 | 37\% | 37\% | 37\% |
| 97 | 40\% | 40\% | 40\% |
| 98 | 36\% | 36\% | 36\% |
| 99 | 33\% | 33\% | 33\% |
| 100 | 35\% | 35\% | 35\% |
| 101 | 31\% | 31\% | 31\% |
| 102 | 28\% | 28\% | 28\% |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 103 | 23\% | 23\% | 23\% |
| 104 | 20\% | 20\% | 20\% |
| 105 | 18\% | 18\% | 18\% |
| 106 |  |  |  |
| 107 | 2048 | 2049 | 2050 |
| 108 | 5,070 | 5,075 | 5,080 |
| 109 | 4,794 | 4,796 | 4,798 |
| 110 | 4,479 | 4,480 | 4,481 |
| 111 | 4,727 | 4,734 | 4,740 |
| 112 | 4,426 | 4,429 | 4,432 |
| 113 | 4,116 | 4,117 | 4,119 |
| 114 | 4,642 | 4,651 | 4,660 |
| 115 | 4,322 | 4,326 | 4,331 |
| 116 | 4,007 | 4,009 | 4,011 |
| 117 | 4,554 | 4,565 | 4,576 |
| 118 | 4,215 | 4,220 | 4,226 |
| 119 | 3,898 | 3,900 | 3,903 |
| 120 | 4,431 | 4,443 | 4,456 |
| 121 | 4,076 | 4,082 | 4,088 |
| 122 | 3,758 | 3,761 | 3,764 |
| 123 | 4,211 | 4,225 | 4,239 |
| 124 | 3,884 | 3,890 | 3,897 |
| 125 | 3,536 | 3,539 | 3,542 |
| 126 | 3,902 | 3,916 | 3,931 |
| 127 | 3,537 | 3,544 | 3,551 |
| 128 | 3,240 | 3,243 | 3,246 |
| 129 | 3,509 | 3,524 | 3,539 |
| 130 | 3,154 | 3,160 | 3,167 |
| 131 | 2,878 | 2,881 | 2,884 |
| 132 | 3,061 | 3,075 | 3,089 |
| 133 | 2,724 | 2,730 | 2,737 |
| 134 | 2,476 | 2,479 | 2,482 |
| 135 | 1,976 | 1,986 | 1,996 |
| 136 | 1,727 | 1,732 | 1,736 |
| 137 | 1,558 | 1,560 | 1,562 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 138 |  |  |  |
| 139 | 2048 | 2049 | 2050 |
| 140 | \$543 | \$534 | \$525 |
| 141 | \$779 | \$770 | \$760 |
| 142 | \$910 | \$905 | \$900 |
| 143 | \$543 | \$534 | \$525 |
| 144 | \$779 | \$770 | \$760 |
| 145 | \$910 | \$905 | \$900 |
| 146 | \$543 | \$534 | \$525 |
| 147 | \$779 | \$770 | \$760 |
| 148 | \$910 | \$905 | \$900 |
| 149 | \$543 | \$534 | \$525 |
| 150 | \$779 | \$770 | \$760 |
| 151 | \$910 | \$905 | \$900 |
| 152 | \$543 | \$534 | \$525 |
| 153 | \$779 | \$770 | \$760 |
| 154 | \$910 | \$905 | \$900 |
| 155 | \$543 | \$534 | \$525 |
| 156 | \$779 | \$770 | \$760 |
| 157 | \$910 | \$905 | \$900 |
| 158 | \$543 | \$534 | \$525 |
| 159 | \$779 | \$770 | \$760 |
| 160 | \$910 | \$905 | \$900 |
| 161 | \$543 | \$534 | \$525 |
| 162 | \$779 | \$770 | \$760 |
| 163 | \$910 | \$905 | \$900 |
| 164 | \$543 | \$534 | \$525 |
| 165 | \$779 | \$770 | \$760 |
| 166 | \$910 | \$905 | \$900 |
| 167 | \$543 | \$534 | \$525 |
| 168 | \$779 | \$770 | \$760 |
| 169 | \$910 | \$905 | \$900 |
| 170 |  |  |  |
| 171 | 2048 | 2049 | 2050 |
| 172 | \$21 | \$21 | \$20 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 173 | \$30 | \$30 | \$30 |
| 174 | \$35 | \$35 | \$35 |
| 175 | \$21 | \$21 | \$20 |
| 176 | \$30 | \$30 | \$30 |
| 177 | \$35 | \$35 | \$35 |
| 178 | \$21 | \$21 | \$20 |
| 179 | \$30 | \$30 | \$30 |
| 180 | \$35 | \$35 | \$35 |
| 181 | \$21 | \$21 | \$20 |
| 182 | \$30 | \$30 | \$30 |
| 183 | \$35 | \$35 | \$35 |
| 184 | \$21 | \$21 | \$20 |
| 185 | \$30 | \$30 | \$30 |
| 186 | \$35 | \$35 | \$35 |
| 187 | \$21 | \$21 | \$20 |
| 188 | \$30 | \$30 | \$30 |
| 189 | \$35 | \$35 | \$35 |
| 190 | \$21 | \$21 | \$20 |
| 191 | \$30 | \$30 | \$30 |
| 192 | \$35 | \$35 | \$35 |
| 193 | \$21 | \$21 | \$20 |
| 194 | \$30 | \$30 | \$30 |
| 195 | \$35 | \$35 | \$35 |
| 196 | \$21 | \$21 | \$20 |
| 197 | \$30 | \$30 | \$30 |
| 198 | \$35 | \$35 | \$35 |
| 199 | \$21 | \$21 | \$20 |
| 200 | \$30 | \$30 | \$30 |
| 201 | \$35 | \$35 | \$35 |
| 202 |  |  |  |
| 203 | 2048 | 2049 | 2050 |
| 204 | \$521 | \$513 | \$505 |
| 205 | \$749 | \$740 | \$730 |
| 206 | \$875 | \$870 | \$865 |
| 207 | \$521 | \$513 | \$505 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 208 | \$749 | \$740 | \$730 |
| 209 | \$875 | \$870 | \$865 |
| 210 | \$521 | \$513 | \$505 |
| 211 | \$749 | \$740 | \$730 |
| 212 | \$875 | \$870 | \$865 |
| 213 | \$521 | \$513 | \$505 |
| 214 | \$749 | \$740 | \$730 |
| 215 | \$875 | \$870 | \$865 |
| 216 | \$521 | \$513 | \$505 |
| 217 | \$749 | \$740 | \$730 |
| 218 | \$875 | \$870 | \$865 |
| 219 | \$521 | \$513 | \$505 |
| 220 | \$749 | \$740 | \$730 |
| 221 | \$875 | \$870 | \$865 |
| 222 | \$521 | \$513 | \$505 |
| 223 | \$749 | \$740 | \$730 |
| 224 | \$875 | \$870 | \$865 |
| 225 | \$521 | \$513 | \$505 |
| 226 | \$749 | \$740 | \$730 |
| 227 | \$875 | \$870 | \$865 |
| 228 | \$521 | \$513 | \$505 |
| 229 | \$749 | \$740 | \$730 |
| 230 | \$875 | \$870 | \$865 |
| 231 | \$521 | \$513 | \$505 |
| 232 | \$749 | \$740 | \$730 |
| 233 | \$875 | \$870 | \$865 |
| 234 |  |  |  |
| 235 | 2048 | 2049 | 2050 |
| 236 | \$25 | \$25 | \$24 |
| 237 | \$34 | \$33 | \$33 |
| 238 | \$41 | \$41 | \$41 |
| 239 | \$25 | \$25 | \$24 |
| 240 | \$34 | \$33 | \$33 |
| 241 | \$41 | \$41 | \$41 |
| 242 | \$25 | \$25 | \$24 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 243 | \$34 | \$33 | \$33 |
| 244 | \$41 | \$41 | \$41 |
| 245 | \$25 | \$25 | \$24 |
| 246 | \$34 | \$33 | \$33 |
| 247 | \$41 | \$41 | \$41 |
| 248 | \$25 | \$25 | \$24 |
| 249 | \$34 | \$33 | \$33 |
| 250 | \$41 | \$41 | \$41 |
| 251 | \$25 | \$25 | \$24 |
| 252 | \$34 | \$33 | \$33 |
| 253 | \$41 | \$41 | \$41 |
| 254 | \$25 | \$25 | \$24 |
| 255 | \$34 | \$33 | \$33 |
| 256 | \$41 | \$41 | \$41 |
| 257 | \$25 | \$25 | \$24 |
| 258 | \$34 | \$33 | \$33 |
| 259 | \$41 | \$41 | \$41 |
| 260 | \$25 | \$25 | \$24 |
| 261 | \$34 | \$33 | \$33 |
| 262 | \$41 | \$41 | \$41 |
| 263 | \$25 | \$25 | \$24 |
| 264 | \$34 | \$33 | \$33 |
| 265 | \$41 | \$41 | \$41 |
| 266 |  |  |  |
| 267 | 2048 | 2049 | 2050 |
| 268 | \$0 | \$0 | \$0 |
| 269 | \$0 | \$0 | \$0 |
| 270 | \$0 | \$0 | \$0 |
| 271 | \$0 | \$0 | \$0 |
| 272 | \$0 | \$0 | \$0 |
| 273 | \$0 | \$0 | \$0 |
| 274 | \$0 | \$0 | \$0 |
| 275 | \$0 | \$0 | \$0 |
| 276 | \$0 | \$0 | \$0 |
| 277 | \$0 | \$0 | \$0 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 278 | \$0 | \$0 | \$0 |
| 279 | \$0 | \$0 | \$0 |
| 280 | \$0 | \$0 | \$0 |
| 281 | \$0 | \$0 | \$0 |
| 282 | \$0 | \$0 | \$0 |
| 283 | \$0 | \$0 | \$0 |
| 284 | \$0 | \$0 | \$0 |
| 285 | \$0 | \$0 | \$0 |
| 286 | \$0 | \$0 | \$0 |
| 287 | \$0 | \$0 | \$0 |
| 288 | \$0 | \$0 | \$0 |
| 289 | \$0 | \$0 | \$0 |
| 290 | \$0 | \$0 | \$0 |
| 291 | \$0 | \$0 | \$0 |
| 292 | \$0 | \$0 | \$0 |
| 293 | \$0 | \$0 | \$0 |
| 294 | \$0 | \$0 | \$0 |
| 295 | \$0 | \$0 | \$0 |
| 296 | \$0 | \$0 | \$0 |
| 297 | \$0 | \$0 | \$0 |
| 298 |  |  |  |
| 299 |  |  |  |
| 300 | 2048 | 2049 | 2050 |
| 301 | \$0 | \$0 | \$0 |
| 302 | \$0 | \$0 | \$0 |
| 303 | \$0 | \$0 | \$0 |
| 304 | \$0 | \$0 | \$0 |
| 305 | \$0 | \$0 | \$0 |
| 306 | \$0 | \$0 | \$0 |
| 307 | \$0 | \$0 | \$0 |
| 308 | \$0 | \$0 | \$0 |
| 309 | \$0 | \$0 | \$0 |
| 310 | \$0 | \$0 | \$0 |
| 311 | \$0 | \$0 | \$0 |
| 312 | \$0 | \$0 | \$0 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 313 | \$0 | \$0 | \$0 |
| 314 | \$0 | \$0 | \$0 |
| 315 | \$0 | \$0 | \$0 |
| 316 | \$0 | \$0 | \$0 |
| 317 | \$0 | \$0 | \$0 |
| 318 | \$0 | \$0 | \$0 |
| 319 | \$0 | \$0 | \$0 |
| 320 | \$0 | \$0 | \$0 |
| 321 | \$0 | \$0 | \$0 |
| 322 | \$0 | \$0 | \$0 |
| 323 | \$0 | \$0 | \$0 |
| 324 | \$0 | \$0 | \$0 |
| 325 | \$0 | \$0 | \$0 |
| 326 | \$0 | \$0 | \$0 |
| 327 | \$0 | \$0 | \$0 |
| 328 | \$0 | \$0 | \$0 |
| 329 | \$0 | \$0 | \$0 |
| 330 | \$0 | \$0 | \$0 |
| 331 |  |  |  |
| 332 |  |  |  |
| 333 | 2048 | 2049 | 2050 |
| 334 | \$10 | \$10 | \$10 |
| 335 | \$15 | \$15 | \$15 |
| 336 | \$19 | \$19 | \$19 |
| 337 | \$11 | \$11 | \$11 |
| 338 | \$16 | \$16 | \$16 |
| 339 | \$21 | \$21 | \$21 |
| 340 | \$11 | \$11 | \$11 |
| 341 | \$17 | \$16 | \$16 |
| 342 | \$21 | \$21 | \$21 |
| 343 | \$11 | \$11 | \$11 |
| 344 | \$17 | \$17 | \$17 |
| 345 | \$22 | \$22 | \$22 |
| 346 | \$12 | \$11 | \$11 |
| 347 | \$18 | \$17 | \$17 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 348 | \$23 | \$23 | \$23 |
| 349 | \$12 | \$12 | \$12 |
| 350 | \$19 | \$18 | \$18 |
| 351 | \$24 | \$24 | \$24 |
| 352 | \$13 | \$13 | \$13 |
| 353 | \$20 | \$20 | \$20 |
| 354 | \$27 | \$26 | \$26 |
| 355 | \$15 | \$14 | \$14 |
| 356 | \$23 | \$23 | \$22 |
| 357 | \$30 | \$30 | \$30 |
| 358 | \$17 | \$17 | \$16 |
| 359 | \$26 | \$26 | \$26 |
| 360 | \$35 | \$35 | \$34 |
| 361 | \$26 | \$26 | \$25 |
| 362 | \$42 | \$41 | \$41 |
| 363 | \$55 | \$55 | \$55 |
| 364 |  |  |  |
| 365 |  |  |  |
| 366 | 2048 | 2049 | 2050 |
| 367 | 11.61\% | 11.61\% | 11.61\% |
| 368 | 11.61\% | 11.61\% | 11.61\% |
| 369 | 11.61\% | 11.61\% | 11.61\% |
| 370 | 0.0\% | 0.0\% | 0.0\% |
| 371 | \$ | \$ | \$ |
| 372 | \$ | \$ | \$ |
| 373 | \$ | \$ | \$ |
| 374 | 0.876 | 0.876 | 0.876 |
| 375 | 0.876 | 0.876 | 0.876 |
| 376 | 0.876 | 0.876 | 0.876 |
| 377 | 1.043 | 1.043 | 1.043 |
| 378 | 1.043 | 1.043 | 1.043 |
| 379 | 1.043 | 1.043 | 1.043 |
| 380 | 2048 | 2049 | 2050 |
| 381 | 0.9528 | 0.9528 | 0.9528 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 382 | 0.9078 | 0.9078 | 0.9078 |
| 383 | 0.8650 | 0.8650 | 0.8650 |
| 384 | 0.8241 | 0.8241 | 0.8241 |
| 385 | 0.7852 | 0.7852 | 0.7852 |
| 386 | 0.7482 | 0.7482 | 0.7482 |
| 387 | 2048 | 2049 | 2050 |
| 388 | 0.9528 | 0.9528 | 0.9528 |
| 389 | 0.9078 | 0.9078 | 0.9078 |
| 390 | 0.8650 | 0.8650 | 0.8650 |
| 391 | 0.8241 | 0.8241 | 0.8241 |
| 392 | 0.7852 | 0.7852 | 0.7852 |
| 393 | 0.7482 | 0.7482 | 0.7482 |
| 394 | 2048 | 2049 | 2050 |
| 395 | 0.9528 | 0.9528 | 0.9528 |
| 396 | 0.9078 | 0.9078 | 0.9078 |
| 397 | 0.8650 | 0.8650 | 0.8650 |
| 398 | 0.8241 | 0.8241 | 0.8241 |
| 399 | 0.7852 | 0.7852 | 0.7852 |
| 400 | 0.7482 | 0.7482 | 0.7482 |
| 401 |  |  |  |
| 402 | 2048 | 2049 | 2050 |
| 403 | 1.040 | 1.040 | 1.040 |
| 404 | 1.040 | 1.040 | 1.040 |
| 405 | 1.040 | 1.040 | 1.040 |
| 406 |  |  |  |
| 407 | 1.017 | 1.017 | 1.017 |
| 408 | 1.053 | 1.053 | 1.053 |
| 409 | 1.090 | 1.090 | 1.090 |
| 410 | 1.054 | 1.054 | 1.054 |
| 411 | 1.169 | 1.169 | 1.169 |
| 412 | 1.298 | 1.298 | 1.298 |
| 413 | 1.054 | 1.054 | 1.054 |
| 414 | 1.169 | 1.169 | 1.169 |
| 415 | 1.298 | 1.298 | 1.298 |
| 416 | 1.054 | 1.054 | 1.054 |


|  | AO | AP | AQ |
| :--- | ---: | ---: | ---: |
| 417 | 1.169 | 1.169 | 1.169 |
| 418 | 1.298 | 1.298 | 1.298 |



|  | A |  | CD | E F | G | H | I | J | K |  | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 |  |  |  |  |  |  |  | Index | Fraction |  | Construction | Construction |
| 32 |  |  |  |  |  |  |  | 0 |  | 100\% | 80\% | 20.0\% |
| 33 |  |  |  |  |  |  |  | 1 |  | 0\% | 80\% | 20.0\% |
| 34 |  |  |  |  |  |  |  | 2 |  | 0\% | 80\% | 20.0\% |
| 35 |  |  |  |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |  |  | 2020 |
| 37 |  |  |  |  |  |  |  |  | Inflation Rate |  | * | 2.5\% |
| 38 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  | Advanced | 4.0\% |
| 39 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  | Moderate | 4.0\% |
| 40 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  | Conservative | 4.0\% |
| 41 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  | Advanced | 1.5\% |
| 42 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  | Moderate | 1.5\% |
| 43 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  | Conservative | 1.5\% |
| 44 |  |  |  |  |  | ${ }_{0}$ |  |  | Interest During Construction - Nominal |  | * | 3.5\% |
| 45 |  |  |  |  |  | - |  |  | Rate of Return on Equity Nominal |  | Advanced | 9.0\% |
| 46 |  |  |  |  |  | $\stackrel{1}{C}$ |  |  | Rate of Return on Equity Nominal |  | Moderate | 9.0\% |
| 47 |  |  |  |  |  | I |  |  | Rate of Return on Equity Nominal |  | Conservative | 9.0\% |
| 48 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  | Advanced | 6.3\% |
| 49 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  | Moderate | 6.3\% |
| 50 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  | Conservative | 6.3\% |
| 51 |  |  |  |  |  |  |  | S | Debt Fraction |  | Advanced | 67.1\% |
| 52 |  |  |  |  |  |  |  |  | Debt Fraction |  | Moderate | 67.1\% |
| 53 |  |  |  |  |  |  |  |  | Debt Fraction |  | Conservative | 67.1\% |
| 54 |  |  |  |  |  |  |  |  | Tax Rate (Federal and State) |  | * | 25.7\% |
| 55 |  |  |  |  |  |  |  |  | WACC Nominal |  | Advanced | 5.0\% |
| 56 |  |  |  |  |  |  |  |  | WACC Nominal |  | Moderate | 5.0\% |
| 57 |  |  |  |  |  |  |  |  | WACC Nominal |  | Conservative | 5.0\% |
| 58 |  |  |  |  |  |  |  |  | WACC Real |  | Advanced | 2.4\% |
| 59 |  |  |  |  |  |  |  |  | WACC Real |  | Moderate | 2.4\% |
| 60 |  |  |  |  |  |  |  |  | WACC Real |  | Conservative | 2.4\% |
| 61 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |  | Advanced | 6.5\% |
| 62 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |  | Moderate | 6.5\% |
| 63 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |  | Conservative | 6.5\% |
| 64 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |  | Advanced | 4.7\% |
| 65 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |  | Moderate | 4.7\% |



|  | A |  | CD | EF | G | H | I | J | K | L | M |
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| 101 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Conservative | 43\% |
| 102 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Advanced | 39\% |
| 103 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Moderate | 39\% |
| 104 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Conservative | 39\% |
| 105 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Advanced | 46\% |
| 106 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Moderate | 46\% |
| 107 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Conservative | 46\% |
| 108 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Advanced | 37\% |
| 109 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Moderate | 37\% |
| 110 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Conservative | 37\% |
| 111 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Advanced | 42\% |
| 112 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Moderate | 42\% |
| 113 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Conservative | 42\% |
| 114 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Advanced | 38\% |
| 115 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Moderate | 38\% |
| 116 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Conservative | 38\% |
| 117 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Advanced | 44\% |
| 118 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Moderate | 44\% |
| 119 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Conservative | 44\% |
| 120 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Advanced | 36\% |
| 121 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Moderate | 36\% |
| 122 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Conservative | 36\% |
| 123 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Advanced | 40\% |
| 124 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Moderate | 40\% |
| 125 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Conservative | 40\% |
| 126 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Advanced | 36\% |
| 127 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Moderate | 36\% |
| 128 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Conservative | 36\% |
| 129 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Advanced | 42\% |
| 130 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Moderate | 42\% |
| 131 |  |  |  |  |  |  |  | Net Capacity Factor | Large DW - Class 5 | Conservative | 42\% |
| 132 |  |  |  |  |  |  |  | (\%) | Residential DW - Class 6 | Advanced | 33\% |
| 133 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Moderate | 33\% |
| 134 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Conservative | 33\% |
| 135 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Advanced | 37\% |


|  | A | B C | CD | E F | FG | H | I | J | K | L | M |
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| 136 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Moderate | 37\% |
| 137 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Conservative | 37\% |
| 138 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Advanced | 33\% |
| 139 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Moderate | 33\% |
| 140 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Conservative | 33\% |
| 141 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Advanced | 40\% |
| 142 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Moderate | 40\% |
| 143 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Conservative | 40\% |
| 144 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Advanced | 30\% |
| 145 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Moderate | 30\% |
| 146 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Conservative | 30\% |
| 147 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Advanced | 33\% |
| 148 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Moderate | 33\% |
| 149 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Conservative | 33\% |
| 150 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Advanced | 29\% |
| 151 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Moderate | 29\% |
| 152 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Conservative | 29\% |
| 153 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Advanced | 35\% |
| 154 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Moderate | 35\% |
| 155 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Conservative | 35\% |
| 156 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Advanced | 26\% |
| 157 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Moderate | 26\% |
| 158 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Conservative | 26\% |
| 159 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Advanced | 28\% |
| 160 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Moderate | 28\% |
| 161 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Conservative | 28\% |
| 162 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Advanced | 24\% |
| 163 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Moderate | 24\% |
| 164 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Conservative | 24\% |
| 165 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Advanced | 30\% |
| 166 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Moderate | 30\% |
| 167 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Conservative | 30\% |
| 168 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Advanced | 21\% |
| 169 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Moderate | 21\% |
| 170 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Conservative | 21\% |


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| 171 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Advanced | 22\% |
| 172 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Moderate | 22\% |
| 173 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Conservative | 22\% |
| 174 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Advanced | 20\% |
| 175 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Moderate | 20\% |
| 176 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Conservative | 20\% |
| 177 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Advanced | 25\% |
| 178 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Moderate | 25\% |
| 179 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Conservative | 25\% |
| 180 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Advanced | 21\% |
| 181 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Moderate | 21\% |
| 182 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Conservative | 21\% |
| 183 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Advanced | 13\% |
| 184 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Moderate | 13\% |
| 185 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Conservative | 13\% |
| 186 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Advanced | 11\% |
| 187 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Moderate | 11\% |
| 188 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Conservative | 11\% |
| 189 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Advanced | 15\% |
| 190 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Moderate | 15\% |
| 191 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Conservative | 15\% |
| 192 |  |  |  |  |  |  |  |  |  |  |  |
| 193 |  |  |  |  |  |  |  |  |  |  | 2020 |
| 194 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Advanced | 3,808 |
| 195 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Moderate | 3,808 |
| 196 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Conservative | 3,808 |
| 197 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Advanced | 4,318 |
| 198 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Moderate | 4,318 |
| 199 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Conservative | 4,318 |
| 200 |  |  |  |  |  |  |  |  | Midsize DW - Class 1 | Advanced | 3,993 |
| 201 |  |  |  |  |  |  |  |  | Midsize DW - Class 1 | Moderate | 3,993 |
| 202 |  |  |  |  |  |  |  |  | Midsize DW - Class 1 | Conservative | 3,993 |
| 203 |  |  |  |  |  |  |  |  | Large DW - Class 1 | Advanced | 4,553 |
| 204 |  |  |  |  |  |  |  |  | Large DW - Class 1 | Moderate | 4,553 |
| 205 |  |  |  |  |  |  |  |  | Large DW - Class 1 | Conservative | 4,553 |


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| 206 |  |  |  |  |  |  |  |  | Residential DW - Class 2 | Advanced | 3,500 |
| 207 |  |  |  |  |  |  |  |  | Residential DW - Class 2 | Moderate | 3,500 |
| 208 |  |  |  |  |  |  |  |  | Residential DW - Class 2 | Conservative | 3,500 |
| 209 |  |  |  |  |  |  |  |  | Commercial DW - Class 2 | Advanced | 3,918 |
| 210 |  |  |  |  |  |  |  |  | Commercial DW - Class 2 | Moderate | 3,918 |
| 211 |  |  |  |  |  |  |  |  | Commercial DW - Class 2 | Conservative | 3,918 |
| 212 |  |  |  |  |  |  |  |  | Midsize DW - Class 2 | Advanced | 3,595 |
| 213 |  |  |  |  |  |  |  |  | Midsize DW - Class 2 | Moderate | 3,595 |
| 214 |  |  |  |  |  |  |  |  | Midsize DW - Class 2 | Conservative | 3,595 |
| 215 |  |  |  |  |  |  |  |  | Large DW - Class 2 | Advanced | 4,168 |
| 216 |  |  |  |  |  |  |  |  | Large DW - Class 2 | Moderate | 4,168 |
| 217 |  |  |  |  |  |  |  |  | Large DW - Class 2 | Conservative | 4,168 |
| 218 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Advanced | 3,390 |
| 219 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Moderate | 3,390 |
| 220 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Conservative | 3,390 |
| 221 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Advanced | 3,781 |
| 222 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Moderate | 3,781 |
| 223 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Conservative | 3,781 |
| 224 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Advanced | 3,459 |
| 225 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Moderate | 3,459 |
| 226 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Conservative | 3,459 |
| 227 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Advanced | 4,033 |
| 228 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Moderate | 4,033 |
| 229 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Conservative | 4,033 |
| 230 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Advanced | 3,276 |
| 231 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Moderate | 3,276 |
| 232 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Conservative | 3,276 |
| 233 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Advanced | 3,639 |
| 234 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Moderate | 3,639 |
| 235 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Conservative | 3,639 |
| 236 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Advanced | 3,319 |
| 237 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Moderate | 3,319 |
| 238 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Conservative | 3,319 |
| 239 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Advanced | 3,894 |
| 240 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Moderate | 3,894 |


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| 241 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Conservative | 3,894 |
| 242 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Advanced | 3,134 |
| 243 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Moderate | 3,134 |
| 244 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Conservative | 3,134 |
| 245 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Advanced | 3,465 |
| 246 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Moderate | 3,465 |
| 247 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Conservative | 3,465 |
| 248 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Advanced | 3,149 |
| 249 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Moderate | 3,149 |
| 250 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Conservative | 3,149 |
| 251 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Advanced | 3,721 |
| 252 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Moderate | 3,721 |
| 253 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Conservative | 3,721 |
| 254 |  |  |  |  |  |  |  | (kWh/kW) | Residential DW - Class 6 | Advanced | 2,918 |
| 255 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Moderate | 2,918 |
| 256 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Conservative | 2,918 |
| 257 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Advanced | 3,206 |
| 258 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Moderate | 3,206 |
| 259 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Conservative | 3,206 |
| 260 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Advanced | 2,896 |
| 261 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Moderate | 2,896 |
| 262 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Conservative | 2,896 |
| 263 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Advanced | 3,463 |
| 264 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Moderate | 3,463 |
| 265 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Conservative | 3,463 |
| 266 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Advanced | 2,618 |
| 267 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Moderate | 2,618 |
| 268 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Conservative | 2,618 |
| 269 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Advanced | 2,847 |
| 270 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Moderate | 2,847 |
| 271 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Conservative | 2,847 |
| 272 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Advanced | 2,551 |
| 273 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Moderate | 2,551 |
| 274 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Conservative | 2,551 |
| 275 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Advanced | 3,099 |


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| 276 |  |  |  |  |  |  |  | Large DW - Class 7 | Moderate | 3,099 |
| 277 |  |  |  |  |  |  |  | Large DW - Class 7 | Conservative | 3,099 |
| 278 |  |  |  |  |  |  |  | Residential DW - Class 8 | Advanced | 2,255 |
| 279 |  |  |  |  |  |  |  | Residential DW - Class 8 | Moderate | 2,255 |
| 280 |  |  |  |  |  |  |  | Residential DW - Class 8 | Conservative | 2,255 |
| 281 |  |  |  |  |  |  |  | Commercial DW - Class 8 | Advanced | 2,413 |
| 282 |  |  |  |  |  |  |  | Commercial DW - Class 8 | Moderate | 2,413 |
| 283 |  |  |  |  |  |  |  | Commercial DW - Class 8 | Conservative | 2,413 |
| 284 |  |  |  |  |  |  |  | Midsize DW - Class 8 | Advanced | 2,140 |
| 285 |  |  |  |  |  |  |  | Midsize DW - Class 8 | Moderate | 2,140 |
| 286 |  |  |  |  |  |  |  | Midsize DW - Class 8 | Conservative | 2,140 |
| 287 |  |  |  |  |  |  |  | Large DW - Class 8 | Advanced | 2,655 |
| 288 |  |  |  |  |  |  |  | Large DW - Class 8 | Moderate | 2,655 |
| 289 |  |  |  |  |  |  |  | Large DW - Class 8 | Conservative | 2,655 |
| 290 |  |  |  |  |  |  |  | Residential DW - Class 9 | Advanced | 1,869 |
| 291 |  |  |  |  |  |  |  | Residential DW - Class 9 | Moderate | 1,869 |
| 292 |  |  |  |  |  |  |  | Residential DW - Class 9 | Conservative | 1,869 |
| 293 |  |  |  |  |  |  |  | Commercial DW - Class 9 | Advanced | 1,950 |
| 294 |  |  |  |  |  |  |  | Commercial DW - Class 9 | Moderate | 1,950 |
| 295 |  |  |  |  |  |  |  | Commercial DW - Class 9 | Conservative | 1,950 |
| 296 |  |  |  |  |  |  |  | Midsize DW - Class 9 | Advanced | 1,711 |
| 297 |  |  |  |  |  |  |  | Midsize DW - Class 9 | Moderate | 1,711 |
| 298 |  |  |  |  |  |  |  | Midsize DW - Class 9 | Conservative | 1,711 |
| 299 |  |  |  |  |  |  |  | Large DW - Class 9 | Advanced | 2,173 |
| 300 |  |  |  |  |  |  |  | Large DW - Class 9 | Moderate | 2,173 |
| 301 |  |  |  |  |  |  |  | Large DW - Class 9 | Conservative | 2,173 |
| 302 |  |  |  |  |  |  |  | Residential DW - Class 10 | Advanced | 1,817 |
| 303 |  |  |  |  |  |  |  | Residential DW - Class 10 | Moderate | 1,817 |
| 304 |  |  |  |  |  |  |  | Residential DW - Class 10 | Conservative | 1,817 |
| 305 |  |  |  |  |  |  |  | Commercial DW - Class 10 | Advanced | 1,146 |
| 306 |  |  |  |  |  |  |  | Commercial DW - Class 10 | Moderate | 1,146 |
| 307 |  |  |  |  |  |  |  | Commercial DW - Class 10 | Conservative | 1,146 |
| 308 |  |  |  |  |  |  |  | Midsize DW - Class 10 | Advanced | 988 |
| 309 |  |  |  |  |  |  |  | Midsize DW - Class 10 | Moderate | 988 |
| 310 |  |  |  |  |  |  |  | Midsize DW - Class 10 | Conservative | 988 |


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| 311 |  |  |  |  |  |  |  | Large DW - Class 10 | Advanced | 1,314 |
| 312 |  |  |  |  |  |  |  | Large DW - Class 10 | Moderate | 1,314 |
| 313 |  |  |  |  |  |  |  | Large DW - Class 10 | Conservative | 1,314 |
| 314 |  |  |  |  |  |  |  |  |  |  |
| 315 |  |  |  |  |  |  |  |  |  | 2020 |
| 316 |  |  |  |  |  |  |  | Residential DW - Class 1 | Advanced | \$5,863 |
| 317 |  |  |  |  |  |  |  | Residential DW - Class 1 | Moderate | \$5,863 |
| 318 |  |  |  |  |  |  |  | Residential DW - Class 1 | Conservative | \$5,863 |
| 319 |  |  |  |  |  |  |  | Commercial DW - Class 1 | Advanced | \$4,402 |
| 320 |  |  |  |  |  |  |  | Commercial DW - Class 1 | Moderate | \$4,402 |
| 321 |  |  |  |  |  |  |  | Commercial DW - Class 1 | Conservative | \$4,402 |
| 322 |  |  |  |  |  |  |  | Midsize DW - Class 1 | Advanced | \$2,858 |
| 323 |  |  |  |  |  |  |  | Midsize DW - Class 1 | Moderate | \$2,858 |
| 324 |  |  |  |  |  |  |  | Midsize DW - Class 1 | Conservative | \$2,858 |
| 325 |  |  |  |  |  |  |  | Large DW - Class 1 | Advanced | \$2,275 |
| 326 |  |  |  |  |  |  |  | Large DW - Class 1 | Moderate | \$2,275 |
| 327 |  |  |  |  |  |  |  | Large DW - Class 1 | Conservative | \$2,275 |
| 328 |  |  |  |  |  |  |  | Residential DW - Class 2 | Advanced | \$5,863 |
| 329 |  |  |  |  |  |  |  | Residential DW - Class 2 | Moderate | \$5,863 |
| 330 |  |  |  |  |  |  |  | Residential DW - Class 2 | Conservative | \$5,863 |
| 331 |  |  |  |  |  |  |  | Commercial DW - Class 2 | Advanced | \$4,402 |
| 332 |  |  |  |  |  |  |  | Commercial DW - Class 2 | Moderate | \$4,402 |
| 333 |  |  |  |  |  |  |  | Commercial DW - Class 2 | Conservative | \$4,402 |
| 334 |  |  |  |  |  |  |  | Midsize DW - Class 2 | Advanced | \$2,858 |
| 335 |  |  |  |  |  |  |  | Midsize DW - Class 2 | Moderate | \$2,858 |
| 336 |  |  |  |  |  |  |  | Midsize DW - Class 2 | Conservative | \$2,858 |
| 337 |  |  |  |  |  |  |  | Large DW - Class 2 | Advanced | \$2,275 |
| 338 |  |  |  |  |  |  |  | Large DW - Class 2 | Moderate | \$2,275 |
| 339 |  |  |  |  |  |  |  | Large DW - Class 2 | Conservative | \$2,275 |
| 340 |  |  |  |  |  |  |  | Residential DW - Class 3 | Advanced | \$5,863 |
| 341 |  |  |  |  |  |  |  | Residential DW - Class 3 | Moderate | \$5,863 |
| 342 |  |  |  |  |  |  |  | Residential DW - Class 3 | Conservative | \$5,863 |
| 343 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Advanced | \$4,402 |
| 344 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Moderate | \$4,402 |
| 345 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Conservative | \$4,402 |


|  | A |  | D ${ }^{\text {E }}$ | F\|G | H | I | J | K | L | M |
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| 346 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Advanced | \$2,858 |
| 347 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Moderate | \$2,858 |
| 348 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Conservative | \$2,858 |
| 349 |  |  |  |  |  |  |  | Large DW - Class 3 | Advanced | \$2,275 |
| 350 |  |  |  |  |  |  |  | Large DW - Class 3 | Moderate | \$2,275 |
| 351 |  |  |  |  |  |  |  | Large DW - Class 3 | Conservative | \$2,275 |
| 352 |  |  |  |  |  |  |  | Residential DW - Class 4 | Advanced | \$5,863 |
| 353 |  |  |  |  |  |  |  | Residential DW - Class 4 | Moderate | \$5,863 |
| 354 |  |  |  |  |  |  |  | Residential DW - Class 4 | Conservative | \$5,863 |
| 355 |  |  |  |  |  |  |  | Commercial DW - Class 4 | Advanced | \$4,402 |
| 356 |  |  |  |  |  |  |  | Commercial DW - Class 4 | Moderate | \$4,402 |
| 357 |  |  |  |  |  |  |  | Commercial DW - Class 4 | Conservative | \$4,402 |
| 358 |  |  |  |  |  |  |  | Midsize DW - Class 4 | Advanced | \$2,858 |
| 359 |  |  |  |  |  |  |  | Midsize DW - Class 4 | Moderate | \$2,858 |
| 360 |  |  |  |  |  |  |  | Midsize DW - Class 4 | Conservative | \$2,858 |
| 361 |  |  |  |  |  |  |  | Large DW - Class 4 | Advanced | \$2,275 |
| 362 |  |  |  |  |  |  |  | Large DW - Class 4 | Moderate | \$2,275 |
| 363 |  |  |  |  |  |  |  | Large DW - Class 4 | Conservative | \$2,275 |
| 364 |  |  |  |  |  |  |  | Residential DW - Class 5 | Advanced | \$5,863 |
| 365 |  |  |  |  |  |  |  | Residential DW - Class 5 | Moderate | \$5,863 |
| 366 |  |  |  |  |  |  |  | Residential DW - Class 5 | Conservative | \$5,863 |
| 367 |  |  |  |  |  |  |  | Commercial DW - Class 5 | Advanced | \$4,402 |
| 368 |  |  |  |  |  |  |  | Commercial DW - Class 5 | Moderate | \$4,402 |
| 369 |  |  |  |  |  |  |  | Commercial DW - Class 5 | Conservative | \$4,402 |
| 370 |  |  |  |  |  |  |  | Midsize DW - Class 5 | Advanced | \$2,858 |
| 371 |  |  |  |  |  |  |  | Midsize DW - Class 5 | Moderate | \$2,858 |
| 372 |  |  |  |  |  |  |  | Midsize DW - Class 5 | Conservative | \$2,858 |
| 373 |  |  |  |  |  |  |  | Large DW - Class 5 | Advanced | \$2,275 |
| 374 |  |  |  |  |  |  |  | Large DW - Class 5 | Moderate | \$2,275 |
| 375 |  |  |  |  |  |  | APEX (\$/kW) | Large DW - Class 5 | Conservative | \$2,275 |
| 376 |  |  |  |  |  |  | ( | Residential DW - Class 6 | Advanced | \$5,863 |
| 377 |  |  |  |  |  |  |  | Residential DW - Class 6 | Moderate | \$5,863 |
| 378 |  |  |  |  |  |  |  | Residential DW - Class 6 | Conservative | \$5,863 |
| 379 |  |  |  |  |  |  |  | Commercial DW - Class 6 | Advanced | \$4,402 |
| 380 |  |  |  |  |  |  |  | Commercial DW - Class 6 | Moderate | \$4,402 |


|  | A | B C | CDE | FG | H | I | J | K | L | M |
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| 381 |  |  |  |  |  |  |  | Commercial DW - Class 6 | Conservative | \$4,402 |
| 382 |  |  |  |  |  |  |  | Midsize DW - Class 6 | Advanced | \$2,858 |
| 383 |  |  |  |  |  |  |  | Midsize DW - Class 6 | Moderate | \$2,858 |
| 384 |  |  |  |  |  |  |  | Midsize DW - Class 6 | Conservative | \$2,858 |
| 385 |  |  |  |  |  |  |  | Large DW - Class 6 | Advanced | \$2,275 |
| 386 |  |  |  |  |  |  |  | Large DW - Class 6 | Moderate | \$2,275 |
| 387 |  |  |  |  |  |  |  | Large DW - Class 6 | Conservative | \$2,275 |
| 388 |  |  |  |  |  |  |  | Residential DW - Class 7 | Advanced | \$5,863 |
| 389 |  |  |  |  |  |  |  | Residential DW - Class 7 | Moderate | \$5,863 |
| 390 |  |  |  |  |  |  |  | Residential DW - Class 7 | Conservative | \$5,863 |
| 391 |  |  |  |  |  |  |  | Commercial DW - Class 7 | Advanced | \$4,402 |
| 392 |  |  |  |  |  |  |  | Commercial DW - Class 7 | Moderate | \$4,402 |
| 393 |  |  |  |  |  |  |  | Commercial DW - Class 7 | Conservative | \$4,402 |
| 394 |  |  |  |  |  |  |  | Midsize DW - Class 7 | Advanced | \$2,858 |
| 395 |  |  |  |  |  |  |  | Midsize DW - Class 7 | Moderate | \$2,858 |
| 396 |  |  |  |  |  |  |  | Midsize DW - Class 7 | Conservative | \$2,858 |
| 397 |  |  |  |  |  |  |  | Large DW - Class 7 | Advanced | \$2,275 |
| 398 |  |  |  |  |  |  |  | Large DW - Class 7 | Moderate | \$2,275 |
| 399 |  |  |  |  |  |  |  | Large DW - Class 7 | Conservative | \$2,275 |
| 400 |  |  |  |  |  |  |  | Residential DW - Class 8 | Advanced | \$5,863 |
| 401 |  |  |  |  |  |  |  | Residential DW - Class 8 | Moderate | \$5,863 |
| 402 |  |  |  |  |  |  |  | Residential DW - Class 8 | Conservative | \$5,863 |
| 403 |  |  |  |  |  |  |  | Commercial DW - Class 8 | Advanced | \$4,402 |
| 404 |  |  |  |  |  |  |  | Commercial DW - Class 8 | Moderate | \$4,402 |
| 405 |  |  |  |  |  |  |  | Commercial DW - Class 8 | Conservative | \$4,402 |
| 406 |  |  |  |  |  |  |  | Midsize DW - Class 8 | Advanced | \$2,858 |
| 407 |  |  |  |  |  |  |  | Midsize DW - Class 8 | Moderate | \$2,858 |
| 408 |  |  |  |  |  |  |  | Midsize DW - Class 8 | Conservative | \$2,858 |
| 409 |  |  |  |  |  |  |  | Large DW - Class 8 | Advanced | \$2,275 |
| 410 |  |  |  |  |  |  |  | Large DW - Class 8 | Moderate | \$2,275 |
| 411 |  |  |  |  |  |  |  | Large DW - Class 8 | Conservative | \$2,275 |
| 412 |  |  |  |  |  |  |  | Residential DW - Class 9 | Advanced | \$5,863 |
| 413 |  |  |  |  |  |  |  | Residential DW - Class 9 | Moderate | \$5,863 |
| 414 |  |  |  |  |  |  |  | Residential DW - Class 9 | Conservative | \$5,863 |
| 415 |  |  |  |  |  |  |  | Commercial DW - Class 9 | Advanced | \$4,402 |


|  | A |  | CD ${ }^{\text {d }}$ | E F | G | H | I | J | K | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 416 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Moderate | \$4,402 |
| 417 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Conservative | \$4,402 |
| 418 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Advanced | \$2,858 |
| 419 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Moderate | \$2,858 |
| 420 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Conservative | \$2,858 |
| 421 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Advanced | \$2,275 |
| 422 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Moderate | \$2,275 |
| 423 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Conservative | \$2,275 |
| 424 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Advanced | \$5,863 |
| 425 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Moderate | \$5,863 |
| 426 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Conservative | \$5,863 |
| 427 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Advanced | \$4,402 |
| 428 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Moderate | \$4,402 |
| 429 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Conservative | \$4,402 |
| 430 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Advanced | \$2,858 |
| 431 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Moderate | \$2,858 |
| 432 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Conservative | \$2,858 |
| 433 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Advanced | \$2,275 |
| 434 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Moderate | \$2,275 |
| 435 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Conservative | \$2,275 |
| 436 |  |  |  |  |  |  |  |  |  |  |  |
| 437 |  |  |  |  |  |  |  |  |  |  | 2020 |
| 438 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Advanced | \$141 |
| 439 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Moderate | \$141 |
| 440 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Conservative | \$141 |
| 441 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Advanced | \$106 |
| 442 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Moderate | \$106 |
| 443 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Conservative | \$106 |
| 444 |  |  |  |  |  | $\stackrel{\text { ¢ }}{\substack{0}}$ |  |  | Midsize DW - Class 1 | Advanced | \$69 |
| 445 |  |  |  |  |  | © |  |  | Midsize DW - Class 1 | Moderate | \$69 |
| 446 |  |  |  |  |  | 찐 |  |  | Midsize DW - Class 1 | Conservative | \$69 |
| 447 |  |  |  |  |  | ¢ |  |  | Large DW - Class 1 | Advanced | \$55 |
| 448 |  |  |  |  |  | O |  |  | Large DW - Class 1 | Moderate | \$55 |
| 449 |  |  |  |  |  | ส |  |  | Large DW - Class 1 | Conservative | \$55 |
| 450 |  |  |  |  |  | ¢ |  |  | Residential DW - Class 2 | Advanced | \$141 |


|  | A | B $C$ |  | EF | G | H | I | J | K | L | M |
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| 451 |  |  |  |  |  | $\stackrel{5}{0}$ |  |  | Residential DW - Class 2 | Moderate | \$141 |
| 452 |  |  |  |  |  | O |  |  | Residential DW - Class 2 | Conservative | \$141 |
| 453 |  |  |  |  |  | ส |  |  | Commercial DW - Class 2 | Advanced | \$106 |
| 454 |  |  |  |  |  | \% |  |  | Commercial DW - Class 2 | Moderate | \$106 |
| 455 |  |  |  |  |  | U |  |  | Commercial DW - Class 2 | Conservative | \$106 |
| 456 |  |  |  |  |  | - |  |  | Midsize DW - Class 2 | Advanced | \$69 |
| 457 |  |  |  |  |  | 일 |  |  | Midsize DW - Class 2 | Moderate | \$69 |
| 458 |  |  |  |  |  | - |  |  | Midsize DW - Class 2 | Conservative | \$69 |
| 459 |  |  |  |  |  | ! |  |  | Large DW - Class 2 | Advanced | \$55 |
| 460 |  |  |  |  |  | $\stackrel{C}{5}$ |  |  | Large DW - Class 2 | Moderate | \$55 |
| 461 |  |  |  |  |  | $\stackrel{\text { d }}{ }$ |  |  | Large DW - Class 2 | Conservative | \$55 |
| 462 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Advanced | \$141 |
| 463 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Moderate | \$141 |
| 464 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Conservative | \$141 |
| 465 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Advanced | \$106 |
| 466 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Moderate | \$106 |
| 467 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Conservative | \$106 |
| 468 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Advanced | \$69 |
| 469 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Moderate | \$69 |
| 470 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Conservative | \$69 |
| 471 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Advanced | \$55 |
| 472 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Moderate | \$55 |
| 473 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Conservative | \$55 |
| 474 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Advanced | \$141 |
| 475 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Moderate | \$141 |
| 476 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Conservative | \$141 |
| 477 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Advanced | \$106 |
| 478 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Moderate | \$106 |
| 479 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Conservative | \$106 |
| 480 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Advanced | \$69 |
| 481 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Moderate | \$69 |
| 482 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Conservative | \$69 |
| 483 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Advanced | \$55 |
| 484 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Moderate | \$55 |
| 485 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Conservative | \$55 |


|  | A |  | CD | EF | G | H | I | J | K | L | M |
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| 486 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Advanced | \$141 |
| 487 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Moderate | \$141 |
| 488 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Conservative | \$141 |
| 489 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Advanced | \$106 |
| 490 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Moderate | \$106 |
| 491 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Conservative | \$106 |
| 492 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Advanced | \$69 |
| 493 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Moderate | \$69 |
| 494 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Conservative | \$69 |
| 495 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Advanced | \$55 |
| 496 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Moderate | \$55 |
| 497 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Conservative | \$55 |
| 498 |  |  |  |  |  |  |  | (\$/kW) | Residential DW - Class 6 | Advanced | \$141 |
| 499 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Moderate | \$141 |
| 500 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Conservative | \$141 |
| 501 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Advanced | \$106 |
| 502 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Moderate | \$106 |
| 503 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Conservative | \$106 |
| 504 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Advanced | \$69 |
| 505 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Moderate | \$69 |
| 506 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Conservative | \$69 |
| 507 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Advanced | \$55 |
| 508 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Moderate | \$55 |
| 509 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Conservative | \$55 |
| 510 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Advanced | \$141 |
| 511 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Moderate | \$141 |
| 512 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Conservative | \$141 |
| 513 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Advanced | \$106 |
| 514 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Moderate | \$106 |
| 515 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Conservative | \$106 |
| 516 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Advanced | \$69 |
| 517 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Moderate | \$69 |
| 518 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Conservative | \$69 |
| 519 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Advanced | \$55 |
| 520 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Moderate | \$55 |



|  | A | B C | C | E F | FG | H | I | J | K | L | M |
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| 556 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Moderate | \$55 |
| 557 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Conservative | \$55 |
| 558 |  |  |  |  |  |  |  |  |  |  |  |
| 559 |  |  |  |  |  |  |  |  |  |  | 2020 |
| 560 | c |  |  |  |  |  |  |  | Residential DW - Class 1 | Advanced | \$5,722 |
| 561 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Moderate | \$5,722 |
| 562 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Conservative | \$5,722 |
| 563 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Advanced | \$4,297 |
| 564 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Moderate | \$4,297 |
| 565 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Conservative | \$4,297 |
| 566 |  |  |  |  |  |  |  |  | Midsize DW - Class 1 | Advanced | \$2,790 |
| 567 |  |  |  |  |  |  |  |  | Midsize DW - Class 1 | Moderate | \$2,790 |
| 568 |  |  |  |  |  |  |  |  | Midsize DW - Class 1 | Conservative | \$2,790 |
| 569 |  |  |  |  |  |  |  |  | Large DW - Class 1 | Advanced | \$2,221 |
| 570 |  |  |  |  |  |  |  |  | Large DW - Class 1 | Moderate | \$2,221 |
| 571 |  |  |  |  |  |  |  |  | Large DW - Class 1 | Conservative | \$2,221 |
| 572 |  |  |  |  |  |  |  |  | Residential DW - Class 2 | Advanced | \$5,722 |
| 573 |  |  |  |  |  |  |  |  | Residential DW - Class 2 | Moderate | \$5,722 |
| 574 |  |  |  |  |  |  |  |  | Residential DW - Class 2 | Conservative | \$5,722 |
| 575 |  |  |  |  |  |  |  |  | Commercial DW - Class 2 | Advanced | \$4,297 |
| 576 |  |  |  |  |  |  |  |  | Commercial DW - Class 2 | Moderate | \$4,297 |
| 577 |  |  |  |  |  |  |  |  | Commercial DW - Class 2 | Conservative | \$4,297 |
| 578 |  |  |  |  |  |  |  |  | Midsize DW - Class 2 | Advanced | \$2,790 |
| 579 |  |  |  |  |  |  |  |  | Midsize DW - Class 2 | Moderate | \$2,790 |
| 580 |  |  |  |  |  |  |  |  | Midsize DW - Class 2 | Conservative | \$2,790 |
| 581 |  |  |  |  |  |  |  |  | Large DW - Class 2 | Advanced | \$2,221 |
| 582 |  |  |  |  |  |  |  |  | Large DW - Class 2 | Moderate | \$2,221 |
| 583 |  |  |  |  |  |  |  |  | Large DW - Class 2 | Conservative | \$2,221 |
| 584 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Advanced | \$5,722 |
| 585 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Moderate | \$5,722 |
| 586 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Conservative | \$5,722 |
| 587 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Advanced | \$4,297 |
| 588 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Moderate | \$4,297 |
| 589 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Conservative | \$4,297 |
| 590 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Advanced | \$2,790 |


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| 591 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Moderate | \$2,790 |
| 592 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Conservative | \$2,790 |
| 593 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Advanced | \$2,221 |
| 594 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Moderate | \$2,221 |
| 595 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Conservative | \$2,221 |
| 596 | C |  |  |  |  |  |  |  | Residential DW - Class 4 | Advanced | \$5,722 |
| 597 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Moderate | \$5,722 |
| 598 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Conservative | \$5,722 |
| 599 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Advanced | \$4,297 |
| 600 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Moderate | \$4,297 |
| 601 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Conservative | \$4,297 |
| 602 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Advanced | \$2,790 |
| 603 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Moderate | \$2,790 |
| 604 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Conservative | \$2,790 |
| 605 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Advanced | \$2,221 |
| 606 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Moderate | \$2,221 |
| 607 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Conservative | \$2,221 |
| 608 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Advanced | \$5,722 |
| 609 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Moderate | \$5,722 |
| 610 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Conservative | \$5,722 |
| 611 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Advanced | \$4,297 |
| 612 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Moderate | \$4,297 |
| 613 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Conservative | \$4,297 |
| 614 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Advanced | \$2,790 |
| 615 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Moderate | \$2,790 |
| 616 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Conservative | \$2,790 |
| 617 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Advanced | \$2,221 |
| 618 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Moderate | \$2,221 |
| 619 |  |  |  |  |  |  |  | Overnight Capital | Large DW - Class 5 | Conservative | \$2,221 |
| 620 |  |  |  |  |  |  |  | Cost (\$/kW) | Residential DW - Class 6 | Advanced | \$5,722 |
| 621 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Moderate | \$5,722 |
| 622 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Conservative | \$5,722 |
| 623 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Advanced | \$4,297 |
| 624 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Moderate | \$4,297 |
| 625 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Conservative | \$4,297 |


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| 626 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Advanced | \$2,790 |
| 627 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Moderate | \$2,790 |
| 628 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Conservative | \$2,790 |
| 629 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Advanced | \$2,221 |
| 630 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Moderate | \$2,221 |
| 631 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Conservative | \$2,221 |
| 632 | C |  |  |  |  |  |  |  | Residential DW - Class 7 | Advanced | \$5,722 |
| 633 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Moderate | \$5,722 |
| 634 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Conservative | \$5,722 |
| 635 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Advanced | \$4,297 |
| 636 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Moderate | \$4,297 |
| 637 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Conservative | \$4,297 |
| 638 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Advanced | \$2,790 |
| 639 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Moderate | \$2,790 |
| 640 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Conservative | \$2,790 |
| 641 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Advanced | \$2,221 |
| 642 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Moderate | \$2,221 |
| 643 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Conservative | \$2,221 |
| 644 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Advanced | \$5,722 |
| 645 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Moderate | \$5,722 |
| 646 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Conservative | \$5,722 |
| 647 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Advanced | \$4,297 |
| 648 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Moderate | \$4,297 |
| 649 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Conservative | \$4,297 |
| 650 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Advanced | \$2,790 |
| 651 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Moderate | \$2,790 |
| 652 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Conservative | \$2,790 |
| 653 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Advanced | \$2,221 |
| 654 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Moderate | \$2,221 |
| 655 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Conservative | \$2,221 |
| 656 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Advanced | \$5,722 |
| 657 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Moderate | \$5,722 |
| 658 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Conservative | \$5,722 |
| 659 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Advanced | \$4,297 |
| 660 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Moderate | \$4,297 |


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| 661 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Conservative | \$4,297 |
| 662 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Advanced | \$2,790 |
| 663 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Moderate | \$2,790 |
| 664 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Conservative | \$2,790 |
| 665 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Advanced | \$2,221 |
| 666 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Moderate | \$2,221 |
| 667 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Conservative | \$2,221 |
| 668 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Advanced | \$5,722 |
| 669 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Moderate | \$5,722 |
| 670 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Conservative | \$5,722 |
| 671 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Advanced | \$4,297 |
| 672 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Moderate | \$4,297 |
| 673 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Conservative | \$4,297 |
| 674 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Advanced | \$2,790 |
| 675 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Moderate | \$2,790 |
| 676 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Conservative | \$2,790 |
| 677 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Advanced | \$2,221 |
| 678 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Moderate | \$2,221 |
| 679 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Conservative | \$2,221 |
| 680 |  |  |  |  |  |  |  |  |  |  |  |
| 681 |  |  |  |  |  |  |  |  |  |  | 2020 |
| 682 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Advanced | \$35 |
| 683 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Moderate | \$35 |
| 684 |  |  |  |  |  |  |  |  | Residential DW - Class 1 | Conservative | \$35 |
| 685 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Advanced | \$35 |
| 686 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Moderate | \$35 |
| 687 |  |  |  |  |  |  |  |  | Commercial DW - Class 1 | Conservative | \$35 |
| 688 |  |  |  |  |  |  |  |  | Midsize DW - Class 1 | Advanced | \$35 |
| 689 |  |  |  |  |  |  |  |  | Midsize DW - Class 1 | Moderate | \$35 |
| 690 |  |  |  |  |  |  |  |  | Midsize DW - Class 1 | Conservative | \$35 |
| 691 |  |  |  |  |  |  |  |  | Large DW - Class 1 | Advanced | \$35 |
| 692 |  |  |  |  |  |  |  |  | Large DW - Class 1 | Moderate | \$35 |
| 693 |  |  |  |  |  |  |  |  | Large DW - Class 1 | Conservative | \$35 |
| 694 |  |  |  |  |  |  |  |  | Residential DW - Class 2 | Advanced | \$35 |
| 695 |  |  |  |  |  |  |  |  | Residential DW - Class 2 | Moderate | \$35 |


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| 696 |  |  |  |  |  |  |  | Residential DW - Class 2 | Conservative | \$35 |
| 697 |  |  |  |  |  |  |  | Commercial DW - Class 2 | Advanced | \$35 |
| 698 |  |  |  |  |  |  |  | Commercial DW - Class 2 | Moderate | \$35 |
| 699 |  |  |  |  |  |  |  | Commercial DW - Class 2 | Conservative | \$35 |
| 700 |  |  |  |  |  |  |  | Midsize DW - Class 2 | Advanced | \$35 |
| 701 |  |  |  |  |  |  |  | Midsize DW - Class 2 | Moderate | \$35 |
| 702 |  |  |  |  |  |  |  | Midsize DW - Class 2 | Conservative | \$35 |
| 703 |  |  |  |  |  |  |  | Large DW - Class 2 | Advanced | \$35 |
| 704 |  |  |  |  |  |  |  | Large DW - Class 2 | Moderate | \$35 |
| 705 |  |  |  |  |  |  |  | Large DW - Class 2 | Conservative | \$35 |
| 706 |  |  |  |  |  |  |  | Residential DW - Class 3 | Advanced | \$35 |
| 707 |  |  |  |  |  |  |  | Residential DW - Class 3 | Moderate | \$35 |
| 708 |  |  |  |  |  |  |  | Residential DW - Class 3 | Conservative | \$35 |
| 709 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Advanced | \$35 |
| 710 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Moderate | \$35 |
| 711 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Conservative | \$35 |
| 712 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Advanced | \$35 |
| 713 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Moderate | \$35 |
| 714 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Conservative | \$35 |
| 715 |  |  |  |  |  |  |  | Large DW - Class 3 | Advanced | \$35 |
| 716 |  |  |  |  |  |  |  | Large DW - Class 3 | Moderate | \$35 |
| 717 |  |  |  |  |  |  |  | Large DW - Class 3 | Conservative | \$35 |
| 718 |  |  |  |  |  |  |  | Residential DW - Class 4 | Advanced | \$35 |
| 719 |  |  |  |  |  |  |  | Residential DW - Class 4 | Moderate | \$35 |
| 720 |  |  |  |  |  |  |  | Residential DW - Class 4 | Conservative | \$35 |
| 721 |  |  |  |  |  |  |  | Commercial DW - Class 4 | Advanced | \$35 |
| 722 |  |  |  |  |  |  |  | Commercial DW - Class 4 | Moderate | \$35 |
| 723 |  |  |  |  |  |  |  | Commercial DW - Class 4 | Conservative | \$35 |
| 724 |  |  |  |  |  |  |  | Midsize DW - Class 4 | Advanced | \$35 |
| 725 |  |  |  |  |  |  |  | Midsize DW - Class 4 | Moderate | \$35 |
| 726 |  |  |  |  |  |  |  | Midsize DW - Class 4 | Conservative | \$35 |
| 727 |  |  |  |  |  |  |  | Large DW - Class 4 | Advanced | \$35 |
| 728 |  |  |  |  |  |  |  | Large DW - Class 4 | Moderate | \$35 |
| 729 |  |  |  |  |  |  |  | Large DW - Class 4 | Conservative | \$35 |
| 730 |  |  |  |  |  |  |  | Residential DW - Class 5 | Advanced | \$35 |


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| 731 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Moderate | \$35 |
| 732 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Conservative | \$35 |
| 733 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Advanced | \$35 |
| 734 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Moderate | \$35 |
| 735 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Conservative | \$35 |
| 736 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Advanced | \$35 |
| 737 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Moderate | \$35 |
| 738 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Conservative | \$35 |
| 739 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Advanced | \$35 |
| 740 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Moderate | \$35 |
| 741 |  |  |  |  |  |  |  | xed Operation and | Large DW - Class 5 | Conservative | \$35 |
| 742 |  |  |  |  |  |  |  | Expenses (\$/kW-yr) | Residential DW - Class 6 | Advanced | \$35 |
| 743 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Moderate | \$35 |
| 744 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Conservative | \$35 |
| 745 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Advanced | \$35 |
| 746 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Moderate | \$35 |
| 747 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Conservative | \$35 |
| 748 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Advanced | \$35 |
| 749 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Moderate | \$35 |
| 750 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Conservative | \$35 |
| 751 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Advanced | \$35 |
| 752 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Moderate | \$35 |
| 753 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Conservative | \$35 |
| 754 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Advanced | \$35 |
| 755 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Moderate | \$35 |
| 756 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Conservative | \$35 |
| 757 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Advanced | \$35 |
| 758 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Moderate | \$35 |
| 759 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Conservative | \$35 |
| 760 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Advanced | \$35 |
| 761 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Moderate | \$35 |
| 762 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Conservative | \$35 |
| 763 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Advanced | \$35 |
| 764 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Moderate | \$35 |
| 765 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Conservative | \$35 |


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| 766 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Advanced | \$35 |
| 767 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Moderate | \$35 |
| 768 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Conservative | \$35 |
| 769 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Advanced | \$35 |
| 770 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Moderate | \$35 |
| 771 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Conservative | \$35 |
| 772 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Advanced | \$35 |
| 773 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Moderate | \$35 |
| 774 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Conservative | \$35 |
| 775 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Advanced | \$35 |
| 776 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Moderate | \$35 |
| 777 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Conservative | \$35 |
| 778 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Advanced | \$35 |
| 779 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Moderate | \$35 |
| 780 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Conservative | \$35 |
| 781 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Advanced | \$35 |
| 782 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Moderate | \$35 |
| 783 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Conservative | \$35 |
| 784 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Advanced | \$35 |
| 785 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Moderate | \$35 |
| 786 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Conservative | \$35 |
| 787 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Advanced | \$35 |
| 788 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Moderate | \$35 |
| 789 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Conservative | \$35 |
| 790 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Advanced | \$35 |
| 791 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Moderate | \$35 |
| 792 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Conservative | \$35 |
| 793 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Advanced | \$35 |
| 794 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Moderate | \$35 |
| 795 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Conservative | \$35 |
| 796 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Advanced | \$35 |
| 797 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Moderate | \$35 |
| 798 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Conservative | \$35 |
| 799 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Advanced | \$35 |
| 800 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Moderate | \$35 |


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| 801 |  |  |  |  |  |  |  | Large DW - Class 10 | Conservative | \$35 |
| 802 |  |  |  |  |  |  |  |  |  |  |
| 803 |  |  |  |  |  |  |  |  |  | 2020 |
| 804 |  |  |  |  |  |  |  | Residential DW - Class 1 | Advanced | \$0 |
| 805 |  |  |  |  |  |  |  | Residential DW - Class 1 | Moderate | \$0 |
| 806 |  |  |  |  |  |  |  | Residential DW - Class 1 | Conservative | \$0 |
| 807 |  |  |  |  |  |  |  | Commercial DW - Class 1 | Advanced | \$0 |
| 808 |  |  |  |  |  |  |  | Commercial DW - Class 1 | Moderate | \$0 |
| 809 |  |  |  |  |  |  |  | Commercial DW - Class 1 | Conservative | \$0 |
| 810 |  |  |  |  |  |  |  | Midsize DW - Class 1 | Advanced | \$0 |
| 811 |  |  |  |  |  |  |  | Midsize DW - Class 1 | Moderate | \$0 |
| 812 |  |  |  |  |  |  |  | Midsize DW - Class 1 | Conservative | \$0 |
| 813 |  |  |  |  |  |  |  | Large DW - Class 1 | Advanced | \$0 |
| 814 |  |  |  |  |  |  |  | Large DW - Class 1 | Moderate | \$0 |
| 815 |  |  |  |  |  |  |  | Large DW - Class 1 | Conservative | \$0 |
| 816 |  |  |  |  |  |  |  | Residential DW - Class 2 | Advanced | \$0 |
| 817 |  |  |  |  |  |  |  | Residential DW - Class 2 | Moderate | \$0 |
| 818 |  |  |  |  |  |  |  | Residential DW - Class 2 | Conservative | \$0 |
| 819 |  |  |  |  |  |  |  | Commercial DW - Class 2 | Advanced | \$0 |
| 820 |  |  |  |  |  |  |  | Commercial DW - Class 2 | Moderate | \$0 |
| 821 |  |  |  |  |  |  |  | Commercial DW - Class 2 | Conservative | \$0 |
| 822 |  |  |  |  |  |  |  | Midsize DW - Class 2 | Advanced | \$0 |
| 823 |  |  |  |  |  |  |  | Midsize DW - Class 2 | Moderate | \$0 |
| 824 |  |  |  |  |  |  |  | Midsize DW - Class 2 | Conservative | \$0 |
| 825 |  |  |  |  |  |  |  | Large DW - Class 2 | Advanced | \$0 |
| 826 |  |  |  |  |  |  |  | Large DW - Class 2 | Moderate | \$0 |
| 827 |  |  |  |  |  |  |  | Large DW - Class 2 | Conservative | \$0 |
| 828 |  |  |  |  |  |  |  | Residential DW - Class 3 | Advanced | \$0 |
| 829 |  |  |  |  |  |  |  | Residential DW - Class 3 | Moderate | \$0 |
| 830 |  |  |  |  |  |  |  | Residential DW - Class 3 | Conservative | \$0 |
| 831 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Advanced | \$0 |
| 832 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Moderate | \$0 |
| 833 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Conservative | \$0 |
| 834 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Advanced | \$0 |
| 835 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Moderate | \$0 |


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| 836 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Conservative | \$0 |
| 837 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Advanced | \$0 |
| 838 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Moderate | \$0 |
| 839 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Conservative | \$0 |
| 840 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Advanced | \$0 |
| 841 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Moderate | \$0 |
| 842 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Conservative | \$0 |
| 843 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Advanced | \$0 |
| 844 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Moderate | \$0 |
| 845 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Conservative | \$0 |
| 846 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Advanced | \$0 |
| 847 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Moderate | \$0 |
| 848 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Conservative | \$0 |
| 849 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Advanced | \$0 |
| 850 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Moderate | \$0 |
| 851 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Conservative | \$0 |
| 852 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Advanced | \$0 |
| 853 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Moderate | \$0 |
| 854 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Conservative | \$0 |
| 855 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Advanced | \$0 |
| 856 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Moderate | \$0 |
| 857 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Conservative | \$0 |
| 858 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Advanced | \$0 |
| 859 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Moderate | \$0 |
| 860 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Conservative | \$0 |
| 861 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Advanced | \$0 |
| 862 |  |  |  |  |  |  |  |  | Large DW - Class 5 | Moderate | \$0 |
| 863 |  |  |  |  |  |  |  | and Maintenance | Large DW - Class 5 | Conservative | \$0 |
| 864 |  |  |  |  |  |  |  | Expenses (\$/MWh) | Residential DW - Class 6 | Advanced | \$0 |
| 865 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Moderate | \$0 |
| 866 |  |  |  |  |  |  |  |  | Residential DW - Class 6 | Conservative | \$0 |
| 867 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Advanced | \$0 |
| 868 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Moderate | \$0 |
| 869 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Conservative | \$0 |
| 870 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Advanced | \$0 |


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| 871 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Moderate | \$0 |
| 872 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Conservative | \$0 |
| 873 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Advanced | \$0 |
| 874 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Moderate | \$0 |
| 875 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Conservative | \$0 |
| 876 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Advanced | \$0 |
| 877 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Moderate | \$0 |
| 878 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Conservative | \$0 |
| 879 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Advanced | \$0 |
| 880 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Moderate | \$0 |
| 881 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Conservative | \$0 |
| 882 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Advanced | \$0 |
| 883 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Moderate | \$0 |
| 884 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Conservative | \$0 |
| 885 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Advanced | \$0 |
| 886 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Moderate | \$0 |
| 887 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Conservative | \$0 |
| 888 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Advanced | \$0 |
| 889 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Moderate | \$0 |
| 890 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Conservative | \$0 |
| 891 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Advanced | \$0 |
| 892 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Moderate | \$0 |
| 893 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Conservative | \$0 |
| 894 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Advanced | \$0 |
| 895 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Moderate | \$0 |
| 896 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Conservative | \$0 |
| 897 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Advanced | \$0 |
| 898 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Moderate | \$0 |
| 899 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Conservative | \$0 |
| 900 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Advanced | \$0 |
| 901 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Moderate | \$0 |
| 902 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Conservative | \$0 |
| 903 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Advanced | \$0 |
| 904 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Moderate | \$0 |
| 905 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Conservative | \$0 |



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| 941 |  |  |  |  |  |  |  |  | Residential DW - Class 2 | Moderate | \$0 |
| 942 |  |  |  |  |  |  |  |  | Residential DW-Class 2 | Conservative | \$0 |
| 943 |  |  |  |  |  |  |  |  | Commercial DW - Class 2 | Advanced | \$0 |
| 944 |  |  |  |  |  |  |  |  | Commercial DW - Class 2 | Moderate | \$0 |
| 945 |  |  |  |  |  |  |  |  | Commercial DW - Class 2 | Conservative | \$0 |
| 946 |  |  |  |  |  |  |  |  | Midsize DW - Class 2 | Advanced | \$0 |
| 947 |  |  |  |  |  |  |  |  | Midsize DW - Class 2 | Moderate | \$0 |
| 948 |  |  |  |  |  |  |  |  | Midsize DW - Class 2 | Conservative | \$0 |
| 949 |  |  |  |  |  |  |  |  | Large DW - Class 2 | Advanced | \$0 |
| 950 |  |  |  |  |  |  |  |  | Large DW - Class 2 | Moderate | \$0 |
| 951 |  |  |  |  |  |  |  |  | Large DW - Class 2 | Conservative | \$0 |
| 952 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Advanced | \$0 |
| 953 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Moderate | \$0 |
| 954 |  |  |  |  |  |  |  |  | Residential DW - Class 3 | Conservative | \$0 |
| 955 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Advanced | \$0 |
| 956 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Moderate | \$0 |
| 957 |  |  |  |  |  |  |  |  | Commercial DW - Class 3 | Conservative | \$0 |
| 958 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Advanced | \$0 |
| 959 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Moderate | \$0 |
| 960 |  |  |  |  |  |  |  |  | Midsize DW - Class 3 | Conservative | \$0 |
| 961 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Advanced | \$0 |
| 962 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Moderate | \$0 |
| 963 |  |  |  |  |  |  |  |  | Large DW - Class 3 | Conservative | \$0 |
| 964 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Advanced | \$0 |
| 965 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Moderate | \$0 |
| 966 |  |  |  |  |  |  |  |  | Residential DW - Class 4 | Conservative | \$0 |
| 967 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Advanced | \$0 |
| 968 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Moderate | \$0 |
| 969 |  |  |  |  |  |  |  |  | Commercial DW - Class 4 | Conservative | \$0 |
| 970 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Advanced | \$0 |
| 971 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Moderate | \$0 |
| 972 |  |  |  |  |  |  |  |  | Midsize DW - Class 4 | Conservative | \$0 |
| 973 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Advanced | \$0 |
| 974 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Moderate | \$0 |
| 975 |  |  |  |  |  |  |  |  | Large DW - Class 4 | Conservative | \$0 |


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| 976 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Advanced | \$0 |
| 977 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Moderate | \$0 |
| 978 |  |  |  |  |  |  |  |  | Residential DW - Class 5 | Conservative | \$0 |
| 979 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Advanced | \$0 |
| 980 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Moderate | \$0 |
| 981 |  |  |  |  |  |  |  |  | Commercial DW - Class 5 | Conservative | \$0 |
| 982 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Advanced | \$0 |
| 983 |  |  |  |  |  |  |  |  | Midsize DW - Class 5 | Moderate | \$0 |
| 984 |  |  |  |  |  | 0 |  |  | Midsize DW - Class 5 | Conservative | \$0 |
| 985 |  |  |  |  |  | 0 |  |  | Large DW - Class 5 | Advanced | \$0 |
| 986 |  |  |  |  |  | 0 |  |  | Large DW - Class 5 | Moderate | \$0 |
| 987 |  |  |  |  |  | 은 |  | Grid Connection | Large DW - Class 5 | Conservative | \$0 |
| 988 |  |  |  |  |  | U |  | Costs (GCC) (\$/kW) | Residential DW - Class 6 | Advanced | \$0 |
| 989 |  |  |  |  |  | ${ }_{0}$ |  |  | Residential DW - Class 6 | Moderate | \$0 |
| 990 |  |  |  |  |  | ¢ |  |  | Residential DW - Class 6 | Conservative | \$0 |
| 991 |  |  |  |  |  | 은 |  |  | Commercial DW - Class 6 | Advanced | \$0 |
| 992 |  |  |  |  |  | - |  |  | Commercial DW - Class 6 | Moderate | \$0 |
| 993 |  |  |  |  |  |  |  |  | Commercial DW - Class 6 | Conservative | \$0 |
| 994 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Advanced | \$0 |
| 995 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Moderate | \$0 |
| 996 |  |  |  |  |  |  |  |  | Midsize DW - Class 6 | Conservative | \$0 |
| 997 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Advanced | \$0 |
| 998 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Moderate | \$0 |
| 999 |  |  |  |  |  |  |  |  | Large DW - Class 6 | Conservative | \$0 |
| 1000 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Advanced | \$0 |
| 1001 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Moderate | \$0 |
| 1002 |  |  |  |  |  |  |  |  | Residential DW - Class 7 | Conservative | \$0 |
| 1003 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Advanced | \$0 |
| 1004 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Moderate | \$0 |
| 1005 |  |  |  |  |  |  |  |  | Commercial DW - Class 7 | Conservative | \$0 |
| 1006 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Advanced | \$0 |
| 1007 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Moderate | \$0 |
| 1008 |  |  |  |  |  |  |  |  | Midsize DW - Class 7 | Conservative | \$0 |
| 1009 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Advanced | \$0 |
| 1010 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Moderate | \$0 |


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| 1011 |  |  |  |  |  |  |  |  | Large DW - Class 7 | Conservative | \$0 |
| 1012 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Advanced | \$0 |
| 1013 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Moderate | \$0 |
| 1014 |  |  |  |  |  |  |  |  | Residential DW - Class 8 | Conservative | \$0 |
| 1015 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Advanced | \$0 |
| 1016 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Moderate | \$0 |
| 1017 |  |  |  |  |  |  |  |  | Commercial DW - Class 8 | Conservative | \$0 |
| 1018 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Advanced | \$0 |
| 1019 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Moderate | \$0 |
| 1020 |  |  |  |  |  |  |  |  | Midsize DW - Class 8 | Conservative | \$0 |
| 1021 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Advanced | \$0 |
| 1022 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Moderate | \$0 |
| 1023 |  |  |  |  |  |  |  |  | Large DW - Class 8 | Conservative | \$0 |
| 1024 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Advanced | \$0 |
| 1025 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Moderate | \$0 |
| 1026 |  |  |  |  |  |  |  |  | Residential DW - Class 9 | Conservative | \$0 |
| 1027 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Advanced | \$0 |
| 1028 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Moderate | \$0 |
| 1029 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Conservative | \$0 |
| 1030 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Advanced | \$0 |
| 1031 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Moderate | \$0 |
| 1032 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Conservative | \$0 |
| 1033 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Advanced | \$0 |
| 1034 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Moderate | \$0 |
| 1035 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Conservative | \$0 |
| 1036 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Advanced | \$0 |
| 1037 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Moderate | \$0 |
| 1038 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Conservative | \$0 |
| 1039 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Advanced | \$0 |
| 1040 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Moderate | \$0 |
| 1041 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Conservative | \$0 |
| 1042 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Advanced | \$0 |
| 1043 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Moderate | \$0 |
| 1044 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Conservative | \$0 |
| 1045 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Advanced | \$0 |



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| 1081 |  |  |  |  |  |  |  | Commercial DW - Class 3 | Conservative | \$66 |
| 1082 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Advanced | \$51 |
| 1083 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Moderate | \$51 |
| 1084 |  |  |  |  |  |  |  | Midsize DW - Class 3 | Conservative | \$51 |
| 1085 |  |  |  |  |  |  |  | Large DW - Class 3 | Advanced | \$36 |
| 1086 |  |  |  |  |  |  |  | Large DW - Class 3 | Moderate | \$36 |
| 1087 |  |  |  |  |  |  |  | Large DW - Class 3 | Conservative | \$36 |
| 1088 |  |  |  |  |  |  |  | Residential DW - Class 4 | Advanced | \$99 |
| 1089 |  |  |  |  |  |  |  | Residential DW - Class 4 | Moderate | \$99 |
| 1090 |  |  |  |  |  |  |  | Residential DW - Class 4 | Conservative | \$99 |
| 1091 |  |  |  |  |  |  |  | Commercial DW - Class 4 | Advanced | \$69 |
| 1092 |  |  |  |  |  |  |  | Commercial DW - Class 4 | Moderate | \$69 |
| 1093 |  |  |  |  |  |  |  | Commercial DW - Class 4 | Conservative | \$69 |
| 1094 |  |  |  |  |  |  |  | Midsize DW - Class 4 | Advanced | \$53 |
| 1095 |  |  |  |  |  |  |  | Midsize DW - Class 4 | Moderate | \$53 |
| 1096 |  |  |  |  |  |  |  | Midsize DW - Class 4 | Conservative | \$53 |
| 1097 |  |  |  |  |  |  |  | Large DW - Class 4 | Advanced | \$38 |
| 1098 |  |  |  |  |  |  |  | Large DW - Class 4 | Moderate | \$38 |
| 1099 |  |  |  |  |  |  |  | Large DW - Class 4 | Conservative | \$38 |
| 1100 |  |  |  |  |  |  |  | Residential DW - Class 5 | Advanced | \$103 |
| 1101 |  |  |  |  |  |  |  | Residential DW - Class 5 | Moderate | \$103 |
| 1102 |  |  |  |  |  |  |  | Residential DW - Class 5 | Conservative | \$103 |
| 1103 |  |  |  |  |  |  |  | Commercial DW - Class 5 | Advanced | \$73 |
| 1104 |  |  |  |  |  |  |  | Commercial DW - Class 5 | Moderate | \$73 |
| 1105 |  |  |  |  |  |  |  | Commercial DW - Class 5 | Conservative | \$73 |
| 1106 |  |  |  |  |  |  |  | Midsize DW - Class 5 | Advanced | \$56 |
| 1107 |  |  |  |  |  |  |  | Midsize DW - Class 5 | Moderate | \$56 |
| 1108 |  |  |  |  |  |  |  | Midsize DW - Class 5 | Conservative | \$56 |
| 1109 |  |  |  |  |  |  |  | Large DW - Class 5 | Advanced | \$39 |
| 1110 |  |  |  |  |  |  |  | Large DW - Class 5 | Moderate | \$39 |
| 1111 |  |  |  |  | - |  | Levelized Cost of | Large DW - Class 5 | Conservative | \$39 |
| 1112 |  |  |  |  | U |  | Energy (\$/MWh) | Residential DW - Class 6 | Advanced | \$111 |
| 1113 |  |  |  |  |  |  |  | Residential DW - Class 6 | Moderate | \$111 |
| 1114 |  |  |  |  |  |  |  | Residential DW - Class 6 | Conservative | \$111 |
| 1115 |  |  |  |  |  |  |  | Commercial DW - Class 6 | Advanced | \$78 |



|  | A |  | CD E | EF] |  | H | I | J | K | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1151 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Advanced | \$129 |
| 1152 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Moderate | \$129 |
| 1153 |  |  |  |  |  |  |  |  | Commercial DW - Class 9 | Conservative | \$129 |
| 1154 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Advanced | \$103 |
| 1155 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Moderate | \$103 |
| 1156 |  |  |  |  |  |  |  |  | Midsize DW - Class 9 | Conservative | \$103 |
| 1157 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Advanced | \$68 |
| 1158 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Moderate | \$68 |
| 1159 |  |  |  |  |  |  |  |  | Large DW - Class 9 | Conservative | \$68 |
| 1160 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Advanced | \$178 |
| 1161 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Moderate | \$178 |
| 1162 |  |  |  |  |  |  |  |  | Residential DW - Class 10 | Conservative | \$178 |
| 1163 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Advanced | \$219 |
| 1164 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Moderate | \$219 |
| 1165 |  |  |  |  |  |  |  |  | Commercial DW - Class 10 | Conservative | \$219 |
| 1166 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Advanced | \$178 |
| 1167 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Moderate | \$178 |
| 1168 |  |  |  |  |  |  |  |  | Midsize DW - Class 10 | Conservative | \$178 |
| 1169 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Advanced | \$112 |
| 1170 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Moderate | \$112 |
| 1171 |  |  |  |  |  |  |  |  | Large DW - Class 10 | Conservative | \$112 |
| 1172 |  |  |  |  |  |  |  |  |  |  |  |
| 1173 |  |  |  |  |  |  |  |  |  |  | 2020 |
| 1174 |  |  |  |  |  |  |  | Tax Credit | 10 year CRF | Advanced | 11.61\% |
| 1175 |  |  |  |  |  |  |  |  | 10 year CRF | Moderate | 11.61\% |
| 1176 |  |  |  |  |  |  |  |  | 10 year CRF | Conservative | 11.61\% |
| 1177 |  |  |  |  |  |  |  |  | PTC Schedule | * | 0.0\% |
| 1178 |  |  |  |  |  |  |  |  | PTC | Advanced | \$ |
| 1179 |  |  |  |  |  |  |  |  | PTC | Moderate | \$ |
| 1180 |  |  |  |  |  |  |  |  | PTC | Conservative | \$ |
| 1181 |  |  |  |  |  |  |  |  | PVD | Advanced | 0.876 |
| 1182 |  |  |  |  |  |  |  |  | PVD | Moderate | 0.876 |
| 1183 |  |  |  |  |  |  |  |  | PVD | Conservative | 0.876 |
| 1184 |  |  |  |  |  |  |  |  | PFF | Advanced | 1.043 |
| 1185 |  |  |  |  |  |  |  |  | PFF | Moderate | 1.043 |


|  |  | B ${ }^{\text {C }}$ | DEF | FG | H | 1 | J | K | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1186 |  |  |  |  |  |  |  | PFF | Conservative | 1.043 |
| 1187 |  |  |  |  |  | MACRS |  | Year (Advanced) |  | 2020 |
| 1188 |  |  |  |  |  | 0.2 | Depreciation Factor | 1 |  | 0.9528 |
| 1189 |  |  |  |  |  | 0.32 |  | 2 |  | 0.9078 |
| 1190 |  |  |  |  |  | 0.192 |  | 3 |  | 0.8650 |
| 1191 |  |  |  |  |  | 0.1152 |  | 4 |  | 0.8241 |
| 1192 |  |  |  |  |  | 0.1152 |  | 5 |  | 0.7852 |
| 1193 |  |  |  |  |  | 0.0576 |  | 6 |  | 0.7482 |
| 1194 |  |  |  |  |  |  |  | Year (Moderate) |  | 2020 |
| 1195 |  |  |  |  |  |  |  | 1 |  | 0.9528 |
| 1196 |  |  |  |  |  |  |  | 2 |  | 0.9078 |
| 1197 |  |  |  |  |  |  |  | 3 |  | 0.8650 |
| 1198 |  |  |  |  |  |  |  | 4 |  | 0.8241 |
| 1199 |  |  |  |  |  |  |  | 5 |  | 0.7852 |
| 1200 |  |  |  |  |  |  |  | 6 |  | 0.7482 |
| 1201 |  |  |  |  |  |  |  | Year (Conservative) |  | 2020 |
| 1202 |  |  |  |  |  |  |  | 1 |  | 0.9528 |
| 1203 |  |  |  |  |  |  |  | 2 |  | 0.9078 |
| 1204 |  |  |  |  |  |  |  | 3 |  | 0.8650 |
| 1205 |  |  |  |  |  |  |  | 4 |  | 0.8241 |
| 1206 |  |  |  |  |  |  |  | 5 |  | 0.7852 |
| 1207 |  |  |  |  |  |  |  | 6 |  | 0.7482 |
| 1208 |  |  |  |  |  |  |  |  |  |  |
| 1209 |  |  |  |  |  |  |  |  |  | 2020 |
| 1210 |  |  |  |  |  |  |  | CFF | Advanced | 1.025 |
| 1211 |  |  |  |  |  |  | Construction | CFF | Moderate | 1.025 |
| 1212 |  |  |  |  |  |  |  | CFF | Conservative | 1.025 |
| 1213 |  |  |  |  |  |  |  |  |  |  |
| 1214 |  |  |  |  |  |  |  | Accumulated Interest - Year 1 | * | 1.017 |
| 1215 |  |  |  |  |  |  |  | Accumulated Interest - Year 2 | * | 1.053 |
| 1216 |  |  |  |  |  |  |  | Accumulated Interest - Year 3 | * | 1.090 |
| 1217 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 | Advanced | 1.054 |
| 1218 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 | Advanced | 1.169 |
| 1219 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 | Advanced | 1.298 |
| 1220 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 | Moderate | 1.054 |




|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 37 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 38 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 39 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 40 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 41 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 42 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 43 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 44 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 45 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 46 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 47 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 48 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 49 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 50 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 51 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 52 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 53 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 54 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 55 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 56 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 57 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 58 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 59 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 60 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 61 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 62 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 63 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 64 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 65 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 67 |  |  |  |  |  |  |  |  |  |  |
| 68 |  |  |  |  |  |  |  |  |  |  |
| 69 |  |  |  |  |  |  |  |  |  |  |
| 70 |  |  |  |  |  |  |  |  |  |  |
| 71 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 72 | 45\% | 46\% | 47\% | 48\% | 49\% | 51\% | 52\% | 53\% | 54\% | 56\% |
| 73 | 45\% | 46\% | 47\% | 48\% | 49\% | 51\% | 52\% | 53\% | 54\% | 56\% |
| 74 | 45\% | 46\% | 47\% | 48\% | 49\% | 51\% | 52\% | 53\% | 54\% | 56\% |
| 75 | 51\% | 52\% | 54\% | 55\% | 57\% | 58\% | 60\% | 61\% | 63\% | 64\% |
| 76 | 51\% | 52\% | 54\% | 55\% | 57\% | 58\% | 60\% | 61\% | 63\% | 64\% |
| 77 | 51\% | 52\% | 54\% | 55\% | 57\% | 58\% | 60\% | 61\% | 63\% | 64\% |
| 78 | 48\% | 50\% | 52\% | 54\% | 56\% | 58\% | 60\% | 62\% | 64\% | 66\% |
| 79 | 48\% | 50\% | 52\% | 54\% | 56\% | 58\% | 60\% | 62\% | 64\% | 66\% |
| 80 | 48\% | 50\% | 52\% | 54\% | 56\% | 58\% | 60\% | 62\% | 64\% | 66\% |
| 81 | 54\% | 55\% | 57\% | 58\% | 60\% | 61\% | 63\% | 65\% | 66\% | 68\% |
| 82 | 54\% | 55\% | 57\% | 58\% | 60\% | 61\% | 63\% | 65\% | 66\% | 68\% |
| 83 | 54\% | 55\% | 57\% | 58\% | 60\% | 61\% | 63\% | 65\% | 66\% | 68\% |
| 84 | 41\% | 42\% | 44\% | 45\% | 46\% | 47\% | 48\% | 50\% | 51\% | 52\% |
| 85 | 41\% | 42\% | 44\% | 45\% | 46\% | 47\% | 48\% | 50\% | 51\% | 52\% |
| 86 | 41\% | 42\% | 44\% | 45\% | 46\% | 47\% | 48\% | 50\% | 51\% | 52\% |
| 87 | 46\% | 48\% | 49\% | 51\% | 53\% | 54\% | 56\% | 57\% | 59\% | 60\% |
| 88 | 46\% | 48\% | 49\% | 51\% | 53\% | 54\% | 56\% | 57\% | 59\% | 60\% |
| 89 | 46\% | 48\% | 49\% | 51\% | 53\% | 54\% | 56\% | 57\% | 59\% | 60\% |
| 90 | 43\% | 45\% | 47\% | 49\% | 51\% | 54\% | 56\% | 58\% | 60\% | 62\% |
| 91 | 43\% | 45\% | 47\% | 49\% | 51\% | 54\% | 56\% | 58\% | 60\% | 62\% |
| 92 | 43\% | 45\% | 47\% | 49\% | 51\% | 54\% | 56\% | 58\% | 60\% | 62\% |
| 93 | 49\% | 51\% | 53\% | 54\% | 56\% | 58\% | 59\% | 61\% | 63\% | 64\% |
| 94 | 49\% | 51\% | 53\% | 54\% | 56\% | 58\% | 59\% | 61\% | 63\% | 64\% |
| 95 | 49\% | 51\% | 53\% | 54\% | 56\% | 58\% | 59\% | 61\% | 63\% | 64\% |
| 96 | 40\% | 41\% | 42\% | 44\% | 45\% | 46\% | 47\% | 48\% | 50\% | 51\% |
| 97 | 40\% | 41\% | 42\% | 44\% | 45\% | 46\% | 47\% | 48\% | 50\% | 51\% |
| 98 | 40\% | 41\% | 42\% | 44\% | 45\% | 46\% | 47\% | 48\% | 50\% | 51\% |
| 99 | 45\% | 46\% | 48\% | 49\% | 51\% | 53\% | 54\% | 56\% | 57\% | 59\% |
| 100 | 45\% | 46\% | 48\% | 49\% | 51\% | 53\% | 54\% | 56\% | 57\% | 59\% |


|  | N | O | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 101 | 45\% | 46\% | 48\% | 49\% | 51\% | 53\% | 54\% | 56\% | 57\% | 59\% |
| 102 | 42\% | 44\% | 46\% | 48\% | 50\% | 52\% | 54\% | 56\% | 58\% | 60\% |
| 103 | 42\% | 44\% | 46\% | 48\% | 50\% | 52\% | 54\% | 56\% | 58\% | 60\% |
| 104 | 42\% | 44\% | 46\% | 48\% | 50\% | 52\% | 54\% | 56\% | 58\% | 60\% |
| 105 | 48\% | 49\% | 51\% | 53\% | 55\% | 56\% | 58\% | 60\% | 61\% | 63\% |
| 106 | 48\% | 49\% | 51\% | 53\% | 55\% | 56\% | 58\% | 60\% | 61\% | 63\% |
| 107 | 48\% | 49\% | 51\% | 53\% | 55\% | 56\% | 58\% | 60\% | 61\% | 63\% |
| 108 | 39\% | 40\% | 41\% | 42\% | 43\% | 45\% | 46\% | 47\% | 48\% | 50\% |
| 109 | 39\% | 40\% | 41\% | 42\% | 43\% | 45\% | 46\% | 47\% | 48\% | 50\% |
| 110 | 39\% | 40\% | 41\% | 42\% | 43\% | 45\% | 46\% | 47\% | 48\% | 50\% |
| 111 | 43\% | 45\% | 46\% | 48\% | 50\% | 51\% | 53\% | 54\% | 56\% | 58\% |
| 112 | 43\% | 45\% | 46\% | 48\% | 50\% | 51\% | 53\% | 54\% | 56\% | 58\% |
| 113 | 43\% | 45\% | 46\% | 48\% | 50\% | 51\% | 53\% | 54\% | 56\% | 58\% |
| 114 | 40\% | 42\% | 44\% | 46\% | 48\% | 51\% | 53\% | 55\% | 57\% | 59\% |
| 115 | 40\% | 42\% | 44\% | 46\% | 48\% | 51\% | 53\% | 55\% | 57\% | 59\% |
| 116 | 40\% | 42\% | 44\% | 46\% | 48\% | 51\% | 53\% | 55\% | 57\% | 59\% |
| 117 | 46\% | 48\% | 50\% | 51\% | 53\% | 55\% | 56\% | 58\% | 60\% | 62\% |
| 118 | 46\% | 48\% | 50\% | 51\% | 53\% | 55\% | 56\% | 58\% | 60\% | 62\% |
| 119 | 46\% | 48\% | 50\% | 51\% | 53\% | 55\% | 56\% | 58\% | 60\% | 62\% |
| 120 | 37\% | 38\% | 39\% | 41\% | 42\% | 43\% | 44\% | 45\% | 47\% | 48\% |
| 121 | 37\% | 38\% | 39\% | 41\% | 42\% | 43\% | 44\% | 45\% | 47\% | 48\% |
| 122 | 37\% | 38\% | 39\% | 41\% | 42\% | 43\% | 44\% | 45\% | 47\% | 48\% |
| 123 | 41\% | 43\% | 44\% | 46\% | 48\% | 49\% | 51\% | 52\% | 54\% | 56\% |
| 124 | 41\% | 43\% | 44\% | 46\% | 48\% | 49\% | 51\% | 52\% | 54\% | 56\% |
| 125 | 41\% | 43\% | 44\% | 46\% | 48\% | 49\% | 51\% | 52\% | 54\% | 56\% |
| 126 | 38\% | 40\% | 42\% | 44\% | 47\% | 49\% | 51\% | 53\% | 55\% | 57\% |
| 127 | 38\% | 40\% | 42\% | 44\% | 47\% | 49\% | 51\% | 53\% | 55\% | 57\% |
| 128 | 38\% | 40\% | 42\% | 44\% | 47\% | 49\% | 51\% | 53\% | 55\% | 57\% |
| 129 | 44\% | 46\% | 48\% | 49\% | 51\% | 53\% | 55\% | 56\% | 58\% | 60\% |
| 130 | 44\% | 46\% | 48\% | 49\% | 51\% | 53\% | 55\% | 56\% | 58\% | 60\% |
| 131 | 44\% | 46\% | 48\% | 49\% | 51\% | 53\% | 55\% | 56\% | 58\% | 60\% |
| 132 | 35\% | 36\% | 37\% | 38\% | 39\% | 41\% | 42\% | 43\% | 44\% | 45\% |
| 133 | 35\% | 36\% | 37\% | 38\% | 39\% | 41\% | 42\% | 43\% | 44\% | 45\% |
| 134 | 35\% | 36\% | 37\% | 38\% | 39\% | 41\% | 42\% | 43\% | 44\% | 45\% |
| 135 | 38\% | 40\% | 41\% | 43\% | 45\% | 46\% | 48\% | 50\% | 51\% | 53\% |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 136 | 38\% | 40\% | 41\% | 43\% | 45\% | 46\% | 48\% | 50\% | 51\% | 53\% |
| 137 | 38\% | 40\% | 41\% | 43\% | 45\% | 46\% | 48\% | 50\% | 51\% | 53\% |
| 138 | 35\% | 37\% | 39\% | 42\% | 44\% | 46\% | 48\% | 50\% | 52\% | 54\% |
| 139 | 35\% | 37\% | 39\% | 42\% | 44\% | 46\% | 48\% | 50\% | 52\% | 54\% |
| 140 | 35\% | 37\% | 39\% | 42\% | 44\% | 46\% | 48\% | 50\% | 52\% | 54\% |
| 141 | 41\% | 43\% | 45\% | 47\% | 48\% | 50\% | 52\% | 54\% | 55\% | 57\% |
| 142 | 41\% | 43\% | 45\% | 47\% | 48\% | 50\% | 52\% | 54\% | 55\% | 57\% |
| 143 | 41\% | 43\% | 45\% | 47\% | 48\% | 50\% | 52\% | 54\% | 55\% | 57\% |
| 144 | 31\% | 32\% | 33\% | 35\% | 36\% | 37\% | 38\% | 39\% | 41\% | 42\% |
| 145 | 31\% | 32\% | 33\% | 35\% | 36\% | 37\% | 38\% | 39\% | 41\% | 42\% |
| 146 | 31\% | 32\% | 33\% | 35\% | 36\% | 37\% | 38\% | 39\% | 41\% | 42\% |
| 147 | 34\% | 36\% | 37\% | 39\% | 41\% | 42\% | 44\% | 45\% | 47\% | 49\% |
| 148 | 34\% | 36\% | 37\% | 39\% | 41\% | 42\% | 44\% | 45\% | 47\% | 49\% |
| 149 | 34\% | 36\% | 37\% | 39\% | 41\% | 42\% | 44\% | 45\% | 47\% | 49\% |
| 150 | 31\% | 33\% | 36\% | 38\% | 40\% | 42\% | 44\% | 46\% | 48\% | 50\% |
| 151 | 31\% | 33\% | 36\% | 38\% | 40\% | 42\% | 44\% | 46\% | 48\% | 50\% |
| 152 | 31\% | 33\% | 36\% | 38\% | 40\% | 42\% | 44\% | 46\% | 48\% | 50\% |
| 153 | 37\% | 39\% | 41\% | 43\% | 44\% | 46\% | 48\% | 50\% | 52\% | 53\% |
| 154 | 37\% | 39\% | 41\% | 43\% | 44\% | 46\% | 48\% | 50\% | 52\% | 53\% |
| 155 | 37\% | 39\% | 41\% | 43\% | 44\% | 46\% | 48\% | 50\% | 52\% | 53\% |
| 156 | 27\% | 28\% | 29\% | 30\% | 31\% | 33\% | 34\% | 35\% | 36\% | 37\% |
| 157 | 27\% | 28\% | 29\% | 30\% | 31\% | 33\% | 34\% | 35\% | 36\% | 37\% |
| 158 | 27\% | 28\% | 29\% | 30\% | 31\% | 33\% | 34\% | 35\% | 36\% | 37\% |
| 159 | 29\% | 31\% | 32\% | 34\% | 36\% | 37\% | 39\% | 40\% | 42\% | 44\% |
| 160 | 29\% | 31\% | 32\% | 34\% | 36\% | 37\% | 39\% | 40\% | 42\% | 44\% |
| 161 | 29\% | 31\% | 32\% | 34\% | 36\% | 37\% | 39\% | 40\% | 42\% | 44\% |
| 162 | 27\% | 29\% | 31\% | 33\% | 35\% | 37\% | 39\% | 41\% | 43\% | 45\% |
| 163 | 27\% | 29\% | 31\% | 33\% | 35\% | 37\% | 39\% | 41\% | 43\% | 45\% |
| 164 | 27\% | 29\% | 31\% | 33\% | 35\% | 37\% | 39\% | 41\% | 43\% | 45\% |
| 165 | 32\% | 34\% | 36\% | 37\% | 39\% | 41\% | 43\% | 45\% | 46\% | 48\% |
| 166 | 32\% | 34\% | 36\% | 37\% | 39\% | 41\% | 43\% | 45\% | 46\% | 48\% |
| 167 | 32\% | 34\% | 36\% | 37\% | 39\% | 41\% | 43\% | 45\% | 46\% | 48\% |
| 168 | 22\% | 23\% | 25\% | 26\% | 27\% | 28\% | 29\% | 30\% | 31\% | 32\% |
| 169 | 22\% | 23\% | 25\% | 26\% | 27\% | 28\% | 29\% | 30\% | 31\% | 32\% |
| 170 | 22\% | 23\% | 25\% | 26\% | 27\% | 28\% | 29\% | 30\% | 31\% | 32\% |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 171 | 24\% | 25\% | 27\% | 28\% | 30\% | 31\% | 33\% | 34\% | 36\% | 37\% |
| 172 | 24\% | 25\% | 27\% | 28\% | 30\% | 31\% | 33\% | 34\% | 36\% | 37\% |
| 173 | 24\% | 25\% | 27\% | 28\% | 30\% | 31\% | 33\% | 34\% | 36\% | 37\% |
| 174 | 21\% | 23\% | 25\% | 27\% | 29\% | 31\% | 33\% | 35\% | 37\% | 39\% |
| 175 | 21\% | 23\% | 25\% | 27\% | 29\% | 31\% | 33\% | 35\% | 37\% | 39\% |
| 176 | 21\% | 23\% | 25\% | 27\% | 29\% | 31\% | 33\% | 35\% | 37\% | 39\% |
| 177 | 27\% | 28\% | 30\% | 32\% | 33\% | 35\% | 37\% | 39\% | 40\% | 42\% |
| 178 | 27\% | 28\% | 30\% | 32\% | 33\% | 35\% | 37\% | 39\% | 40\% | 42\% |
| 179 | 27\% | 28\% | 30\% | 32\% | 33\% | 35\% | 37\% | 39\% | 40\% | 42\% |
| 180 | 21\% | 21\% | 21\% | 21\% | 21\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 181 | 21\% | 21\% | 21\% | 21\% | 21\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 182 | 21\% | 21\% | 21\% | 21\% | 21\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 183 | 14\% | 15\% | 17\% | 18\% | 19\% | 20\% | 21\% | 23\% | 24\% | 25\% |
| 184 | 14\% | 15\% | 17\% | 18\% | 19\% | 20\% | 21\% | 23\% | 24\% | 25\% |
| 185 | 14\% | 15\% | 17\% | 18\% | 19\% | 20\% | 21\% | 23\% | 24\% | 25\% |
| 186 | 13\% | 14\% | 16\% | 17\% | 19\% | 20\% | 22\% | 24\% | 25\% | 27\% |
| 187 | 13\% | 14\% | 16\% | 17\% | 19\% | 20\% | 22\% | 24\% | 25\% | 27\% |
| 188 | 13\% | 14\% | 16\% | 17\% | 19\% | 20\% | 22\% | 24\% | 25\% | 27\% |
| 189 | 16\% | 18\% | 19\% | 21\% | 22\% | 24\% | 25\% | 27\% | 28\% | 29\% |
| 190 | 16\% | 18\% | 19\% | 21\% | 22\% | 24\% | 25\% | 27\% | 28\% | 29\% |
| 191 | 16\% | 18\% | 19\% | 21\% | 22\% | 24\% | 25\% | 27\% | 28\% | 29\% |
| 192 |  |  |  |  |  |  |  |  |  |  |
| 193 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 194 | 3,913 | 4,019 | 4,124 | 4,230 | 4,335 | 4,440 | 4,546 | 4,651 | 4,756 | 4,862 |
| 195 | 3,913 | 4,019 | 4,124 | 4,230 | 4,335 | 4,440 | 4,546 | 4,651 | 4,756 | 4,862 |
| 196 | 3,913 | 4,019 | 4,124 | 4,230 | 4,335 | 4,440 | 4,546 | 4,651 | 4,756 | 4,862 |
| 197 | 4,449 | 4,581 | 4,713 | 4,844 | 4,976 | 5,108 | 5,239 | 5,371 | 5,503 | 5,634 |
| 198 | 4,449 | 4,581 | 4,713 | 4,844 | 4,976 | 5,108 | 5,239 | 5,371 | 5,503 | 5,634 |
| 199 | 4,449 | 4,581 | 4,713 | 4,844 | 4,976 | 5,108 | 5,239 | 5,371 | 5,503 | 5,634 |
| 200 | 4,168 | 4,344 | 4,519 | 4,694 | 4,870 | 5,045 | 5,220 | 5,396 | 5,571 | 5,747 |
| 201 | 4,168 | 4,344 | 4,519 | 4,694 | 4,870 | 5,045 | 5,220 | 5,396 | 5,571 | 5,747 |
| 202 | 4,168 | 4,344 | 4,519 | 4,694 | 4,870 | 5,045 | 5,220 | 5,396 | 5,571 | 5,747 |
| 203 | 4,691 | 4,830 | 4,969 | 5,108 | 5,247 | 5,386 | 5,524 | 5,663 | 5,802 | 5,941 |
| 204 | 4,691 | 4,830 | 4,969 | 5,108 | 5,247 | 5,386 | 5,524 | 5,663 | 5,802 | 5,941 |
| 205 | 4,691 | 4,830 | 4,969 | 5,108 | 5,247 | 5,386 | 5,524 | 5,663 | 5,802 | 5,941 |


|  | N | O | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 206 | 3,606 | 3,711 | 3,816 | 3,921 | 4,026 | 4,131 | 4,236 | 4,341 | 4,446 | 4,551 |
| 207 | 3,606 | 3,711 | 3,816 | 3,921 | 4,026 | 4,131 | 4,236 | 4,341 | 4,446 | 4,551 |
| 208 | 3,606 | 3,711 | 3,816 | 3,921 | 4,026 | 4,131 | 4,236 | 4,341 | 4,446 | 4,551 |
| 209 | 4,055 | 4,193 | 4,330 | 4,467 | 4,604 | 4,741 | 4,878 | 5,015 | 5,152 | 5,289 |
| 210 | 4,055 | 4,193 | 4,330 | 4,467 | 4,604 | 4,741 | 4,878 | 5,015 | 5,152 | 5,289 |
| 211 | 4,055 | 4,193 | 4,330 | 4,467 | 4,604 | 4,741 | 4,878 | 5,015 | 5,152 | 5,289 |
| 212 | 3,777 | 3,959 | 4,141 | 4,323 | 4,505 | 4,687 | 4,869 | 5,051 | 5,233 | 5,415 |
| 213 | 3,777 | 3,959 | 4,141 | 4,323 | 4,505 | 4,687 | 4,869 | 5,051 | 5,233 | 5,415 |
| 214 | 3,777 | 3,959 | 4,141 | 4,323 | 4,505 | 4,687 | 4,869 | 5,051 | 5,233 | 5,415 |
| 215 | 4,314 | 4,461 | 4,607 | 4,754 | 4,900 | 5,046 | 5,193 | 5,339 | 5,485 | 5,632 |
| 216 | 4,314 | 4,461 | 4,607 | 4,754 | 4,900 | 5,046 | 5,193 | 5,339 | 5,485 | 5,632 |
| 217 | 4,314 | 4,461 | 4,607 | 4,754 | 4,900 | 5,046 | 5,193 | 5,339 | 5,485 | 5,632 |
| 218 | 3,496 | 3,602 | 3,708 | 3,813 | 3,919 | 4,025 | 4,130 | 4,236 | 4,342 | 4,447 |
| 219 | 3,496 | 3,602 | 3,708 | 3,813 | 3,919 | 4,025 | 4,130 | 4,236 | 4,342 | 4,447 |
| 220 | 3,496 | 3,602 | 3,708 | 3,813 | 3,919 | 4,025 | 4,130 | 4,236 | 4,342 | 4,447 |
| 221 | 3,919 | 4,058 | 4,197 | 4,335 | 4,474 | 4,612 | 4,751 | 4,889 | 5,028 | 5,167 |
| 222 | 3,919 | 4,058 | 4,197 | 4,335 | 4,474 | 4,612 | 4,751 | 4,889 | 5,028 | 5,167 |
| 223 | 3,919 | 4,058 | 4,197 | 4,335 | 4,474 | 4,612 | 4,751 | 4,889 | 5,028 | 5,167 |
| 224 | 3,643 | 3,827 | 4,010 | 4,194 | 4,378 | 4,562 | 4,745 | 4,929 | 5,113 | 5,296 |
| 225 | 3,643 | 3,827 | 4,010 | 4,194 | 4,378 | 4,562 | 4,745 | 4,929 | 5,113 | 5,296 |
| 226 | 3,643 | 3,827 | 4,010 | 4,194 | 4,378 | 4,562 | 4,745 | 4,929 | 5,113 | 5,296 |
| 227 | 4,182 | 4,330 | 4,479 | 4,627 | 4,776 | 4,924 | 5,072 | 5,221 | 5,369 | 5,518 |
| 228 | 4,182 | 4,330 | 4,479 | 4,627 | 4,776 | 4,924 | 5,072 | 5,221 | 5,369 | 5,518 |
| 229 | 4,182 | 4,330 | 4,479 | 4,627 | 4,776 | 4,924 | 5,072 | 5,221 | 5,369 | 5,518 |
| 230 | 3,382 | 3,488 | 3,594 | 3,701 | 3,807 | 3,913 | 4,019 | 4,126 | 4,232 | 4,338 |
| 231 | 3,382 | 3,488 | 3,594 | 3,701 | 3,807 | 3,913 | 4,019 | 4,126 | 4,232 | 4,338 |
| 232 | 3,382 | 3,488 | 3,594 | 3,701 | 3,807 | 3,913 | 4,019 | 4,126 | 4,232 | 4,338 |
| 233 | 3,779 | 3,919 | 4,059 | 4,198 | 4,338 | 4,478 | 4,618 | 4,758 | 4,898 | 5,038 |
| 234 | 3,779 | 3,919 | 4,059 | 4,198 | 4,338 | 4,478 | 4,618 | 4,758 | 4,898 | 5,038 |
| 235 | 3,779 | 3,919 | 4,059 | 4,198 | 4,338 | 4,478 | 4,618 | 4,758 | 4,898 | 5,038 |
| 236 | 3,504 | 3,690 | 3,875 | 4,060 | 4,246 | 4,431 | 4,616 | 4,801 | 4,987 | 5,172 |
| 237 | 3,504 | 3,690 | 3,875 | 4,060 | 4,246 | 4,431 | 4,616 | 4,801 | 4,987 | 5,172 |
| 238 | 3,504 | 3,690 | 3,875 | 4,060 | 4,246 | 4,431 | 4,616 | 4,801 | 4,987 | 5,172 |
| 239 | 4,044 | 4,195 | 4,345 | 4,496 | 4,646 | 4,797 | 4,947 | 5,098 | 5,248 | 5,399 |
| 240 | 4,044 | 4,195 | 4,345 | 4,496 | 4,646 | 4,797 | 4,947 | 5,098 | 5,248 | 5,399 |


|  | N | O | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 241 | 4,044 | 4,195 | 4,345 | 4,496 | 4,646 | 4,797 | 4,947 | 5,098 | 5,248 | 5,399 |
| 242 | 3,240 | 3,347 | 3,453 | 3,559 | 3,666 | 3,772 | 3,879 | 3,985 | 4,091 | 4,198 |
| 243 | 3,240 | 3,347 | 3,453 | 3,559 | 3,666 | 3,772 | 3,879 | 3,985 | 4,091 | 4,198 |
| 244 | 3,240 | 3,347 | 3,453 | 3,559 | 3,666 | 3,772 | 3,879 | 3,985 | 4,091 | 4,198 |
| 245 | 3,606 | 3,747 | 3,888 | 4,029 | 4,171 | 4,312 | 4,453 | 4,594 | 4,735 | 4,877 |
| 246 | 3,606 | 3,747 | 3,888 | 4,029 | 4,171 | 4,312 | 4,453 | 4,594 | 4,735 | 4,877 |
| 247 | 3,606 | 3,747 | 3,888 | 4,029 | 4,171 | 4,312 | 4,453 | 4,594 | 4,735 | 4,877 |
| 248 | 3,336 | 3,522 | 3,709 | 3,895 | 4,082 | 4,268 | 4,455 | 4,641 | 4,828 | 5,014 |
| 249 | 3,336 | 3,522 | 3,709 | 3,895 | 4,082 | 4,268 | 4,455 | 4,641 | 4,828 | 5,014 |
| 250 | 3,336 | 3,522 | 3,709 | 3,895 | 4,082 | 4,268 | 4,455 | 4,641 | 4,828 | 5,014 |
| 251 | 3,874 | 4,027 | 4,179 | 4,332 | 4,485 | 4,637 | 4,790 | 4,943 | 5,095 | 5,248 |
| 252 | 3,874 | 4,027 | 4,179 | 4,332 | 4,485 | 4,637 | 4,790 | 4,943 | 5,095 | 5,248 |
| 253 | 3,874 | 4,027 | 4,179 | 4,332 | 4,485 | 4,637 | 4,790 | 4,943 | 5,095 | 5,248 |
| 254 | 3,025 | 3,131 | 3,237 | 3,344 | 3,450 | 3,556 | 3,663 | 3,769 | 3,875 | 3,981 |
| 255 | 3,025 | 3,131 | 3,237 | 3,344 | 3,450 | 3,556 | 3,663 | 3,769 | 3,875 | 3,981 |
| 256 | 3,025 | 3,131 | 3,237 | 3,344 | 3,450 | 3,556 | 3,663 | 3,769 | 3,875 | 3,981 |
| 257 | 3,349 | 3,491 | 3,633 | 3,776 | 3,918 | 4,060 | 4,203 | 4,345 | 4,487 | 4,630 |
| 258 | 3,349 | 3,491 | 3,633 | 3,776 | 3,918 | 4,060 | 4,203 | 4,345 | 4,487 | 4,630 |
| 259 | 3,349 | 3,491 | 3,633 | 3,776 | 3,918 | 4,060 | 4,203 | 4,345 | 4,487 | 4,630 |
| 260 | 3,084 | 3,271 | 3,459 | 3,647 | 3,834 | 4,022 | 4,210 | 4,397 | 4,585 | 4,772 |
| 261 | 3,084 | 3,271 | 3,459 | 3,647 | 3,834 | 4,022 | 4,210 | 4,397 | 4,585 | 4,772 |
| 262 | 3,084 | 3,271 | 3,459 | 3,647 | 3,834 | 4,022 | 4,210 | 4,397 | 4,585 | 4,772 |
| 263 | 3,618 | 3,773 | 3,929 | 4,084 | 4,239 | 4,394 | 4,549 | 4,705 | 4,860 | 5,015 |
| 264 | 3,618 | 3,773 | 3,929 | 4,084 | 4,239 | 4,394 | 4,549 | 4,705 | 4,860 | 5,015 |
| 265 | 3,618 | 3,773 | 3,929 | 4,084 | 4,239 | 4,394 | 4,549 | 4,705 | 4,860 | 5,015 |
| 266 | 2,723 | 2,828 | 2,932 | 3,037 | 3,142 | 3,246 | 3,351 | 3,456 | 3,560 | 3,665 |
| 267 | 2,723 | 2,828 | 2,932 | 3,037 | 3,142 | 3,246 | 3,351 | 3,456 | 3,560 | 3,665 |
| 268 | 2,723 | 2,828 | 2,932 | 3,037 | 3,142 | 3,246 | 3,351 | 3,456 | 3,560 | 3,665 |
| 269 | 2,989 | 3,132 | 3,274 | 3,416 | 3,558 | 3,701 | 3,843 | 3,985 | 4,127 | 4,270 |
| 270 | 2,989 | 3,132 | 3,274 | 3,416 | 3,558 | 3,701 | 3,843 | 3,985 | 4,127 | 4,270 |
| 271 | 2,989 | 3,132 | 3,274 | 3,416 | 3,558 | 3,701 | 3,843 | 3,985 | 4,127 | 4,270 |
| 272 | 2,738 | 2,924 | 3,111 | 3,298 | 3,485 | 3,671 | 3,858 | 4,045 | 4,232 | 4,419 |
| 273 | 2,738 | 2,924 | 3,111 | 3,298 | 3,485 | 3,671 | 3,858 | 4,045 | 4,232 | 4,419 |
| 274 | 2,738 | 2,924 | 3,111 | 3,298 | 3,485 | 3,671 | 3,858 | 4,045 | 4,232 | 4,419 |
| 275 | 3,257 | 3,414 | 3,571 | 3,728 | 3,885 | 4,043 | 4,200 | 4,357 | 4,514 | 4,672 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 276 | 3,257 | 3,414 | 3,571 | 3,728 | 3,885 | 4,043 | 4,200 | 4,357 | 4,514 | 4,672 |
| 277 | 3,257 | 3,414 | 3,571 | 3,728 | 3,885 | 4,043 | 4,200 | 4,357 | 4,514 | 4,672 |
| 278 | 2,356 | 2,456 | 2,557 | 2,658 | 2,759 | 2,860 | 2,961 | 3,061 | 3,162 | 3,263 |
| 279 | 2,356 | 2,456 | 2,557 | 2,658 | 2,759 | 2,860 | 2,961 | 3,061 | 3,162 | 3,263 |
| 280 | 2,356 | 2,456 | 2,557 | 2,658 | 2,759 | 2,860 | 2,961 | 3,061 | 3,162 | 3,263 |
| 281 | 2,553 | 2,694 | 2,835 | 2,976 | 3,116 | 3,257 | 3,398 | 3,539 | 3,679 | 3,820 |
| 282 | 2,553 | 2,694 | 2,835 | 2,976 | 3,116 | 3,257 | 3,398 | 3,539 | 3,679 | 3,820 |
| 283 | 2,553 | 2,694 | 2,835 | 2,976 | 3,116 | 3,257 | 3,398 | 3,539 | 3,679 | 3,820 |
| 284 | 2,322 | 2,504 | 2,686 | 2,869 | 3,051 | 3,233 | 3,415 | 3,597 | 3,779 | 3,961 |
| 285 | 2,322 | 2,504 | 2,686 | 2,869 | 3,051 | 3,233 | 3,415 | 3,597 | 3,779 | 3,961 |
| 286 | 2,322 | 2,504 | 2,686 | 2,869 | 3,051 | 3,233 | 3,415 | 3,597 | 3,779 | 3,961 |
| 287 | 2,812 | 2,969 | 3,125 | 3,282 | 3,439 | 3,595 | 3,752 | 3,909 | 4,066 | 4,222 |
| 288 | 2,812 | 2,969 | 3,125 | 3,282 | 3,439 | 3,595 | 3,752 | 3,909 | 4,066 | 4,222 |
| 289 | 2,812 | 2,969 | 3,125 | 3,282 | 3,439 | 3,595 | 3,752 | 3,909 | 4,066 | 4,222 |
| 290 | 1,963 | 2,056 | 2,150 | 2,244 | 2,338 | 2,432 | 2,526 | 2,620 | 2,714 | 2,808 |
| 291 | 1,963 | 2,056 | 2,150 | 2,244 | 2,338 | 2,432 | 2,526 | 2,620 | 2,714 | 2,808 |
| 292 | 1,963 | 2,056 | 2,150 | 2,244 | 2,338 | 2,432 | 2,526 | 2,620 | 2,714 | 2,808 |
| 293 | 2,082 | 2,214 | 2,346 | 2,478 | 2,610 | 2,742 | 2,874 | 3,006 | 3,138 | 3,270 |
| 294 | 2,082 | 2,214 | 2,346 | 2,478 | 2,610 | 2,742 | 2,874 | 3,006 | 3,138 | 3,270 |
| 295 | 2,082 | 2,214 | 2,346 | 2,478 | 2,610 | 2,742 | 2,874 | 3,006 | 3,138 | 3,270 |
| 296 | 1,882 | 2,054 | 2,225 | 2,397 | 2,568 | 2,740 | 2,911 | 3,083 | 3,255 | 3,426 |
| 297 | 1,882 | 2,054 | 2,225 | 2,397 | 2,568 | 2,740 | 2,911 | 3,083 | 3,255 | 3,426 |
| 298 | 1,882 | 2,054 | 2,225 | 2,397 | 2,568 | 2,740 | 2,911 | 3,083 | 3,255 | 3,426 |
| 299 | 2,325 | 2,477 | 2,629 | 2,780 | 2,932 | 3,084 | 3,235 | 3,387 | 3,539 | 3,691 |
| 300 | 2,325 | 2,477 | 2,629 | 2,780 | 2,932 | 3,084 | 3,235 | 3,387 | 3,539 | 3,691 |
| 301 | 2,325 | 2,477 | 2,629 | 2,780 | 2,932 | 3,084 | 3,235 | 3,387 | 3,539 | 3,691 |
| 302 | 1,829 | 1,841 | 1,853 | 1,865 | 1,878 | 1,890 | 1,902 | 1,914 | 1,926 | 1,939 |
| 303 | 1,829 | 1,841 | 1,853 | 1,865 | 1,878 | 1,890 | 1,902 | 1,914 | 1,926 | 1,939 |
| 304 | 1,829 | 1,841 | 1,853 | 1,865 | 1,878 | 1,890 | 1,902 | 1,914 | 1,926 | 1,939 |
| 305 | 1,250 | 1,353 | 1,457 | 1,561 | 1,665 | 1,769 | 1,872 | 1,976 | 2,080 | 2,184 |
| 306 | 1,250 | 1,353 | 1,457 | 1,561 | 1,665 | 1,769 | 1,872 | 1,976 | 2,080 | 2,184 |
| 307 | 1,250 | 1,353 | 1,457 | 1,561 | 1,665 | 1,769 | 1,872 | 1,976 | 2,080 | 2,184 |
| 308 | 1,122 | 1,257 | 1,391 | 1,525 | 1,660 | 1,794 | 1,928 | 2,062 | 2,197 | 2,331 |
| 309 | 1,122 | 1,257 | 1,391 | 1,525 | 1,660 | 1,794 | 1,928 | 2,062 | 2,197 | 2,331 |
| 310 | 1,122 | 1,257 | 1,391 | 1,525 | 1,660 | 1,794 | 1,928 | 2,062 | 2,197 | 2,331 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 311 | 1,440 | 1,567 | 1,693 | 1,819 | 1,946 | 2,072 | 2,198 | 2,325 | 2,451 | 2,577 |
| 312 | 1,440 | 1,567 | 1,693 | 1,819 | 1,946 | 2,072 | 2,198 | 2,325 | 2,451 | 2,577 |
| 313 | 1,440 | 1,567 | 1,693 | 1,819 | 1,946 | 2,072 | 2,198 | 2,325 | 2,451 | 2,577 |
| 314 |  |  |  |  |  |  |  |  |  |  |
| 315 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 316 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 317 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 318 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 319 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |
| 320 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |
| 321 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |
| 322 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 323 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 324 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 325 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 326 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 327 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 328 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 329 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 330 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 331 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |
| 332 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |
| 333 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |
| 334 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 335 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 336 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 337 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 338 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 339 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 340 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 341 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 342 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 343 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |
| 344 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |
| 345 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 346 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 347 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 348 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 349 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 350 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 351 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 352 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 353 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 354 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 355 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |
| 356 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |
| 357 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |
| 358 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 359 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 360 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 361 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 362 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 363 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 364 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 365 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 366 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 367 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |
| 368 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |
| 369 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |
| 370 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 371 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 372 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 373 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 374 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 375 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 376 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 377 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 378 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 379 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |
| 380 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 381 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |
| 382 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 383 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 384 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 385 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 386 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 387 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 388 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 389 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 390 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 391 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |
| 392 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |
| 393 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |
| 394 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 395 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 396 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 397 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 398 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 399 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 400 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 401 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 402 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 403 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |
| 404 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |
| 405 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |
| 406 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 407 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 408 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 409 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 410 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 411 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 412 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 413 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 414 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 415 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 416 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |
| 417 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |
| 418 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 419 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 420 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 421 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 422 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 423 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 424 | \$5,150 | \$4,562 | \$4,075 | \$3,671 | \$3,336 | \$3,031 | \$2,754 | \$2,503 | \$2,275 | \$2,067 |
| 425 | \$5,668 | \$5,479 | \$5,297 | \$5,120 | \$4,950 | \$4,785 | \$4,625 | \$4,471 | \$4,323 | \$4,179 |
| 426 | \$5,757 | \$5,653 | \$5,551 | \$5,451 | \$5,352 | \$5,256 | \$5,161 | \$5,068 | \$4,976 | \$4,886 |
| 427 | \$3,867 | \$3,425 | \$3,060 | \$2,756 | \$2,505 | \$2,276 | \$2,068 | \$1,879 | \$1,708 | \$1,552 |
| 428 | \$4,256 | \$4,114 | \$3,977 | \$3,845 | \$3,717 | \$3,593 | \$3,473 | \$3,357 | \$3,246 | \$3,138 |
| 429 | \$4,323 | \$4,245 | \$4,168 | \$4,093 | \$4,019 | \$3,946 | \$3,875 | \$3,805 | \$3,736 | \$3,669 |
| 430 | \$2,511 | \$2,224 | \$1,986 | \$1,790 | \$1,626 | \$1,478 | \$1,343 | \$1,220 | \$1,109 | \$1,008 |
| 431 | \$2,763 | \$2,671 | \$2,582 | \$2,496 | \$2,413 | \$2,333 | \$2,255 | \$2,180 | \$2,107 | \$2,037 |
| 432 | \$2,807 | \$2,756 | \$2,706 | \$2,657 | \$2,609 | \$2,562 | \$2,516 | \$2,471 | \$2,426 | \$2,382 |
| 433 | \$1,999 | \$1,770 | \$1,581 | \$1,425 | \$1,295 | \$1,185 | \$1,134 | \$1,082 | \$1,031 | \$979 |
| 434 | \$2,200 | \$2,126 | \$2,055 | \$1,987 | \$1,921 | \$1,857 | \$1,795 | \$1,735 | \$1,678 | \$1,622 |
| 435 | \$2,234 | \$2,194 | \$2,154 | \$2,115 | \$2,077 | \$2,040 | \$2,003 | \$1,967 | \$1,931 | \$1,896 |
| 436 |  |  |  |  |  |  |  |  |  |  |
| 437 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 438 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |
| 439 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 440 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 441 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 442 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 443 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 444 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 445 | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 446 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 447 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |
| 448 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |
| 449 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 450 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 451 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 452 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 453 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 454 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 455 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 456 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 457 | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 458 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 459 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |
| 460 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |
| 461 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 462 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |
| 463 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 464 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 465 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 466 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 467 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 468 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 469 - | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 470 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 471 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |
| 472 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |
| 473 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 474 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |
| 475 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 476 <br> 47 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 477 <br> 48 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 478 <br> 48 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 479 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 480 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 481 | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 482 <br> 48 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 483 <br> 48 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |
| 484 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |
| 485 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |


|  | N | O | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 486 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |
| 487 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 488 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 489 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 490 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 491 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 492 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 493 | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 494 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 495 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |
| 496 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |
| 497 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 498 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |
| 499 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 500 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 501 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 502 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 503 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 504 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 505 | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 506 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 507 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |
| 508 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |
| 509 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 510 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |
| 511 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 512 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 513 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 514 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 515 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 516 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 517 | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 518 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 519 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |
| 520 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 521 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 522 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |
| 523 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 524 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 525 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 526 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 527 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 528 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 529 | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 530 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 531 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |
| 532 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |
| 533 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 534 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |
| 535 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 536 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 537 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 538 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 539 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 540 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 541 | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 542 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 543 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |
| 544 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |
| 545 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 546 | \$124 | \$109 | \$98 | \$88 | \$80 | \$73 | \$66 | \$60 | \$55 | \$50 |
| 547 | \$136 | \$132 | \$127 | \$123 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 |
| 548 | \$138 | \$136 | \$133 | \$131 | \$128 | \$126 | \$124 | \$122 | \$119 | \$117 |
| 549 | \$93 | \$82 | \$73 | \$66 | \$60 | \$55 | \$50 | \$45 | \$41 | \$37 |
| 550 | \$102 | \$99 | \$95 | \$92 | \$89 | \$86 | \$83 | \$81 | \$78 | \$75 |
| 551 | \$104 | \$102 | \$100 | \$98 | \$96 | \$95 | \$93 | \$91 | \$90 | \$88 |
| 552 | \$60 | \$53 | \$48 | \$43 | \$39 | \$35 | \$32 | \$29 | \$27 | \$24 |
| 553 | \$66 | \$64 | \$62 | \$60 | \$58 | \$56 | \$54 | \$52 | \$51 | \$49 |
| 554 | \$67 | \$66 | \$65 | \$64 | \$63 | \$61 | \$60 | \$59 | \$58 | \$57 |
| 555 | \$48 | \$42 | \$38 | \$34 | \$31 | \$28 | \$27 | \$26 | \$25 | \$24 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 556 | \$53 | \$51 | \$49 | \$48 | \$46 | \$45 | \$43 | \$42 | \$40 | \$39 |
| 557 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 558 |  |  |  |  |  |  |  |  |  |  |
| 559 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 560 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 561 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 562 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 563 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 564 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |
| 565 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |
| 566 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |
| 567 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 568 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 569 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 570 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 571 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 572 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 573 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 574 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 575 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 576 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |
| 577 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |
| 578 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |
| 579 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 580 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 581 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 582 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 583 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 584 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 585 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 586 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 587 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 588 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |
| 589 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |
| 590 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |


|  | N | O | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 591 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 592 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 593 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 594 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 595 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 596 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 597 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 598 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 599 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 600 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |
| 601 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |
| 602 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |
| 603 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 604 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 605 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 606 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 607 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 608 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 609 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 610 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 611 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 612 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |
| 613 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |
| 614 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |
| 615 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 616 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 617 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 618 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 619 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 620 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 621 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 622 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 623 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 624 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |
| 625 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 626 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |
| 627 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 628 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 629 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 630 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 631 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 632 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 633 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 634 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 635 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 636 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |
| 637 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |
| 638 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |
| 639 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 640 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 641 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 642 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 643 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 644 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 645 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 646 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 647 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 648 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |
| 649 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |
| 650 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |
| 651 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 652 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 653 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 654 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 655 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 656 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 657 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 658 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 659 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 660 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |


|  | N | 0 | P | Q | R | S | T | U | V | W |
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| 661 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |
| 662 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |
| 663 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 664 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 665 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 666 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 667 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 668 | \$5,027 | \$4,452 | \$3,977 | \$3,583 | \$3,256 | \$2,958 | \$2,688 | \$2,443 | \$2,220 | \$2,017 |
| 669 | \$5,532 | \$5,347 | \$5,169 | \$4,997 | \$4,831 | \$4,670 | \$4,514 | \$4,364 | \$4,219 | \$4,078 |
| 670 | \$5,619 | \$5,517 | \$5,418 | \$5,320 | \$5,224 | \$5,129 | \$5,037 | \$4,946 | \$4,857 | \$4,769 |
| 671 | \$3,774 | \$3,343 | \$2,986 | \$2,690 | \$2,445 | \$2,221 | \$2,019 | \$1,834 | \$1,667 | \$1,515 |
| 672 | \$4,154 | \$4,015 | \$3,882 | \$3,752 | \$3,627 | \$3,507 | \$3,390 | \$3,277 | \$3,168 | \$3,062 |
| 673 | \$4,219 | \$4,143 | \$4,068 | \$3,995 | \$3,922 | \$3,852 | \$3,782 | \$3,714 | \$3,647 | \$3,581 |
| 674 | \$2,451 | \$2,171 | \$1,939 | \$1,747 | \$1,587 | \$1,442 | \$1,311 | \$1,191 | \$1,082 | \$983 |
| 675 | \$2,697 | \$2,607 | \$2,520 | \$2,436 | \$2,355 | \$2,277 | \$2,201 | \$2,128 | \$2,057 | \$1,988 |
| 676 | \$2,739 | \$2,690 | \$2,641 | \$2,594 | \$2,547 | \$2,501 | \$2,456 | \$2,411 | \$2,368 | \$2,325 |
| 677 | \$1,951 | \$1,728 | \$1,543 | \$1,390 | \$1,263 | \$1,156 | \$1,106 | \$1,056 | \$1,006 | \$956 |
| 678 | \$2,147 | \$2,075 | \$2,006 | \$1,939 | \$1,875 | \$1,812 | \$1,752 | \$1,694 | \$1,637 | \$1,583 |
| 679 | \$2,181 | \$2,141 | \$2,103 | \$2,065 | \$2,027 | \$1,991 | \$1,955 | \$1,919 | \$1,885 | \$1,851 |
| 680 |  |  |  |  |  |  |  |  |  |  |
| 681 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 682 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 683 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 684 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 685 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 686 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 687 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
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| 690 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 691 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 692 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 693 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 694 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 695 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |


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| 696 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 697 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 698 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 699 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 700 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 701 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 702 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 703 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 704 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 705 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 706 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 707 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 708 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 709 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 710 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 711 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 712 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 713 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 714 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 715 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 716 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 717 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 718 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 719 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 720 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 721 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 722 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 723 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 724 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 725 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 726 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 727 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 728 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 729 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 730 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |


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| 731 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 732 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 733 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
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| 736 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 737 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 738 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 739 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 740 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 741 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 742 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 743 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 744 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 745 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 746 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 747 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 748 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 749 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 750 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
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| 753 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 754 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 755 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 756 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 757 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 758 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 759 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 760 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 761 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 762 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 763 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 764 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 765 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |


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| 766 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 767 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 768 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 769 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 770 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 771 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 772 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 773 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 774 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 775 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 776 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 777 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
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| 779 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 780 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 781 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 782 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
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| 792 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
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| 797 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
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| 799 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 800 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |


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| 801 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 802 |  |  |  |  |  |  |  |  |  |  |
| 803 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 804 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 805 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 806 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 807 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 808 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 809 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 810 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 811 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 812 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 813 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 814 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 815 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 816 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 817 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 818 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 819 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 820 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 821 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 822 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 823 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 824 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 825 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 826 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 827 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
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| 829 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 830 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 831 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 832 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 833 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 834 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 835 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |


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| 836 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 837 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 839 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 840 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 841 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 842 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 850 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 867 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 871 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 888 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 900 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 902 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 906 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 910 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 922 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 926 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 927 | 2021 |  | 2022 |  | 2023 |  | 2024 |  | 2025 |  | 2026 |  | 2027 |  | 2028 |  | 2029 |  | 2030 |  |
| 928 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 941 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 976 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 977 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 978 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 979 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 980 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 981 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 982 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 983 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 984 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 985 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 986 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 987 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 988 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 989 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 990 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 991 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 992 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 993 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 994 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 995 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 996 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 997 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 998 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 999 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1000 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1001 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1002 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1003 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1004 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1005 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1006 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1007 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1008 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1009 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1010 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |


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| 1011 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1012 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1013 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1014 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1015 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1016 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1017 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1018 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1019 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1020 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1021 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1022 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1023 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1024 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1025 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1026 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1027 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1028 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1029 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1030 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1031 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1032 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1033 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1034 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1035 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1036 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1037 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1038 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1039 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1040 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1041 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1042 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1043 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1044 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 1045 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |


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| 1046 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 1047 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 1048 |  |  |  |  |  |  |  |  |  |  |
| 1049 |  |  |  |  |  |  |  |  |  |  |
| 1050 |  |  |  |  |  |  |  |  |  |  |
| 1051 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 1052 | \$74 | \$64 | \$57 | \$51 | \$46 | \$41 | \$37 | \$34 | \$31 | \$28 |
| 1053 | \$80 | \$76 | \$71 | \$68 | \$64 | \$61 | \$57 | \$55 | \$52 | \$49 |
| 1054 | \$81 | \$78 | \$75 | \$71 | \$69 | \$66 | \$63 | \$61 | \$58 | \$56 |
| 1055 | \$51 | \$44 | \$39 | \$35 | \$32 | \$29 | \$26 | \$24 | \$21 | \$19 |
| 1056 | \$55 | \$52 | \$49 | \$46 | \$44 | \$41 | \$39 | \$37 | \$35 | \$33 |
| 1057 | \$56 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 | \$41 | \$39 | \$38 |
| 1058 | \$38 | \$33 | \$29 | \$26 | \$23 | \$21 | \$19 | \$17 | \$16 | \$14 |
| 1059 | \$41 | \$38 | \$36 | \$33 | \$31 | \$29 | \$28 | \$26 | \$25 | \$23 |
| 1060 | \$41 | \$39 | \$37 | \$35 | \$33 | \$32 | \$30 | \$29 | \$27 | \$26 |
| 1061 | \$28 | \$25 | \$23 | \$20 | \$19 | \$17 | \$16 | \$15 | \$15 | \$14 |
| 1062 | \$30 | \$29 | \$27 | \$26 | \$25 | \$23 | \$22 | \$21 | \$20 | \$19 |
| 1063 | \$31 | \$30 | \$28 | \$27 | \$26 | \$25 | \$24 | \$23 | \$22 | \$21 |
| 1064 | \$80 | \$70 | \$62 | \$55 | \$49 | \$44 | \$40 | \$36 | \$33 | \$30 |
| 1065 | \$87 | \$82 | \$77 | \$73 | \$69 | \$65 | \$62 | \$58 | \$55 | \$53 |
| 1066 | \$88 | \$84 | \$81 | \$77 | \$74 | \$71 | \$68 | \$65 | \$63 | \$60 |
| 1067 | \$55 | \$48 | \$43 | \$38 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 |
| 1068 | \$60 | \$56 | \$53 | \$50 | \$47 | \$44 | \$42 | \$40 | \$38 | \$36 |
| 1069 | \$61 | \$58 | \$55 | \$53 | \$50 | \$48 | \$46 | \$44 | \$42 | \$40 |
| 1070 | \$42 | \$36 | \$32 | \$28 | \$25 | \$23 | \$21 | \$19 | \$17 | \$15 |
| 1071 | \$45 | \$42 | \$39 | \$36 | \$34 | \$32 | \$30 | \$28 | \$26 | \$25 |
| 1072 | \$46 | \$43 | \$40 | \$38 | \$36 | \$34 | \$32 | \$31 | \$29 | \$28 |
| 1073 | \$31 | \$27 | \$24 | \$22 | \$20 | \$18 | \$17 | \$16 | \$15 | \$15 |
| 1074 | \$33 | \$31 | \$29 | \$28 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 1075 | \$34 | \$32 | \$30 | \$29 | \$28 | \$27 | \$26 | \$24 | \$23 | \$23 |
| 1076 | \$82 | \$72 | \$63 | \$56 | \$51 | \$45 | \$41 | \$37 | \$34 | \$30 |
| 1077 | \$90 | \$84 | \$80 | \$75 | \$71 | \$67 | \$63 | \$60 | \$57 | \$54 |
| 1078 | \$91 | \$87 | \$83 | \$79 | \$76 | \$73 | \$70 | \$67 | \$64 | \$62 |
| 1079 | \$57 | \$50 | \$44 | \$39 | \$35 | \$32 | \$29 | \$26 | \$23 | \$21 |
| 1080 | \$62 | \$58 | \$55 | \$52 | \$48 | \$46 | \$43 | \$41 | \$38 | \$36 |


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| 1081 | \$63 | \$60 | \$57 | \$54 | \$52 | \$49 | \$47 | \$45 | \$43 | \$41 |
| 1082 | \$43 | \$38 | \$33 | \$29 | \$26 | \$23 | \$21 | \$19 | \$17 | \$16 |
| 1083 | \$47 | \$43 | \$40 | \$37 | \$35 | \$33 | \$31 | \$29 | \$27 | \$25 |
| 1084 | \$47 | \$44 | \$42 | \$39 | \$37 | \$35 | \$33 | \$32 | \$30 | \$28 |
| 1085 | \$32 | \$28 | \$25 | \$23 | \$21 | \$19 | \$18 | \$17 | \$16 | \$15 |
| 1086 | \$34 | \$32 | \$30 | \$29 | \$27 | \$25 | \$24 | \$23 | \$22 | \$21 |
| 1087 | \$35 | \$33 | \$31 | \$30 | \$29 | \$27 | \$26 | \$25 | \$24 | \$23 |
| 1088 | \$85 | \$74 | \$65 | \$58 | \$52 | \$47 | \$42 | \$38 | \$34 | \$31 |
| 1089 | \$93 | \$87 | \$82 | \$77 | \$73 | \$69 | \$65 | \$61 | \$58 | \$55 |
| 1090 | \$94 | \$90 | \$86 | \$82 | \$78 | \$75 | \$72 | \$69 | \$66 | \$63 |
| 1091 | \$60 | \$52 | \$46 | \$40 | \$36 | \$33 | \$29 | \$27 | \$24 | \$22 |
| 1092 | \$65 | \$60 | \$57 | \$53 | \$50 | \$47 | \$44 | \$42 | \$39 | \$37 |
| 1093 | \$65 | \$62 | \$59 | \$56 | \$53 | \$51 | \$49 | \$46 | \$44 | \$42 |
| 1094 | \$45 | \$39 | \$34 | \$30 | \$27 | \$24 | \$22 | \$20 | \$18 | \$16 |
| 1095 | \$49 | \$45 | \$42 | \$39 | \$36 | \$34 | \$31 | \$29 | \$28 | \$26 |
| 1096 | \$49 | \$46 | \$43 | \$41 | \$38 | \$36 | \$34 | \$32 | \$31 | \$29 |
| 1097 | \$33 | \$29 | \$26 | \$23 | \$21 | \$19 | \$18 | \$17 | \$16 | \$15 |
| 1098 | \$35 | \$33 | \$31 | \$29 | \$28 | \$26 | \$25 | \$23 | \$22 | \$21 |
| 1099 | \$36 | \$34 | \$32 | \$31 | \$29 | \$28 | \$27 | \$26 | \$25 | \$23 |
| 1100 | \$89 | \$77 | \$68 | \$60 | \$54 | \$49 | \$44 | \$39 | \$36 | \$32 |
| 1101 | \$97 | \$91 | \$85 | \$80 | \$76 | \$71 | \$67 | \$64 | \$60 | \$57 |
| 1102 <br> 1103 | \$98 | \$93 | \$89 | \$85 | \$81 | \$78 | \$74 | \$71 | \$68 | \$65 |
| 1103 <br> 1108 | \$62 | \$54 | \$48 | \$42 | \$38 | \$34 | \$30 | \$27 | \$25 | \$23 |
| 1104 | \$68 | \$63 | \$59 | \$55 | \$52 | \$49 | \$46 | \$43 | \$41 | \$39 |
| 1105 | \$69 | \$65 | \$62 | \$58 | \$56 | \$53 | \$50 | \$48 | \$46 | \$44 |
| 1106 <br> 1107 | \$47 | \$41 | \$36 | \$31 | \$28 | \$25 | \$22 | \$20 | \$18 | \$17 |
| 1107 | \$51 | \$47 | \$44 | \$40 | \$37 | \$35 | \$33 | \$30 | \$28 | \$27 |
| 1108 <br> 110 | \$52 | \$48 | \$45 | \$42 | \$40 | \$38 | \$35 | \$33 | \$32 | \$30 |
| 1109 <br> 110 | \$34 | \$30 | \$27 | \$24 | \$22 | \$20 | \$19 | \$18 | \$17 | \$16 |
| 1110 | \$37 | \$35 | \$32 | \$30 | \$29 | \$27 | \$26 | \$24 | \$23 | \$22 |
| 1111 | \$37 | \$35 | \$34 | \$32 | \$30 | \$29 | \$28 | \$26 | \$25 | \$24 |
| 1112 | \$95 | \$83 | \$73 | \$64 | \$57 | \$51 | \$46 | \$42 | \$38 | \$34 |
| 1113 <br> 114 | \$104 | \$97 | \$91 | \$86 | \$80 | \$76 | \$71 | \$67 | \$64 | \$60 |
| 1114 <br> 111 | \$105 | \$100 | \$95 | \$90 | \$86 | \$82 | \$79 | \$75 | \$72 | \$69 |
| 1115 | \$67 | \$58 | \$51 | \$45 | \$40 | \$36 | \$32 | \$29 | \$26 | \$24 |


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| 1116 | \$73 | \$68 | \$63 | \$59 | \$55 | \$52 | \$49 | \$46 | \$43 | \$41 |
| 1117 | \$74 | \$70 | \$66 | \$62 | \$59 | \$56 | \$53 | \$51 | \$48 | \$46 |
| 1118 | \$51 | \$44 | \$38 | \$34 | \$30 | \$27 | \$24 | \$21 | \$19 | \$17 |
| 1119 | \$55 | \$51 | \$47 | \$43 | \$40 | \$37 | \$34 | \$32 | \$30 | \$28 |
| 1120 | \$56 | \$52 | \$48 | \$45 | \$42 | \$40 | \$37 | \$35 | \$33 | \$32 |
| 1121 | \$37 | \$32 | \$29 | \$26 | \$23 | \$21 | \$20 | \$19 | \$17 | \$16 |
| 1122 | \$40 | \$37 | \$35 | \$32 | \$30 | \$29 | \$27 | \$25 | \$24 | \$23 |
| 1123 | \$40 | \$38 | \$36 | \$34 | \$32 | \$31 | \$29 | \$28 | \$26 | \$25 |
| 1124 | \$106 | \$92 | \$80 | \$71 | \$63 | \$56 | \$51 | \$45 | \$41 | \$37 |
| 1125 | \$115 | \$107 | \$101 | \$94 | \$88 | \$83 | \$78 | \$73 | \$69 | \$65 |
| 1126 | \$117 | \$111 | \$105 | \$100 | \$95 | \$90 | \$86 | \$82 | \$78 | \$75 |
| 1127 | \$75 | \$65 | \$56 | \$50 | \$44 | \$39 | \$35 | \$32 | \$29 | \$26 |
| 1128 | \$82 | \$76 | \$70 | \$65 | \$61 | \$57 | \$53 | \$50 | \$47 | \$44 |
| 1129 | \$83 | \$78 | \$73 | \$69 | \$65 | \$62 | \$58 | \$55 | \$53 | \$50 |
| 1130 | \$58 | \$49 | \$42 | \$37 | \$33 | \$29 | \$26 | \$23 | \$21 | \$19 |
| 1131 | \$62 | \$57 | \$52 | \$48 | \$44 | \$41 | \$38 | \$35 | \$32 | \$30 |
| 1132 | \$63 | \$58 | \$54 | \$50 | \$47 | \$44 | \$41 | \$38 | \$36 | \$34 |
| 1133 | \$41 | \$36 | \$31 | \$28 | \$25 | \$23 | \$21 | \$20 | \$19 | \$17 |
| 1134 | \$44 | \$41 | \$38 | \$35 | \$33 | \$31 | \$29 | \$27 | \$26 | \$24 |
| 1135 | \$44 | \$42 | \$39 | \$37 | \$35 | \$33 | \$32 | \$30 | \$28 | \$27 |
| 1136 | \$122 | \$105 | \$92 | \$81 | \$72 | \$64 | \$57 | \$51 | \$46 | \$41 |
| 1137 | \$133 | \$124 | \$115 | \$108 | \$101 | \$94 | \$88 | \$83 | \$78 | \$73 |
| 1138 | \$135 | \$127 | \$120 | \$114 | \$108 | \$102 | \$97 | \$92 | \$88 | \$84 |
| 1139 | \$88 | \$75 | \$65 | \$57 | \$50 | \$45 | \$40 | \$36 | \$32 | \$29 |
| 1140 | \$96 | \$88 | \$81 | \$75 | \$70 | \$65 | \$60 | \$56 | \$53 | \$49 |
| 1141 | \$97 | \$90 | \$84 | \$79 | \$74 | \$70 | \$66 | \$62 | \$59 | \$56 |
| 1142 | \$68 | \$58 | \$49 | \$43 | \$37 | \$33 | \$29 | \$26 | \$23 | \$21 |
| 1143 | \$73 | \$66 | \$60 | \$55 | \$50 | \$46 | \$42 | \$39 | \$36 | \$34 |
| 1144 | \$74 | \$68 | \$62 | \$58 | \$53 | \$50 | \$46 | \$43 | \$40 | \$38 |
| 1145 | \$47 | \$41 | \$36 | \$32 | \$28 | \$26 | \$24 | \$22 | \$21 | \$19 |
| 1146 | \$51 | \$47 | \$43 | \$40 | \$37 | \$35 | \$33 | \$30 | \$29 | \$27 |
| 1147 | \$51 | \$48 | \$45 | \$42 | \$40 | \$37 | \$35 | \$33 | \$32 | \$30 |
| 1148 | \$147 | \$126 | \$109 | \$96 | \$85 | \$75 | \$67 | \$60 | \$54 | \$48 |
| 1149 | \$160 | \$148 | \$137 | \$127 | \$119 | \$111 | \$103 | \$97 | \$91 | \$85 |
| 1150 | \$162 | \$152 | \$143 | \$135 | \$127 | \$120 | \$114 | \$108 | \$103 | \$97 |


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| 1151 | \$108 | \$92 | \$79 | \$69 | \$60 | \$53 | \$47 | \$42 | \$37 | \$34 |
| 1152 | \$117 | \$107 | \$98 | \$90 | \$83 | \$77 | \$71 | \$66 | \$62 | \$57 |
| 1153 | \$119 | \$110 | \$102 | \$95 | \$89 | \$83 | \$78 | \$73 | \$69 | \$65 |
| 1154 | \$84 | \$70 | \$59 | \$51 | \$44 | \$39 | \$34 | \$30 | \$27 | \$24 |
| 1155 | \$91 | \$81 | \$73 | \$66 | \$60 | \$54 | \$50 | \$46 | \$42 | \$39 |
| 1156 | \$92 | \$83 | \$75 | \$69 | \$63 | \$58 | \$54 | \$50 | \$47 | \$44 |
| 1157 | \$57 | \$49 | \$43 | \$38 | \$33 | \$30 | \$28 | \$26 | \$24 | \$22 |
| 1158 | \$61 | \$56 | \$52 | \$48 | \$44 | \$41 | \$38 | \$35 | \$33 | \$31 |
| 1159 | \$62 | \$58 | \$53 | \$50 | \$47 | \$44 | \$41 | \$39 | \$36 | \$34 |
| 1160 | \$157 | \$141 | \$127 | \$115 | \$106 | \$97 | \$89 | \$82 | \$76 | \$70 |
| 1161 | \$171 | \$165 | \$159 | \$153 | \$148 | \$142 | \$137 | \$132 | \$128 | \$123 |
| 1162 | \$174 | \$170 | \$166 | \$162 | \$158 | \$155 | \$151 | \$148 | \$144 | \$141 |
| 1163 | \$180 | \$150 | \$127 | \$109 | \$95 | \$83 | \$72 | \$64 | \$57 | \$50 |
| 1164 | \$195 | \$175 | \$158 | \$143 | \$130 | \$119 | \$109 | \$101 | \$93 | \$86 |
| 1165 | \$198 | \$180 | \$164 | \$151 | \$139 | \$129 | \$120 | \$112 | \$104 | \$98 |
| 1166 | \$141 | \$115 | \$95 | \$80 | \$69 | \$60 | \$52 | \$46 | \$40 | \$36 |
| 1167 | \$152 | \$132 | \$116 | \$103 | \$92 | \$83 | \$75 | \$68 | \$62 | \$57 |
| 1168 | \$154 | \$135 | \$120 | \$108 | \$98 | \$89 | \$82 | \$75 | \$70 | \$65 |
| 1169 | \$92 | \$78 | \$66 | \$57 | \$50 | \$45 | \$41 | \$37 | \$34 | \$32 |
| 1170 | \$99 | \$89 | \$80 | \$73 | \$66 | \$61 | \$56 | \$51 | \$47 | \$44 |
| 1171 | \$100 | \$91 | \$83 | \$76 | \$70 | \$65 | \$60 | \$56 | \$52 | \$49 |
| 1172 |  |  |  |  |  |  |  |  |  |  |
| 1173 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 1174 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 1175 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 1176 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 1177 | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 1178 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 1179 | \$ | \$ | \$ | \$ | \$ | \$ - | \$ | \$ | \$ | \$ |
| 1180 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 1181 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 1182 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 1183 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 1184 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 1185 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |


|  | N | O | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1186 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 1187 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 1188 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 1189 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 1190 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 1191 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 1192 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 1193 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 1194 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 1195 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 1196 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 1197 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 1198 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 1199 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 1200 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 1201 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 1202 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 1203 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 1204 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 1205 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 1206 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 1207 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 1208 |  |  |  |  |  |  |  |  |  |  |
| 1209 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 1210 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 |
| 1211 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 |
| 1212 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 |
| 1213 |  |  |  |  |  |  |  |  |  |  |
| 1214 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 1215 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 1216 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 1217 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 1218 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 1219 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 1220 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |


|  | N | O | P | Q | R | S | T | U | V | W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1221 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 1222 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 1223 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 1224 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 1225 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 1226 |  |  |  |  |  |  |  |  |  |  |
| 1227 |  |  |  |  |  |  |  |  |  |  |
| 1228 |  |  |  |  |  |  |  |  |  |  |
| 1229 |  |  |  |  |  |  |  |  |  |  |
| 1230 |  |  |  |  |  |  |  |  |  |  |
| 1231 | K. McCabe, A | na, J. L | n, P. Bha | T. Bowe | aranowski | Segrin, E. | 2022 Dis | ed Wind | gy Future |  |
| 1232 | K. McCabe, A | anna, J. L | n, P. Bha | T. Bowe | aranowski | Segrin, E. | 2022 Dis | ed Wind | gy Future |  |
| 1233 | P. Bhaskar, T | 2021 |  |  |  |  |  |  |  |  |
| 1234 | T. Stehly and | fy 2021 |  |  |  |  |  |  |  |  |
| 1235 | N/A |  |  |  |  |  |  |  |  |  |
| 1236 | N/A |  |  |  |  |  |  |  |  |  |
| 1237 |  |  |  |  |  |  |  |  |  |  |
| 1238 |  |  |  |  |  |  |  |  |  |  |
| 1239 | K. McCabe, A | anna, J. L | n, P. Bha | T. Bowe | aranowski | Segrin, E. | 2022 Dis | ed Wind | gy Future |  |
| 1240 | K. McCabe, A | anna, J. L | n, P. Bha | T. Bowe | aranowski | Segrin, E. | 2022 Dis | ed Wind | gy Future |  |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |  |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 37 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 38 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 39 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 40 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 41 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 42 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 43 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 44 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 45 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 46 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 47 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 48 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 49 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 50 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 51 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 52 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 53 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 54 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 55 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 56 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 57 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 58 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 59 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 60 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 61 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 62 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 63 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 64 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 65 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 67 |  |  |  |  |  |  |  |  |  |  |
| 68 |  |  |  |  |  |  |  |  |  |  |
| 69 |  |  |  |  |  |  |  |  |  |  |
| 70 |  |  |  |  |  |  |  |  |  |  |
| 71 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 72 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 73 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 74 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 75 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 76 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 77 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 78 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 79 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 80 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 81 | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% |
| 82 | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% |
| 83 | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% |
| 84 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% |
| 85 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% |
| 86 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% |
| 87 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 88 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 89 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 90 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 91 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 92 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 93 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 94 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 95 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 96 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 97 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 98 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 99 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 100 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 101 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 102 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 103 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 104 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 105 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |
| 106 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |
| 107 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |
| 108 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 109 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 110 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 111 | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% |
| 112 | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% |
| 113 | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% |
| 114 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 115 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 116 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 117 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 118 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 119 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 120 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 121 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 122 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 123 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 124 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 125 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 126 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 127 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 128 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 129 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 130 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 131 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 132 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 133 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 134 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 135 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 136 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 137 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 138 | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 139 | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 140 | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 141 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 142 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 143 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 144 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 145 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 146 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 147 | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% |
| 148 | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% |
| 149 | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% |
| 150 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 151 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 152 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 153 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 154 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 155 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 156 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 157 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 158 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 159 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 160 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 161 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 162 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 163 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 164 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 165 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 166 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 167 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 168 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 169 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 170 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 171 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 172 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 173 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 174 | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% |
| 175 | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% |
| 176 | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% |
| 177 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 178 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 179 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 180 | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 181 | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 182 | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 183 | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 184 | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 185 | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 186 | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |
| 187 | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |
| 188 | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |
| 189 | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% |
| 190 | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% |
| 191 | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% |
| 192 |  |  |  |  |  |  |  |  |  |  |
| 193 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 194 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 |
| 195 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 |
| 196 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 |
| 197 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 |
| 198 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 |
| 199 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 |
| 200 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 |
| 201 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 |
| 202 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 |
| 203 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 |
| 204 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 |
| 205 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 206 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 |
| 207 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 |
| 208 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 |
| 209 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 |
| 210 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 |
| 211 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 |
| 212 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 |
| 213 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 |
| 214 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 |
| 215 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 |
| 216 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 |
| 217 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 |
| 218 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 |
| 219 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 |
| 220 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 |
| 221 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 |
| 222 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 |
| 223 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 |
| 224 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 |
| 225 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 |
| 226 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 |
| 227 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 |
| 228 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 |
| 229 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 |
| 230 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 |
| 231 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 |
| 232 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 |
| 233 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 |
| 234 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 |
| 235 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 |
| 236 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 |
| 237 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 |
| 238 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 |
| 239 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 |
| 240 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
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| 241 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 |
| 242 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 |
| 243 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 |
| 244 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 |
| 245 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 |
| 246 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 |
| 247 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 |
| 248 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 |
| 249 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 |
| 250 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 |
| 251 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 |
| 252 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 |
| 253 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 |
| 254 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 |
| 255 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 |
| 256 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 |
| 257 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 |
| 258 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 |
| 259 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 |
| 260 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 |
| 261 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 |
| 262 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 |
| 263 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 |
| 264 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 |
| 265 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 |
| 266 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 |
| 267 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 |
| 268 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 |
| 269 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 |
| 270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 |
| 271 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 |
| 272 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 |
| 273 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 |
| 274 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 |
| 275 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 276 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 |
| 277 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 |
| 278 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 |
| 279 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 |
| 280 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 |
| 281 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 |
| 282 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 |
| 283 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 |
| 284 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 |
| 285 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 |
| 286 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 |
| 287 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 |
| 288 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 |
| 289 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 |
| 290 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 |
| 291 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 |
| 292 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 |
| 293 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 |
| 294 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 |
| 295 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 |
| 296 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 |
| 297 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 |
| 298 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 |
| 299 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 |
| 300 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 |
| 301 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 |
| 302 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 |
| 303 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 |
| 304 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 |
| 305 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 |
| 306 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 |
| 307 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 |
| 308 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 |
| 309 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 |
| 310 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 311 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 |
| 312 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 |
| 313 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 |
| 314 |  |  |  |  |  |  |  |  |  |  |
| 315 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 316 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 317 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 318 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 319 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 320 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |
| 321 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |
| 322 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 323 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 324 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 325 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 326 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 327 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 328 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 329 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 330 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 331 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 332 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |
| 333 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |
| 334 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 335 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 336 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 337 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 338 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 339 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 340 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 341 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 342 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 343 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 344 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |
| 345 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 346 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 347 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 348 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 349 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 350 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 351 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 352 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 353 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 354 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 355 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 356 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |
| 357 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |
| 358 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 359 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 360 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 361 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 362 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 363 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 364 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 365 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 366 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 367 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 368 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |
| 369 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |
| 370 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 371 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 372 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 373 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 374 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 375 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 376 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 377 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 378 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 379 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 380 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 381 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |
| 382 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 383 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 384 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 385 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 386 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 387 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 388 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 389 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 390 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 391 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 392 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |
| 393 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |
| 394 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 395 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 396 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 397 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 398 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 399 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 400 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 401 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 402 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 403 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 404 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |
| 405 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |
| 406 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 407 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 408 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 409 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 410 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 411 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 412 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 413 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 414 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 415 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 416 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |
| 417 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |
| 418 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 419 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 420 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 421 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 422 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 423 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 424 | \$1,878 | \$1,707 | \$1,551 | \$1,409 | \$1,281 | \$1,164 | \$1,058 | \$961 | \$891 | \$881 |
| 425 | \$4,039 | \$3,905 | \$3,775 | \$3,649 | \$3,528 | \$3,410 | \$3,297 | \$3,187 | \$3,081 | \$2,978 |
| 426 | \$4,798 | \$4,711 | \$4,626 | \$4,543 | \$4,461 | \$4,380 | \$4,301 | \$4,223 | \$4,147 | \$4,072 |
| 427 | \$1,410 | \$1,282 | \$1,165 | \$1,058 | \$962 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 428 | \$3,033 | \$2,932 | \$2,834 | \$2,740 | \$2,649 | \$2,561 | \$2,475 | \$2,393 | \$2,313 | \$2,236 |
| 429 | \$3,603 | \$3,538 | \$3,474 | \$3,411 | \$3,349 | \$3,289 | \$3,229 | \$3,171 | \$3,114 | \$3,058 |
| 430 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 431 | \$1,969 | \$1,904 | \$1,840 | \$1,779 | \$1,720 | \$1,663 | \$1,607 | \$1,554 | \$1,502 | \$1,452 |
| 432 | \$2,339 | \$2,297 | \$2,255 | \$2,215 | \$2,175 | \$2,135 | \$2,097 | \$2,059 | \$2,022 | \$1,985 |
| 433 | \$970 | \$960 | \$950 | \$940 | \$930 | \$921 | \$911 | \$901 | \$891 | \$881 |
| 434 | \$1,568 | \$1,515 | \$1,465 | \$1,416 | \$1,369 | \$1,323 | \$1,279 | \$1,237 | \$1,196 | \$1,156 |
| 435 | \$1,862 | \$1,828 | \$1,795 | \$1,763 | \$1,731 | \$1,700 | \$1,669 | \$1,639 | \$1,609 | \$1,580 |
| 436 |  |  |  |  |  |  |  |  |  |  |
| 437 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 438 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |
| 439 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 440 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 441 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 442 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 443 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 444 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 445 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 446 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 447 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 448 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 449 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |
| 450 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 451 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 452 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 453 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 454 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 455 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 456 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 457 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 458 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 459 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 460 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 461 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |
| 462 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |
| 463 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 464 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 465 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 466 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 467 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 468 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 469 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 470 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 471 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 472 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 473 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |
| 474 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |
| 475 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 476 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 477 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 478 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 479 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 480 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 481 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 482 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 483 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 484 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 485 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 486 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |
| 487 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 488 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 489 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 490 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 491 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 492 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 493 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 494 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 495 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 496 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 497 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |
| 498 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |
| 499 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 500 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 501 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 502 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 503 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 504 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 505 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 506 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 507 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 508 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 509 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |
| 510 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |
| 511 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 512 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 513 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 514 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 515 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 516 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 517 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 518 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 519 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 520 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 521 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |
| 522 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |
| 523 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 524 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 525 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 526 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 527 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 528 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 529 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 530 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 531 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 532 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 533 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |
| 534 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |
| 535 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 536 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 537 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 538 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 539 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 540 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 541 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 542 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 543 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 544 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 545 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |
| 546 | \$45 | \$41 | \$37 | \$34 | \$31 | \$28 | \$25 | \$23 | \$21 | \$21 |
| 547 | \$97 | \$94 | \$91 | \$88 | \$85 | \$82 | \$79 | \$76 | \$74 | \$71 |
| 548 | \$115 | \$113 | \$111 | \$109 | \$107 | \$105 | \$103 | \$101 | \$100 | \$98 |
| 549 | \$34 | \$31 | \$28 | \$25 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 550 | \$73 | \$70 | \$68 | \$66 | \$64 | \$61 | \$59 | \$57 | \$56 | \$54 |
| 551 | \$86 | \$85 | \$83 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$73 |
| 552 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 553 | \$47 | \$46 | \$44 | \$43 | \$41 | \$40 | \$39 | \$37 | \$36 | \$35 |
| 554 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
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|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 556 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 557 | \$45 | \$44 | \$43 | \$42 | \$42 | \$41 | \$40 | \$39 | \$39 | \$38 |
| 558 |  |  |  |  |  |  |  |  |  |  |
| 559 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 560 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 561 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 562 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 563 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 564 | \$2,960 | \$2,862 | \$2,766 | \$2,674 | \$2,585 | \$2,499 | \$2,416 | \$2,335 | \$2,258 | \$2,183 |
| 565 | \$3,516 | \$3,453 | \$3,390 | \$3,329 | \$3,269 | \$3,210 | \$3,152 | \$3,095 | \$3,039 | \$2,984 |
| 566 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 567 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 568 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 569 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 570 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 571 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 572 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 573 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 574 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 575 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 576 | \$2,960 | $\begin{aligned} & \$ 2,862 \\ & \$ 3,453 \end{aligned}$ | \$2,766 | \$2,674 | \$2,585 | $\begin{aligned} & \$ 2,499 \\ & \$ 3,210 \end{aligned}$ | $\begin{aligned} & \$ 2,416 \\ & \$ 3,152 \end{aligned}$ | $\begin{aligned} & \$ 2,335 \\ & \$ 3,095 \end{aligned}$ | $\begin{aligned} & \$ 2,258 \\ & \$ 3,039 \end{aligned}$ | $\begin{aligned} & \$ 2,183 \\ & \$ 2,984 \end{aligned}$ |
| 577 | \$3,516 |  | \$3,390 | \$3,329 | \$3,269 |  |  |  |  |  |
| 578 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 579 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 580 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 581 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 582 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 583 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 584 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 585 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 586 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 587 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 588 | \$2,960 | \$2,862 | \$2,766 | \$2,674 | \$2,585 | \$2,499 | \$2,416 | \$2,335 | \$2,258 | \$2,183 |
| 589 | \$3,516 | \$3,453 | \$3,390 | \$3,329 | \$3,269 | \$3,210 | \$3,152 | \$3,095 | \$3,039 | \$2,984 |
| 590 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 591 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 592 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 593 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 594 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 595 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 596 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 597 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 598 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 599 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 600 | \$2,960 | \$2,862 | \$2,766 | \$2,674 | \$2,585 | \$2,499 | \$2,416 | \$2,335 | \$2,258 | \$2,183 |
| 601 | \$3,516 | \$3,453 | \$3,390 | \$3,329 | \$3,269 | \$3,210 | \$3,152 | \$3,095 | \$3,039 | \$2,984 |
| 602 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 603 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 604 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 605 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 606 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 607 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 608 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 609 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 610 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 611 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 612 | \$2,960 | \$2,862 | \$2,766 | \$2,674 | \$2,585 | \$2,499 | \$2,416 | \$2,335 | \$2,258 | \$2,183 |
| 613 | \$3,516 | \$3,453 | \$3,390 | \$3,329 | \$3,269 | \$3,210 | \$3,152 | \$3,095 | \$3,039 | \$2,984 |
| 614 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 615 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 616 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 617 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 618 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 619 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 620 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 621 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 622 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 623 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 624 | \$2,960 | \$2,862 | \$2,766 | \$2,674 | \$2,585 | \$2,499 | \$2,416 | \$2,335 | \$2,258 | \$2,183 |
| 625 | \$3,516 | \$3,453 | \$3,390 | \$3,329 | \$3,269 | \$3,210 | \$3,152 | \$3,095 | \$3,039 | \$2,984 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 626 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 627 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 628 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 629 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 630 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 631 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 632 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 633 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 634 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 635 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 636 | \$2,960 | \$2,862 | \$2,766 | \$2,674 | \$2,585 | \$2,499 | \$2,416 | \$2,335 | \$2,258 | \$2,183 |
| 637 | \$3,516 | \$3,453 | \$3,390 | \$3,329 | \$3,269 | \$3,210 | \$3,152 | \$3,095 | \$3,039 | \$2,984 |
| 638 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 639 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 640 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 641 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 642 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 643 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 644 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 645 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 646 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 647 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 648 | \$2,960 | \$2,862 | \$2,766 | \$2,674 | \$2,585 | \$2,499 | \$2,416 | \$2,335 | \$2,258 | \$2,183 |
| 649 | \$3,516 | \$3,453 | \$3,390 | \$3,329 | \$3,269 | \$3,210 | \$3,152 | \$3,095 | \$3,039 | \$2,984 |
| 650 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 651 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 652 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 653 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 654 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 655 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 656 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 657 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 658 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 659 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 660 | \$2,960 | \$2,862 | \$2,766 | \$2,674 | \$2,585 | \$2,499 | \$2,416 | \$2,335 | \$2,258 | \$2,183 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
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| 661 | \$3,516 | \$3,453 | \$3,390 | \$3,329 | \$3,269 | \$3,210 | \$3,152 | \$3,095 | \$3,039 | \$2,984 |
| 662 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 663 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 664 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 665 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 666 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 667 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 668 | \$1,833 | \$1,666 | \$1,514 | \$1,376 | \$1,250 | \$1,136 | \$1,032 | \$938 | \$870 | \$860 |
| 669 | \$3,943 | \$3,811 | \$3,684 | \$3,562 | \$3,443 | \$3,328 | \$3,218 | \$3,110 | \$3,007 | \$2,907 |
| 670 | \$4,683 | \$4,598 | \$4,515 | \$4,434 | \$4,354 | \$4,275 | \$4,198 | \$4,122 | \$4,047 | \$3,974 |
| 671 | \$1,376 | \$1,251 | \$1,137 | \$1,033 | \$939 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 672 | \$2,960 | \$2,862 | \$2,766 | \$2,674 | \$2,585 | \$2,499 | \$2,416 | \$2,335 | \$2,258 | \$2,183 |
| 673 | \$3,516 | \$3,453 | \$3,390 | \$3,329 | \$3,269 | \$3,210 | \$3,152 | \$3,095 | \$3,039 | \$2,984 |
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| 675 | \$1,922 | \$1,858 | \$1,796 | \$1,736 | \$1,679 | \$1,623 | \$1,569 | \$1,516 | \$1,466 | \$1,417 |
| 676 | \$2,283 | \$2,242 | \$2,201 | \$2,161 | \$2,122 | \$2,084 | \$2,046 | \$2,009 | \$1,973 | \$1,938 |
| 677 | \$946 | \$937 | \$927 | \$918 | \$908 | \$899 | \$889 | \$879 | \$870 | \$860 |
| 678 | \$1,530 | \$1,479 | \$1,430 | \$1,382 | \$1,336 | \$1,292 | \$1,249 | \$1,207 | \$1,167 | \$1,128 |
| 679 | \$1,817 | \$1,784 | \$1,752 | \$1,721 | \$1,690 | \$1,659 | \$1,629 | \$1,600 | \$1,571 | \$1,542 |
| 680 |  |  |  |  |  |  |  |  |  |  |
| 681 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 682 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |
| 683 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |
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| 694 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |
| 695 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
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| 696 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |
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| 710 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |
| 711 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |
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| 726 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |
| 727 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |
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|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
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|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
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| 799 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |
| 800 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 | \$33 |




|  | X |  | Y |  | Z |  | AA |  | AB |  | AC |  | AD |  | AE |  | AF |  | AG |
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| 873 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 874 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 875 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 879 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 887 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 888 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 889 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 890 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 891 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 892 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 893 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 894 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 895 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 896 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 897 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 898 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 899 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 900 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 901 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 902 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 903 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 904 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 905 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |


|  | X |  | Y |  | Z |  | AA |  | AB |  | AC |  | AD |  | AE |  | AF |  | AG |
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| 906 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 907 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 908 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |
| 909 |  | \$0 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  | \$0 | \$0 |  | \$0 |  | \$0 |
| 910 |  | \$0 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  | \$0 | \$0 |  | \$0 |  | \$0 |
| 911 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  | \$0 | \$0 |  | \$0 |  | \$0 |
| 912 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 913 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  | \$0 | \$0 \$0 |  |  |
| 914 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |  | \$0 |  | \$0 |
| 915 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 916 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |
| 917 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  | \$0 |  | \$0 |
| 918 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |
| 919 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  | \$0 |  | \$0 |
| 920 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 $\$ 0$ |
| 921 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 922 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  | \$0 |  | \$0 | \$0 |  | \$0 |
| 923 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 924 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 925 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 926 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 927 | 2031 |  | 2032 |  | 2033 |  | 2034 |  | 2035 |  | 2036 |  | 2037 |  | 2038 |  | 2039 |  | 2040 |
| 928 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 929 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 930 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 931 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 932 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 933 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 934 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 935 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 936 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 937 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 938 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 939 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 940 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |


|  | X |  | Y |  | Z |  | AA |  | AB |  | AC |  | AD |  | AE |  | AF |  | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 941 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 942 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 943 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 944 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 945 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 946 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 947 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 948 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 949 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 950 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 951 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 952 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 953 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 954 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 955 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 956 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 957 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 958 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 959 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 960 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 961 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 962 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 963 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 964 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 965 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 966 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 967 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 968 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 969 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 970 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 971 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 972 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 973 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 974 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 975 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |



|  | X |  | Y |  | Z |  | AA |  | AB |  | AC |  | AD |  | AE |  | AF |  | AG |
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| 1011 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1012 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1013 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1014 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1015 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1016 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1017 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1018 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1019 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1020 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1021 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1022 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1023 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1024 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1025 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1026 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1027 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1028 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1029 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1030 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1031 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1032 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1033 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1034 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1035 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1036 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1037 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1038 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1039 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1040 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1041 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1042 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1043 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1044 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1045 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
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| 1046 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 1047 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 1048 |  |  |  |  |  |  |  |  |  |  |
| 1049 |  |  |  |  |  |  |  |  |  |  |
| 1050 |  |  |  |  |  |  |  |  |  |  |
| 1051 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 1052 | \$26 | \$24 | \$23 | \$21 | \$20 | \$19 | \$17 | \$16 | \$16 | \$16 |
| 1053 | \$48 | \$46 | \$45 | \$44 | \$42 | \$41 | \$40 | \$39 | \$38 | \$37 |
| 1054 | \$55 | \$54 | \$54 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 1055 | \$18 | \$17 | \$16 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$13 |
| 1056 | \$32 | \$31 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 1057 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 |
| 1058 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 1059 | \$23 | \$22 | \$22 | \$21 | \$20 | \$20 | \$19 | \$19 | \$19 | \$18 |
| 1060 | \$26 | \$25 | \$25 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 |
| 1061 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 1062 | \$19 | \$18 | \$18 | \$17 | \$17 | \$16 | \$16 | \$16 | \$15 | \$15 |
| 1063 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 |
| 1064 | \$28 | \$26 | \$24 | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$17 |
| 1065 | \$51 | \$50 | \$48 | \$47 | \$45 | \$44 | \$43 | \$42 | \$40 | \$39 |
| 1066 | \$59 | \$58 | \$57 | \$56 | \$55 | \$55 | \$54 | \$53 | \$52 | \$51 |
| 1067 | \$19 | \$18 | \$17 | \$16 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 |
| 1068 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$28 | \$28 | \$27 |
| 1069 | \$40 | \$39 | \$39 | \$38 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 |
| 1070 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 1071 | \$24 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 |
| 1072 | \$27 | \$27 | \$27 | \$26 | \$26 | \$25 | \$25 | \$25 | \$24 | \$24 |
| 1073 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$13 |
| 1074 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 1075 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 |
| 1076 | \$28 | \$26 | \$25 | \$23 | \$22 | \$20 | \$19 | \$18 | \$17 | \$17 |
| 1077 | \$52 | \$51 | \$49 | \$48 | \$46 | \$45 | \$44 | \$43 | \$41 | \$40 |
| 1078 | \$61 | \$60 | \$59 | \$58 | \$57 | \$56 | \$55 | \$54 | \$53 | \$52 |
| 1079 | \$20 | \$19 | \$18 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 1080 | \$35 | \$34 | \$33 | \$32 | \$32 | \$31 | \$30 | \$29 | \$28 | \$28 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1081 | \$41 | \$40 | \$39 | \$39 | \$38 | \$38 | \$37 | \$36 | \$36 | \$35 |
| 1082 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 |
| 1083 | \$25 | \$24 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 |
| 1084 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 | \$25 |
| 1085 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 1086 | \$20 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$17 | \$17 | \$16 |
| 1087 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$21 | \$20 | \$20 |
| 1088 | \$29 | \$27 | \$25 | \$24 | \$22 | \$21 | \$20 | \$18 | \$18 | \$17 |
| 1089 | \$53 | \$52 | \$50 | \$49 | \$48 | \$46 | \$45 | \$44 | \$42 | \$41 |
| 1090 | \$62 | \$61 | \$60 | \$59 | \$58 | \$57 | \$56 | \$55 | \$55 | \$54 |
| 1091 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 |
| 1092 | \$36 | \$35 | \$34 | \$33 | \$32 | \$32 | \$31 | \$30 | \$29 | \$28 |
| 1093 | \$42 | \$41 | \$40 | \$40 | \$39 | \$39 | \$38 | \$37 | \$37 | \$36 |
| 1094 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 1095 | \$25 | \$25 | \$24 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 |
| 1096 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 |
| 1097 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 1098 | \$20 | \$20 | \$19 | \$19 | \$19 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 1099 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$20 |
| 1100 | \$30 | \$28 | \$26 | \$24 | \$23 | \$21 | \$20 | \$19 | \$18 | \$18 |
| 1101 | \$55 | \$54 | \$52 | \$51 | \$49 | \$48 | \$46 | \$45 | \$44 | \$43 |
| 1102 | \$64 | \$63 | \$62 | \$61 | \$60 | \$59 | \$58 | \$57 | \$56 | \$55 |
| 1103 | \$21 | \$20 | \$19 | \$17 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 |
| 1104 | \$37 | \$36 | \$35 | \$34 | \$33 | \$33 | \$32 | \$31 | \$30 | \$29 |
| 1105 | \$43 | \$42 | \$42 | \$41 | \$41 | \$40 | \$39 | \$39 | \$38 | \$37 |
| 1106 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 |
| 1107 | \$26 | \$25 | \$25 | \$24 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 |
| 1108 | \$30 | \$29 | \$29 | \$28 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 1109 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 |
| 1110 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$17 |
| 1111 | \$24 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 |
| 1112 | \$32 | \$29 | \$28 | \$26 | \$24 | \$23 | \$21 | \$20 | \$19 | \$19 |
| 1113 | \$58 | \$57 | \$55 | \$53 | \$52 | \$50 | \$49 | \$48 | \$46 | \$45 |
| 1114 | \$68 | \$67 | \$65 | \$64 | \$63 | \$62 | \$61 | \$60 | \$59 | \$58 |
| 1115 | \$22 | \$21 | \$20 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1116 | \$39 | \$38 | \$37 | \$36 | \$35 | \$34 | \$33 | \$32 | \$32 | \$31 |
| 1117 | \$45 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$41 | \$40 | \$39 |
| 1118 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 | \$16 | \$16 |
| 1119 | \$27 | \$27 | \$26 | \$25 | \$25 | \$24 | \$23 | \$23 | \$22 | \$22 |
| 1120 | \$31 | \$31 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$28 | \$27 |
| 1121 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 |
| 1122 | \$22 | \$22 | \$21 | \$20 | \$20 | \$20 | \$19 | \$19 | \$18 | \$18 |
| 1123 | \$25 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 |
| 1124 | \$34 | \$32 | \$30 | \$28 | \$26 | \$25 | \$23 | \$22 | \$21 | \$21 |
| 1125 | \$63 | \$61 | \$60 | \$58 | \$56 | \$55 | \$53 | \$52 | \$50 | \$49 |
| 1126 | \$73 | \$72 | \$71 | \$70 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 |
| 1127 | \$24 | \$23 | \$21 | \$20 | \$19 | \$18 | \$18 | \$18 | \$18 | \$18 |
| 1128 | \$43 | \$42 | \$40 | \$39 | \$38 | \$37 | \$36 | \$35 | \$34 | \$33 |
| 1129 | \$49 | \$49 | \$48 | \$47 | \$46 | \$46 | \$45 | \$44 | \$43 | \$43 |
| 1130 | \$18 | \$18 | \$18 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 1131 | \$29 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 | \$25 | \$24 | \$24 |
| 1132 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 | \$30 | \$30 | \$29 |
| 1133 <br> 1138 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 |
| 1134 | \$24 | \$23 | \$23 | \$22 | \$21 | \$21 | \$20 | \$20 | \$20 | \$19 |
| 1135 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 1136 | \$39 | \$36 | \$34 | \$31 | \$29 | \$28 | \$26 | \$25 | \$23 | \$23 |
| 1137 | \$71 | \$69 | \$67 | \$65 | \$63 | \$61 | \$60 | \$58 | \$56 | \$55 |
| 1138 | \$83 | \$81 | \$80 | \$79 | \$77 | \$76 | \$75 | \$74 | \$72 | \$71 |
| 1139 | \$27 | \$25 | \$24 | \$22 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 1140 | \$48 | \$46 | \$45 | \$44 | \$43 | \$42 | \$40 | \$39 | \$38 | \$37 |
| 1141 | \$55 | \$54 | \$53 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 1142 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 1143 | \$33 | \$32 | \$31 | \$30 | \$30 | \$29 | \$28 | \$28 | \$27 | \$26 |
| 1144 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 |
| 1145 | \$19 | \$19 | \$19 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 | \$18 |
| 1146 | \$26 | \$26 | \$25 | \$24 | \$24 | \$23 | \$23 | \$22 | \$22 | \$21 |
| 1147 | \$30 | \$29 | \$29 | \$28 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 1148 <br> 114 | \$45 | \$42 | \$39 | \$36 | \$34 | \$32 | \$30 | \$28 | \$27 | \$27 |
| 1149 | \$83 | \$80 | \$78 | \$76 | \$73 | \$71 | \$69 | \$67 | \$66 | \$64 |
| 1150 | \$96 | \$94 | \$93 | \$91 | \$90 | \$88 | \$87 | \$86 | \$84 | \$83 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1151 | \$31 | \$29 | \$28 | \$26 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 |
| 1152 | \$56 | \$54 | \$53 | \$51 | \$50 | \$49 | \$47 | \$46 | \$45 | \$44 |
| 1153 | \$64 | \$63 | \$62 | \$61 | \$60 | \$60 | \$59 | \$58 | \$57 | \$56 |
| 1154 | \$24 | \$24 | \$23 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 |
| 1155 | \$38 | \$37 | \$36 | \$35 | \$34 | \$33 | \$33 | \$32 | \$31 | \$30 |
| 1156 | \$43 | \$43 | \$42 | \$41 | \$41 | \$40 | \$40 | \$39 | \$39 | \$38 |
| 1157 | \$22 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$21 | \$21 | \$21 |
| 1158 | \$30 | \$29 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 | \$25 | \$24 |
| 1159 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$30 | \$30 |
| 1160 | \$65 | \$60 | \$56 | \$53 | \$50 | \$47 | \$44 | \$41 | \$39 | \$39 |
| 1161 | \$120 | \$116 | \$113 | \$110 | \$106 | \$103 | \$101 | \$98 | \$95 | \$92 |
| 1162 | \$139 | \$137 | \$134 | \$132 | \$130 | \$128 | \$126 | \$124 | \$122 | \$120 |
| 1163 | \$47 | \$44 | \$41 | \$39 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 |
| 1164 | \$84 | \$81 | \$79 | \$77 | \$75 | \$73 | \$71 | \$69 | \$67 | \$65 |
| 1165 | \$96 | \$95 | \$93 | \$92 | \$91 | \$89 | \$88 | \$86 | \$85 | \$84 |
| 1166 | \$35 | \$35 | \$34 | \$34 | \$34 | \$34 | \$33 | \$33 | \$33 | \$33 |
| 1167 | \$56 | \$54 | \$53 | \$52 | \$50 | \$49 | \$48 | \$47 | \$46 | \$45 |
| 1168 | \$64 | \$63 | \$62 | \$61 | \$60 | \$59 | \$58 | \$57 | \$57 | \$56 |
| 1169 | \$31 | \$31 | \$31 | \$31 | \$31 | \$30 | \$30 | \$30 | \$30 | \$29 |
| 1170 | \$43 | \$42 | \$41 | \$40 | \$39 | \$38 | \$37 | \$36 | \$35 | \$35 |
| 1171 | \$48 | \$48 | \$47 | \$46 | \$46 | \$45 | \$45 | \$44 | \$43 | \$43 |
| 1172 |  |  |  |  |  |  |  |  |  |  |
| 1173 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 1174 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 1175 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 1176 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 1177 | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 1178 | \$ - | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 1179 | \$ - | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 1180 | \$ - | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 1181 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 1182 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 1183 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 1184 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 1185 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1186 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 1187 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 1188 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 1189 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 1190 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 1191 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 1192 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 1193 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 1194 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 1195 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 1196 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 1197 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 1198 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 1199 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 1200 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 1201 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 1202 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 1203 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 1204 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 1205 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 1206 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 1207 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 1208 |  |  |  |  |  |  |  |  |  |  |
| 1209 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
| 1210 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 |
| 1211 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 |
| 1212 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 |
| 1213 |  |  |  |  |  |  |  |  |  |  |
| 1214 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 1215 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 1216 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 1217 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 1218 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 1219 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 1220 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |


|  | X | Y | Z | AA | AB | AC | AD | AE | AF | AG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1221 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 1222 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 1223 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 1224 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 1225 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 1226 |  |  |  |  |  |  |  |  |  |  |
| 1227 |  |  |  |  |  |  |  |  |  |  |
| 1228 |  |  |  |  |  |  |  |  |  |  |
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| 1231 |  |  |  |  |  |  |  |  |  |  |
| 1232 |  |  |  |  |  |  |  |  |  |  |
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| 1238 |  |  |  |  |  |  |  |  |  |  |
| 1239 |  |  |  |  |  |  |  |  |  |  |
| 1240 |  |  |  |  |  |  |  |  |  |  |


|  | AH | Al | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
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| 10 |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
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| 19 |  |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |  |
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| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |  |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 37 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 38 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 39 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 40 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 41 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 42 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 43 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 44 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 45 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 46 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 47 | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% | 9.0\% |
| 48 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 49 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 50 | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.3\% |
| 51 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 52 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 53 | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% | 67.1\% |
| 54 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 55 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 56 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 57 | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% | 5.0\% |
| 58 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 59 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 60 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 61 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 62 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 63 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 64 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 65 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 67 |  |  |  |  |  |  |  |  |  |  |
| 68 |  |  |  |  |  |  |  |  |  |  |
| 69 |  |  |  |  |  |  |  |  |  |  |
| 70 |  |  |  |  |  |  |  |  |  |  |
| 71 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 72 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 73 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 74 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 75 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 76 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 77 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 78 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 79 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 80 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 81 | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% |
| 82 | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% |
| 83 | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% | 68\% |
| 84 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% |
| 85 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% |
| 86 | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% | 52\% |
| 87 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 88 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 89 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 90 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 91 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 92 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 93 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 94 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 95 | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% | 64\% |
| 96 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 97 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 98 | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% | 51\% |
| 99 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 100 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 101 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 102 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 103 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 104 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 105 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |
| 106 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |
| 107 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |
| 108 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 109 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 110 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 111 | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% |
| 112 | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% |
| 113 | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% | 58\% |
| 114 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 115 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 116 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 117 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 118 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 119 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 120 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 121 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 122 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 123 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 124 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 125 | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% | 56\% |
| 126 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 127 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 128 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 129 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 130 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 131 | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% | 60\% |
| 132 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 133 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 134 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 135 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 136 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 137 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 138 | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 139 | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 140 | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% | 54\% |
| 141 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 142 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 143 | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% | 57\% |
| 144 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 145 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 146 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 147 | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% |
| 148 | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% |
| 149 | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% | 49\% |
| 150 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 151 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 152 | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% | 50\% |
| 153 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 154 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 155 | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% | 53\% |
| 156 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 157 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 158 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 159 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 160 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 161 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 162 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 163 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 164 | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% | 45\% |
| 165 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 166 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 167 | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% | 48\% |
| 168 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 169 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 170 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 171 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 172 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 173 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 174 | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% |
| 175 | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% |
| 176 | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% | 39\% |
| 177 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 178 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 179 | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% | 42\% |
| 180 | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 181 | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 182 | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 183 | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 184 | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 185 | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 186 | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |
| 187 | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |
| 188 | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |
| 189 | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% |
| 190 | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% |
| 191 | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% |
| 192 |  |  |  |  |  |  |  |  |  |  |
| 193 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 194 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 |
| 195 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 |
| 196 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 | 4,862 |
| 197 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 |
| 198 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 |
| 199 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 | 5,634 |
| 200 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 |
| 201 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 |
| 202 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 | 5,747 |
| 203 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 |
| 204 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 |
| 205 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 | 5,941 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 206 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 |
| 207 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 |
| 208 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 | 4,551 |
| 209 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 |
| 210 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 |
| 211 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 | 5,289 |
| 212 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 |
| 213 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 |
| 214 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 | 5,415 |
| 215 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 |
| 216 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 |
| 217 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 | 5,632 |
| 218 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 |
| 219 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 |
| 220 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 | 4,447 |
| 221 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 |
| 222 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 |
| 223 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 | 5,167 |
| 224 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 |
| 225 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 |
| 226 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 | 5,296 |
| 227 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 |
| 228 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 |
| 229 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 | 5,518 |
| 230 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 |
| 231 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 |
| 232 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 | 4,338 |
| 233 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 |
| 234 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 |
| 235 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 | 5,038 |
| 236 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 |
| 237 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 |
| 238 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 | 5,172 |
| 239 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 |
| 240 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 241 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 | 5,399 |
| 242 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 |
| 243 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 |
| 244 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 | 4,198 |
| 245 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 |
| 246 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 |
| 247 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 | 4,877 |
| 248 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 |
| 249 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 |
| 250 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 | 5,014 |
| 251 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 |
| 252 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 |
| 253 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 | 5,248 |
| 254 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 |
| 255 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 |
| 256 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 | 3,981 |
| 257 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 |
| 258 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 |
| 259 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 | 4,630 |
| 260 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 |
| 261 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 |
| 262 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 | 4,772 |
| 263 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 |
| 264 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 |
| 265 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 | 5,015 |
| 266 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 |
| 267 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 |
| 268 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 | 3,665 |
| 269 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 |
| 270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 |
| 271 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 | 4,270 |
| 272 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 |
| 273 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 |
| 274 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 | 4,419 |
| 275 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 276 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 |
| 277 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 | 4,672 |
| 278 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 |
| 279 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 |
| 280 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 | 3,263 |
| 281 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 |
| 282 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 |
| 283 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 | 3,820 |
| 284 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 |
| 285 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 |
| 286 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 | 3,961 |
| 287 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 |
| 288 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 |
| 289 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 | 4,222 |
| 290 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 |
| 291 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 |
| 292 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 | 2,808 |
| 293 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 |
| 294 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 |
| 295 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 | 3,270 |
| 296 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 |
| 297 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 |
| 298 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 | 3,426 |
| 299 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 |
| 300 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 |
| 301 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 | 3,691 |
| 302 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 |
| 303 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 |
| 304 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 | 1,939 |
| 305 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 |
| 306 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 |
| 307 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 |
| 308 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 |
| 309 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 |
| 310 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 | 2,331 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 311 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 |
| 312 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 |
| 313 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 | 2,577 |
| 314 |  |  |  |  |  |  |  |  |  |  |
| 315 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 316 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 317 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 318 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 319 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 320 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |
| 321 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |
| 322 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 323 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 324 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 325 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 326 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 327 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 328 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 329 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 330 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 331 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 332 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |
| 333 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |
| 334 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 335 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 336 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 337 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 338 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 339 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 340 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 341 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 342 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 343 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 344 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |
| 345 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 346 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 347 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 348 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 349 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 350 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 351 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 352 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 353 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 354 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 355 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 356 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |
| 357 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |
| 358 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 359 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 360 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 361 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 362 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 363 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 364 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 365 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 366 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 367 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 368 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |
| 369 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |
| 370 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 371 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 372 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 373 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 374 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 375 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 376 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 377 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 378 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 379 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 380 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 381 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |
| 382 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 383 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 384 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 385 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 386 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 387 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 388 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 389 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 390 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 391 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 392 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |
| 393 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |
| 394 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 395 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 396 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 397 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 398 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 399 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 400 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 401 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 402 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 403 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 404 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |
| 405 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |
| 406 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 407 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 408 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 409 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 410 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 411 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 412 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 413 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 414 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 415 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 416 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |
| 417 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |
| 418 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 419 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 420 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 421 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 422 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 423 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 424 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 425 | \$2,879 | \$2,783 | \$2,690 | \$2,601 | \$2,514 | \$2,431 | \$2,350 | \$2,271 | \$2,196 | \$2,123 |
| 426 | \$3,999 | \$3,926 | \$3,855 | \$3,786 | \$3,717 | \$3,650 | \$3,584 | \$3,520 | \$3,456 | \$3,394 |
| 427 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 428 | \$2,162 | \$2,090 | \$2,020 | \$1,953 | \$1,888 | \$1,825 | \$1,764 | \$1,705 | \$1,649 | \$1,594 |
| 429 | \$3,002 | \$2,948 | \$2,895 | \$2,843 | \$2,791 | \$2,741 | \$2,691 | \$2,643 | \$2,595 | \$2,548 |
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| 431 | \$1,404 | \$1,357 | \$1,312 | \$1,268 | \$1,226 | \$1,185 | \$1,145 | \$1,107 | \$1,070 | \$1,035 |
| 432 | \$1,949 | \$1,914 | \$1,880 | \$1,846 | \$1,812 | \$1,780 | \$1,747 | \$1,716 | \$1,685 | \$1,654 |
| 433 | \$872 | \$862 | \$852 | \$842 | \$833 | \$823 | \$813 | \$803 | \$793 | \$784 |
| 434 | \$1,117 | \$1,080 | \$1,044 | \$1,009 | \$976 | \$943 | \$912 | \$881 | \$852 | \$824 |
| 435 | \$1,552 | \$1,524 | \$1,496 | \$1,469 | \$1,443 | \$1,417 | \$1,391 | \$1,366 | \$1,341 | \$1,317 |
| 436 |  |  |  |  |  |  |  |  |  |  |
| 437 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 438 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 439 | \$69 | \$67 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$51 |
| 440 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 441 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 442 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 443 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 444 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 445 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 446 | \$47 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$40 | \$40 |
| 447 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 448 | \$27 | \$26 | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |
| 449 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |
| 450 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 451 | \$69 | \$67 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$51 |
| 452 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 453 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 454 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 455 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 456 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 457 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 458 | \$47 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$40 | \$40 |
| 459 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 460 | \$27 | \$26 | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |
| 461 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |
| 462 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 463 | \$69 | \$67 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$51 |
| 464 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 465 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 466 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 467 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 468 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 469 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 470 | \$47 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$40 | \$40 |
| 471 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 472 | \$27 | \$26 | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |
| 473 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |
| 474 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 475 | \$69 | \$67 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$51 |
| 476 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 477 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 478 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 479 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 480 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 481 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 482 | \$47 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$40 | \$40 |
| 483 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 484 | \$27 | \$26 | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |
| 485 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 486 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 487 | \$69 | \$67 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$51 |
| 488 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 489 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 490 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 491 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 492 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 493 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 494 | \$47 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$40 | \$40 |
| 495 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 496 | \$27 | \$26 | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |
| 497 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |
| 498 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 499 | \$69 | \$67 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$51 |
| 500 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 501 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 502 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 503 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 504 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 505 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
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| 507 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 508 | \$27 | \$26 | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |
| 509 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |
| 510 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
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| 512 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 513 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 514 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 515 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 516 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 517 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 518 | \$47 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$40 | \$40 |
| 519 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 520 | \$27 | \$26 | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 521 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |
| 522 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 523 | \$69 | \$67 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$51 |
| 524 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 525 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 526 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 527 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 528 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 529 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 530 | \$47 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$40 | \$40 |
| 531 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 532 | \$27 | \$26 | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |
| 533 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |
| 534 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 535 | \$69 | \$67 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$51 |
| 536 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 537 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 538 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 539 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 540 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 541 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 542 | \$47 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$40 | \$40 |
| 543 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 544 | \$27 | \$26 | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |
| 545 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |
| 546 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 547 | \$69 | \$67 | \$65 | \$62 | \$60 | \$58 | \$56 | \$55 | \$53 | \$51 |
| 548 | \$96 | \$94 | \$93 | \$91 | \$89 | \$88 | \$86 | \$84 | \$83 | \$81 |
| 549 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 550 | \$52 | \$50 | \$48 | \$47 | \$45 | \$44 | \$42 | \$41 | \$40 | \$38 |
| 551 | \$72 | \$71 | \$69 | \$68 | \$67 | \$66 | \$65 | \$63 | \$62 | \$61 |
| 552 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 553 | \$34 | \$33 | \$31 | \$30 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 |
| 554 | \$47 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$40 | \$40 |
| 555 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 556 | \$27 \$26 |  | \$25 | \$24 | \$23 | \$23 | \$22 | \$21 | \$20 | \$20 |
| 557 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$33 | \$33 | \$32 | \$32 |
| 558 |  |  |  |  |  |  |  |  |  |  |
| 559 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 560 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 561 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 562 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 563 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 564 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |
| 565 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |
| 566 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 567 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 568 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 569 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 570 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 571 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 572 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 573 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 574 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 575 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 576 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |
| 577 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |
| 578 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 579 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 580 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 581 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 582 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 583 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 584 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 585 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 586 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 587 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 588 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |
| 589 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |
| 590 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 591 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 592 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 593 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 594 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 595 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 596 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 597 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 598 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 599 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 600 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |
| 601 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |
| 602 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 603 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 604 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 605 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 606 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 607 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 608 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 609 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 610 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 611 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 612 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |
| 613 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |
| 614 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 615 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 616 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 617 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 618 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 619 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 620 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 621 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 622 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 623 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 624 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |
| 625 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 626 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 627 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 628 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 629 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 630 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 631 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 632 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 633 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 634 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 635 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 636 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |
| 637 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |
| 638 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 639 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 640 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 641 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 642 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 643 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 644 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 645 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 646 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 647 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 648 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |
| 649 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |
| 650 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 651 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 652 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 653 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 654 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 655 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 656 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 657 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 658 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 659 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 660 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 661 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |
| 662 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 663 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 664 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 665 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 666 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 667 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 668 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 669 | \$2,810 | \$2,716 | \$2,626 | \$2,538 | \$2,454 | \$2,372 | \$2,293 | \$2,217 | \$2,143 | \$2,072 |
| 670 | \$3,903 | \$3,832 | \$3,763 | \$3,695 | \$3,628 | \$3,563 | \$3,498 | \$3,435 | \$3,373 | \$3,312 |
| 671 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 672 | \$2,110 | \$2,040 | \$1,972 | \$1,906 | \$1,843 | \$1,781 | \$1,722 | \$1,665 | \$1,609 | \$1,556 |
| 673 | \$2,930 | \$2,877 | \$2,825 | \$2,774 | \$2,724 | \$2,675 | \$2,627 | \$2,579 | \$2,533 | \$2,487 |
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| 675 | \$1,370 | \$1,324 | \$1,280 | \$1,238 | \$1,196 | \$1,156 | \$1,118 | \$1,081 | \$1,045 | \$1,010 |
| 676 | \$1,903 | \$1,868 | \$1,834 | \$1,801 | \$1,769 | \$1,737 | \$1,706 | \$1,675 | \$1,644 | \$1,615 |
| 677 | \$851 | \$841 | \$832 | \$822 | \$813 | \$803 | \$793 | \$784 | \$774 | \$765 |
| 678 | \$1,090 | \$1,054 | \$1,019 | \$985 | \$952 | \$921 | \$890 | \$860 | \$832 | \$804 |
| 679 | \$1,515 | \$1,487 | \$1,460 | \$1,434 | \$1,408 | \$1,383 | \$1,358 | \$1,333 | \$1,309 | \$1,285 |
| 680 |  |  |  |  |  |  |  |  |  |  |
| 681 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 682 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 686 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 689 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 690 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 691 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 693 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 694 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 695 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 696 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 698 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 700 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 701 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 702 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 703 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 704 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 705 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 706 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 708 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 709 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 710 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 712 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 713 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 714 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 717 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 727 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 728 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 730 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |


|  | AH | Al | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 731 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 732 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 734 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 737 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 750 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 764 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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|  | AH | Al | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 766 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 767 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 768 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 772 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 773 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 774 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 775 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 776 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 777 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 778 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 779 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 780 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 781 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 782 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 785 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 787 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 792 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
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| 798 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 799 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 800 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
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| 801 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 802 |  |  |  |  |  |  |  |  |  |  |
| 803 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 804 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 805 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 806 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
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| 809 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
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| 815 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 816 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
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| 818 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 819 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 820 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 821 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 822 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 823 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 824 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 825 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 826 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 827 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
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| 830 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 831 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 832 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 833 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 834 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 835 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |


|  | AH |  | Al |  | AJ |  | AK |  | AL |  | AM |  | AN |  | AO |  | AP |  | AQ |
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| 836 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 837 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 844 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 853 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 856 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 857 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 858 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 859 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 860 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 861 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 863 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 864 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 870 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |


|  | AH |  | AI |  | AJ |  | AK |  | AL |  | AM |  | AN |  | AO |  | AP |  | AQ |
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| 899 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 900 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 901 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 905 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |


|  | AH |  | AI |  | AJ |  | AK |  | AL |  | AM |  | AN |  | AO |  | AP |  | AQ |
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| 906 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |
| 907 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 909 |  | \$0 |  | \$0 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 910 | \$0 |  |  | \$0 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 911 |  | \$0 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |
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| 913 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 919 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 920 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
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| 922 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 924 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 925 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 926 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 927 | 2041 |  | 2042 |  | 2043 |  | 2044 |  | 2045 |  | 2046 |  | 2047 |  | 2048 |  | 2049 |  | 2050 |
| 928 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
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| 935 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 936 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 937 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 938 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 939 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 940 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |



|  | AH |  | Al |  | AJ |  | AK |  | AL |  | AM |  | AN |  | AO |  | AP |  | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 976 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 977 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 978 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 979 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 980 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 981 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 982 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 983 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 984 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 985 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 986 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 987 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 988 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 989 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 990 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 991 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 992 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 993 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 994 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 995 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 996 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 997 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 998 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 999 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1000 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1001 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1002 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1003 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1004 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1005 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1006 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1007 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1008 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1009 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 1010 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |



|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1046 | \$0 \$0 |  | \$0 \$0 |  | \$0 \$0 |  | \$0 \$0 |  | \$0 |  |
| 1047 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 1048 |  |  |  |  |  |  |  |  |  |  |
| 1049 |  |  |  |  |  |  |  |  |  |  |
| 1050 |  |  |  |  |  |  |  |  |  |  |
| 1051 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 1052 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 |
| 1053 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$29 | \$28 |
| 1054 | \$47 | \$46 | \$46 | \$45 | \$44 | \$43 | \$43 | \$42 | \$41 | \$41 |
| 1055 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$12 |
| 1056 | \$25 | \$24 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$19 |
| 1057 | \$32 | \$31 | \$31 | \$30 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 |
| 1058 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 |
| 1059 | \$18 | \$17 | \$17 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$14 |
| 1060 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 |
| 1061 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 |
| 1062 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 | \$12 | \$12 |
| 1063 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 1064 | \$17 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 |
| 1065 | \$38 | \$37 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$31 | \$30 |
| 1066 | \$50 | \$50 | \$49 | \$48 | \$47 | \$46 | \$46 | \$45 | \$44 | \$44 |
| 1067 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 1068 | \$26 | \$26 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 | \$21 |
| 1069 | \$34 | \$34 | \$33 | \$32 | \$32 | \$31 | \$31 | \$31 | \$30 | \$30 |
| 1070 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 1071 | \$19 | \$18 | \$18 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 | \$15 |
| 1072 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 |
| 1073 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$12 |
| 1074 | \$16 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 1075 | \$19 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 |
| 1076 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 |
| 1077 | \$39 | \$38 | \$37 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 | \$31 |
| 1078 | \$51 | \$51 | \$50 | \$49 | \$48 | \$48 | \$47 | \$46 | \$45 | \$45 |
| 1079 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 1080 | \$27 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1081 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 | \$30 |
| 1082 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 1083 | \$19 | \$19 | \$18 | \$18 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 |
| 1084 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 1085 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 1086 | \$16 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 |
| 1087 | \$20 | \$19 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 |
| 1088 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 |
| 1089 | \$40 | \$39 | \$38 | \$37 | \$36 | \$35 | \$34 | \$33 | \$32 | \$31 |
| 1090 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 | \$47 | \$46 | \$46 |
| 1091 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 1092 | \$28 | \$27 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 |
| 1093 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 |
| 1094 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 1095 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 1096 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 |
| 1097 | \$14 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 1098 | \$16 | \$16 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$13 |
| 1099 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 |
| 1100 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 |
| 1101 | \$41 | \$40 | \$39 | \$38 | \$37 | \$36 | \$35 | \$34 | \$33 | \$32 |
| 1102 | \$55 | \$54 | \$53 | \$52 | \$51 | \$50 | \$50 | \$49 | \$48 | \$47 |
| 1103 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 |
| 1104 | \$28 | \$28 | \$27 | \$26 | \$26 | \$25 | \$24 | \$24 | \$23 | \$23 |
| 1105 | \$37 | \$36 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 |
| 1106 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 1107 | \$20 | \$20 | \$19 | \$19 | \$18 | \$18 | \$18 | \$17 | \$17 | \$16 |
| 1108 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 |
| 1109 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 |
| 1110 | \$17 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 |
| 1111 | \$21 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$18 |
| 1112 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 | \$18 | \$18 | \$18 | \$18 |
| 1113 | \$44 | \$42 | \$41 | \$40 | \$39 | \$38 | \$37 | \$36 | \$35 | \$34 |
| 1114 | \$57 | \$57 | \$56 | \$55 | \$54 | \$53 | \$52 | \$51 | \$51 | \$50 |
| 1115 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1116 | \$30 | \$29 | \$28 | \$28 | \$27 | \$26 | \$26 | \$25 | \$24 | \$24 |
| 1117 | \$39 | \$38 | \$38 | \$37 | \$37 | \$36 | \$35 | \$35 | \$34 | \$34 |
| 1118 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 1119 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 | \$18 | \$18 | \$18 | \$17 |
| 1120 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 1121 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 1122 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$14 |
| 1123 | \$22 | \$21 | \$21 | \$21 | \$21 | \$20 | \$20 | \$20 | \$19 | \$19 |
| 1124 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 1125 | \$47 | \$46 | \$45 | \$44 | \$42 | \$41 | \$40 | \$39 | \$38 | \$37 |
| 1126 | \$62 | \$61 | \$60 | \$60 | \$59 | \$58 | \$57 | \$56 | \$55 | \$54 |
| 1127 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 |
| 1128 | \$32 | \$32 | \$31 | \$30 | \$29 | \$28 | \$28 | \$27 | \$26 | \$26 |
| 1129 | \$42 | \$42 | \$41 | \$40 | \$40 | \$39 | \$38 | \$38 | \$37 | \$37 |
| 1130 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 | \$16 | \$16 |
| 1131 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 | \$19 |
| 1132 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 |
| 1133 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 1134 | \$19 | \$18 | \$18 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 | \$15 |
| 1135 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$21 |
| 1136 | \$23 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$22 | \$21 |
| 1137 | \$53 | \$52 | \$50 | \$49 | \$48 | \$46 | \$45 | \$44 | \$43 | \$42 |
| 1138 | \$70 | \$69 | \$68 | \$67 | \$66 | \$65 | \$64 | \$63 | \$62 | \$61 |
| 1139 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 | \$19 | \$18 | \$18 |
| 1140 | \$36 | \$35 | \$34 | \$34 | \$33 | \$32 | \$31 | \$30 | \$29 | \$29 |
| 1141 | \$47 | \$46 | \$46 | \$45 | \$44 | \$44 | \$43 | \$42 | \$42 | \$41 |
| 1142 <br> 1143 | \$19 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 | \$18 | \$18 | \$18 |
| 1143 | \$26 | \$25 | \$24 | \$24 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 |
| 1144 | \$32 | \$32 | \$31 | \$31 | \$31 | \$30 | \$30 | \$29 | \$29 | \$28 |
| 1145 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 | \$17 |
| 1146 | \$21 | \$20 | \$20 | \$19 | \$19 | \$19 | \$18 | \$18 | \$17 | \$17 |
| 1147 | \$26 | \$25 | \$25 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 |
| 1148 | \$27 | \$27 | \$26 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$25 |
| 1149 | \$62 | \$60 | \$59 | \$57 | \$55 | \$54 | \$52 | \$51 | \$50 | \$48 |
| 1150 | \$82 | \$80 | \$79 | \$78 | \$76 | \$75 | \$74 | \$73 | \$72 | \$71 |

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|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1151 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$21 |
| 1152 | \$42 | \$41 | \$40 | \$39 | \$38 | \$37 | \$36 | \$35 | \$34 | \$34 |
| 1153 | \$55 | \$54 | \$53 | \$53 | \$52 | \$51 | \$50 | \$49 | \$49 | \$48 |
| 1154 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$21 | \$21 | \$21 | \$20 |
| 1155 | \$30 | \$29 | \$28 | \$28 | \$27 | \$26 | \$26 | \$25 | \$25 | \$24 |
| 1156 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 |
| 1157 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 |
| 1158 | \$24 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$20 |
| 1159 | \$29 | \$29 | \$29 | \$28 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 1160 | \$39 | \$39 | \$38 | \$38 | \$38 | \$37 | \$37 | \$37 | \$36 | \$36 |
| 1161 | \$90 | \$87 | \$85 | \$82 | \$80 | \$78 | \$76 | \$74 | \$72 | \$70 |
| 1162 | \$118 | \$116 | \$114 | \$113 | \$111 | \$109 | \$107 | \$106 | \$104 | \$102 |
| 1163 | \$34 | \$34 | \$34 | \$34 | \$33 | \$33 | \$33 | \$33 | \$32 | \$32 |
| 1164 | \$63 | \$62 | \$60 | \$59 | \$57 | \$56 | \$54 | \$53 | \$52 | \$50 |
| 1165 | \$82 | \$81 | \$80 | \$79 | \$77 | \$76 | \$75 | \$74 | \$73 | \$72 |
| 1166 | \$32 | \$32 | \$32 | \$32 | \$31 | \$31 | \$31 | \$31 | \$30 | \$30 |
| 1167 | \$44 | \$42 | \$41 | \$41 | \$40 | \$39 | \$38 | \$37 | \$36 | \$35 |
| 1168 | \$55 | \$54 | \$53 | \$53 | \$52 | \$51 | \$50 | \$50 | \$49 | \$48 |
| 1169 | \$29 | \$29 | \$29 | \$29 | \$28 | \$28 | \$28 | \$28 | \$27 | \$27 |
| 1170 | \$34 | \$33 | \$32 | \$32 | \$31 | \$30 | \$30 | \$29 | \$29 | \$28 |
| 1171 | \$42 | \$42 | \$41 | \$40 | \$40 | \$39 | \$39 | \$38 | \$38 | \$37 |
| 1172 |  |  |  |  |  |  |  |  |  |  |
| 1173 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 1174 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 1175 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 1176 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 1177 | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 1178 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 1179 | \$ - | \$ - | \$ - | \$ - | \$ | \$ | \$ | \$ | \$ | \$ |
| 1180 | \$ - | \$ | \$ - | \$ - | \$ | \$ | \$ | \$ | \$ | \$ |
| 1181 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 1182 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 1183 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 | 0.876 |
| 1184 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 1185 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1186 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 | 1.043 |
| 1187 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 1188 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 1189 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 1190 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 1191 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 1192 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 1193 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 1194 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 1195 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 1196 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 1197 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 1198 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 1199 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 1200 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 1201 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 1202 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 | 0.9528 |
| 1203 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 | 0.9078 |
| 1204 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 | 0.8650 |
| 1205 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 | 0.8241 |
| 1206 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 | 0.7852 |
| 1207 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 | 0.7482 |
| 1208 |  |  |  |  |  |  |  |  |  |  |
| 1209 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |
| 1210 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 |
| 1211 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 |
| 1212 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 | 1.025 |
| 1213 |  |  |  |  |  |  |  |  |  |  |
| 1214 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 1215 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 1216 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 1217 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 1218 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 1219 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 1220 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |


|  | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1221 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 1222 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 1223 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 | 1.054 |
| 1224 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 | 1.169 |
| 1225 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 | 1.298 |
| 1226 |  |  |  |  |  |  |  |  |  |  |
| 1227 |  |  |  |  |  |  |  |  |  |  |
| 1228 |  |  |  |  |  |  |  |  |  |  |
| 1229 |  |  |  |  |  |  |  |  |  |  |
| 1230 |  |  |  |  |  |  |  |  |  |  |
| 1231 |  |  |  |  |  |  |  |  |  |  |
| 1232 |  |  |  |  |  |  |  |  |  |  |
| 1233 |  |  |  |  |  |  |  |  |  |  |
| 1234 |  |  |  |  |  |  |  |  |  |  |
| 1235 |  |  |  |  |  |  |  |  |  |  |
| 1236 |  |  |  |  |  |  |  |  |  |  |
| 1237 |  |  |  |  |  |  |  |  |  |  |
| 1238 |  |  |  |  |  |  |  |  |  |  |
| 1239 |  |  |  |  |  |  |  |  |  |  |
| 1240 |  |  |  |  |  |  |  |  |  |  |


|  | A |  | CDE]FG | H | 1 | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Solar Utility PV |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  | Base Year: |  |
| 10 |  |  |  |  |  | All values are given in 2020 U.S. dollars, using the Consumer Price Index (BLS, 2021) for dolla |  |
| 11 |  |  |  |  |  |  | Utility S |
| 12 |  |  |  |  |  | Representative plant is Single Axis tracking with capacity of 100 MW |  |
| 13 |  |  |  |  |  | Overnight Capital Cost, Capacity Factor, Fixed O\&M, and Variable O\&M costs represent |  |
| 14 |  |  |  |  |  | \$/kW AC, unlike the commercial and residential PV cases which are represented in \$/kW DC. |  |
| 15 |  |  |  |  |  | Capacity factors chosen here to reflect range across the continental U.S. in ReEDS. |  |
| 16 |  |  |  |  |  | Avai |  |
| 17 |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  | Financial Assumptions: |
| 27 |  |  |  |  |  | Capital Recovery Period (Years) |  |
| 28 |  |  |  |  |  | Depreciation Period |  |
| 29 |  |  |  |  |  | Equity Premium During Construction |  |
| 30 |  |  |  |  |  | Construction Duration yrs |  |
| 31 |  |  |  |  |  | Year | Capital |
| 32 |  |  |  |  |  | Index | Fraction |
| 33 |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |


|  | A | B ${ }^{\text {c }}$ | CD | E F | G | H | I | J | K |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 |  |  |  |  |  |  |  | 0 |  | 100\% |
| 36 |  |  |  |  |  |  |  | 1 |  | 0\% |
| 37 |  |  |  |  |  |  |  | 2 |  | 0\% |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  | Inflation Rate |  |
| 41 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 42 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 43 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 44 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 45 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 46 |  |  |  |  |  | ${ }^{0}$ |  |  | Calculated Interest Rate Real |  |
| 47 |  |  |  |  |  | ¢ |  |  | Interest During Construction - Nominal |  |
| 48 |  |  |  |  |  |  |  |  | Rate of Return on Equity Nominal |  |
| 49 |  |  |  |  |  |  |  |  | Rate of Return on Equity Nominal |  |
| 50 |  |  |  |  |  |  |  |  | Rate of Return on Equity Nominal |  |
| 51 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  |
| 52 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  |
| 53 |  |  |  |  |  |  |  | Assumptions | Calculated Rate of Return on Equity Real |  |
| 54 |  |  |  |  |  |  |  | Assumptions | Debt Fraction |  |
| 55 |  |  |  |  |  |  |  |  | Debt Fraction |  |
| 56 |  |  |  |  |  |  |  |  | Debt Fraction |  |
| 57 |  |  |  |  |  |  |  |  | Tax Rate (Federal and State) |  |
| 58 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 59 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 60 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 61 |  |  |  |  |  |  |  |  | WACC Real |  |
| 62 |  |  |  |  |  |  |  |  | WACC Real |  |
| 63 |  |  |  |  |  |  |  |  | WACC Real |  |
| 64 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |  |
| 65 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |  |
| 66 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |  |
| 67 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |  |
| 68 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |  |
| 69 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |  |





|  | A | B C | DEFFG | H | I | J |  | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 |  |  |  |  |  |  | Utility PV - Class 9 |  |
| 176 |  |  |  |  |  |  | Utility PV - Class 9 |  |
| 177 |  |  |  | $\stackrel{\varrho}{0}$ |  |  | Utility PV - Class 8 |  |
| 178 |  |  |  | $\pm$ |  |  | Utility PV - Class 8 |  |
| 179 |  |  |  | 쩬 |  |  | Utility PV - Class 8 |  |
| 180 |  |  |  | ¢ |  |  | Utility PV - Class 7 |  |
| 181 |  |  |  | \% |  |  | Utility PV - Class 7 |  |
| 182 |  |  |  | ส |  |  | Utility PV - Class 7 |  |
| 183 |  |  |  | E |  |  | Utility PV - Class 6 |  |
| 184 |  |  |  | $\stackrel{\square}{ \pm}$ |  |  | Utility PV - Class 6 |  |
| 185 |  |  |  | 0 |  | Construction | Utility PV - Class 6 |  |
| 186 |  |  |  | - |  | Financing Cost (\$/kW) | Utility PV - Class 5 |  |
| 187 |  |  |  | 菅 |  |  | Utility PV - Class 5 |  |
| 188 |  |  |  | - |  |  | Utility PV - Class 5 |  |
| 189 |  |  |  | . |  |  | Utility PV - Class 4 |  |
| 190 |  |  |  | 읻 |  |  | Utility PV - Class 4 |  |
| 191 |  |  |  | \% |  |  | Utility PV - Class 4 |  |
| 192 |  |  |  | ب |  |  | Utility PV - Class 3 |  |
| 193 |  |  |  | $\stackrel{\square}{\circ}$ |  |  | Utility PV - Class 3 |  |
| 194 |  |  |  |  |  |  | Utility PV - Class 3 |  |
| 195 |  |  |  |  |  |  | Utility PV - Class 2 |  |
| 196 |  |  |  |  |  |  | Utility PV - Class 2 |  |
| 197 |  |  |  |  |  |  | Utility PV - Class 2 |  |
| 198 |  |  |  |  |  |  | Utility PV - Class 1 |  |
| 199 |  |  |  |  |  |  | Utility PV - Class 1 |  |
| 200 |  |  |  |  |  |  | Utility PV - Class 1 |  |
| 201 |  |  |  |  |  |  |  |  |
| 202 |  |  |  |  |  |  |  |  |
| 203 |  |  |  |  |  |  | Utility PV - Class 10 |  |
| 204 |  |  |  |  |  |  | Utility PV - Class 10 |  |
| 205 |  |  |  |  |  |  | Utility PV - Class 10 |  |
| 206 |  |  |  |  |  |  | Utility PV - Class 9 |  |
| 207 |  |  |  |  |  |  | Utility PV - Class 9 |  |
| 208 |  |  |  |  |  |  | Utility PV - Class 9 |  |
| 209 |  |  |  |  |  |  | Utility PV - Class 8 |  |










|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 | 80\% | 20\% |  |  |  |  |  |  |  |
| 36 | 80\% | 20\% |  |  |  |  |  |  |  |
| 37 | 80\% | 20\% |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |
| 39 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 40 | * | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 41 | Advanced | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 42 | Moderate | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 43 | Conservative | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 44 | Advanced | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 45 | Moderate | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 46 | Conservative | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 47 | * | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 48 | Advanced | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% |
| 49 | Moderate | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% |
| 50 | Conservative | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% |
| 51 | Advanced | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 52 | Moderate | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 53 | Conservative | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 54 | Advanced | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% |
| 55 | Moderate | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% |
| 56 | Conservative | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% |
| 57 | * | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 58 | Advanced | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 59 | Moderate | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 60 | Conservative | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 61 | Advanced | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% |
| 62 | Moderate | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% |
| 63 | Conservative | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% |
| 64 | Advanced | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 65 | Moderate | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 66 | Conservative | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 67 | Advanced | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 68 | Moderate | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 69 | Conservative | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |



|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 |  |  |  |  |  |  |  |  |  |
| 106 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 107 | Advanced | 1,641 | 1,671 | 1,700 | 1,729 | 1,758 | 1,788 | 1,817 | 1,846 |
| 108 | Moderate | 1,629 | 1,647 | 1,664 | 1,682 | 1,699 | 1,716 | 1,734 | 1,751 |
| 109 | Conservative | 1,612 | 1,612 | 1,612 | 1,612 | 1,612 | 1,612 | 1,612 | 1,612 |
| 110 | Advanced | 1,787 | 1,819 | 1,851 | 1,882 | 1,914 | 1,946 | 1,978 | 2,010 |
| 111 | Moderate | 1,774 | 1,793 | 1,812 | 1,831 | 1,850 | 1,869 | 1,888 | 1,907 |
| 112 | Conservative | 1,755 | 1,755 | 1,755 | 1,755 | 1,755 | 1,755 | 1,755 | 1,755 |
| 113 | Advanced | 1,879 | 1,912 | 1,946 | 1,979 | 2,013 | 2,046 | 2,080 | 2,113 |
| 114 | Moderate | 1,865 | 1,885 | 1,905 | 1,925 | 1,945 | 1,965 | 1,984 | 2,004 |
| 115 | Conservative | 1,845 | 1,845 | 1,845 | 1,845 | 1,845 | 1,845 | 1,845 | 1,845 |
| 116 | Advanced | 1,972 | 2,007 | 2,042 | 2,078 | 2,113 | 2,148 | 2,183 | 2,218 |
| 117 | Moderate | 1,958 | 1,979 | 2,000 | 2,020 | 2,041 | 2,062 | 2,083 | 2,104 |
| 118 | Conservative | 1,937 | 1,937 | 1,937 | 1,937 | 1,937 | 1,937 | 1,937 | 1,937 |
| 119 | Advanced | 2,072 | 2,109 | 2,146 | 2,183 | 2,220 | 2,257 | 2,294 | 2,331 |
| 120 | Moderate | 2,057 | 2,079 | 2,101 | 2,123 | 2,145 | 2,167 | 2,189 | 2,211 |
| 121 | Conservative | 2,035 | 2,035 | 2,035 | 2,035 | 2,035 | 2,035 | 2,035 | 2,035 |
| 122 | Advanced | 2,150 | 2,189 | 2,227 | 2,265 | 2,304 | 2,342 | 2,380 | 2,419 |
| 123 | Moderate | 2,135 | 2,157 | 2,180 | 2,203 | 2,226 | 2,249 | 2,271 | 2,294 |
| 124 | Conservative | 2,112 | 2,112 | 2,112 | 2,112 | 2,112 | 2,112 | 2,112 | 2,112 |
| 125 | Advanced | 2,302 | 2,343 | 2,384 | 2,425 | 2,466 | 2,507 | 2,548 | 2,589 |
| 126 | Moderate | 2,285 | 2,309 | 2,334 | 2,358 | 2,383 | 2,407 | 2,431 | 2,456 |
| 127 | Conservative | 2,261 | 2,261 | 2,261 | 2,261 | 2,261 | 2,261 | 2,261 | 2,261 |
| 128 | Advanced | 2,435 | 2,479 | 2,522 | 2,566 | 2,609 | 2,653 | 2,696 | 2,740 |
| 129 | Moderate | 2,418 | 2,444 | 2,469 | 2,495 | 2,521 | 2,547 | 2,573 | 2,599 |
| 130 | Conservative | 2,392 | 2,392 | 2,392 | 2,392 | 2,392 | 2,392 | 2,392 | 2,392 |
| 131 | Advanced | 2,554 | 2,599 | 2,645 | 2,690 | 2,736 | 2,781 | 2,827 | 2,872 |
| 132 | Moderate | 2,535 | 2,562 | 2,589 | 2,616 | 2,643 | 2,670 | 2,698 | 2,725 |
| 133 | Conservative | 2,508 | 2,508 | 2,508 | 2,508 | 2,508 | 2,508 | 2,508 | 2,508 |
| 134 | Advanced | 2,633 | 2,680 | 2,727 | 2,774 | 2,820 | 2,867 | 2,914 | 2,961 |
| 135 | Moderate | 2,614 | 2,641 | 2,669 | 2,697 | 2,725 | 2,753 | 2,781 | 2,809 |
| 136 | Conservative | 2,586 | 2,586 | 2,586 | 2,586 | 2,586 | 2,586 | 2,586 | 2,586 |
| 137 |  |  |  |  |  |  |  |  |  |
| 138 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 139 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 141 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 142 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |
| 143 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 144 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 145 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |
| 146 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 147 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 148 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |
| 149 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 150 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 151 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |
| 152 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 153 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 154 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |
| 155 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 156 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 157 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |
| 158 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 159 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 160 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |
| 161 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 162 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 163 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |
| 164 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 165 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 166 | Advanced | \$1,333 | \$1,166 | \$1,105 | \$1,044 | \$983 | \$922 | \$861 | \$800 |
| 167 | Moderate | \$1,333 | \$1,166 | \$1,120 | \$1,074 | \$1,028 | \$982 | \$936 | \$890 |
| 168 | Conservative | \$1,333 | \$1,166 | \$1,164 | \$1,161 | \$1,159 | \$1,157 | \$1,154 | \$1,152 |
| 169 |  |  |  |  |  |  |  |  |  |
| 170 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 171 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |
| 172 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 173 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 174 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 176 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 177 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |
| 178 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 179 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 180 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |
| 181 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 182 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 183 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |
| 184 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 185 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 186 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |
| 187 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 188 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 189 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |
| 190 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 191 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 192 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |
| 193 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 194 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 195 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |
| 196 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 197 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 198 | Advanced | \$31 | \$27 | \$25 | \$24 | \$23 | \$21 | \$20 | \$18 |
| 199 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 200 | Conservative | \$31 | \$27 | \$27 | \$27 | \$27 | \$27 | \$26 | \$26 |
| 201 |  |  |  |  |  |  |  |  |  |
| 202 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 203 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |
| 204 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 205 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 206 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |
| 207 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 208 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 209 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 210 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 211 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 212 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |
| 213 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 214 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 215 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |
| 216 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 217 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 218 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |
| 219 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 220 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 221 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |
| 222 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 223 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 224 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |
| 225 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 226 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 227 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |
| 228 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 229 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 230 | Advanced | \$1,303 | \$1,139 | \$1,080 | \$1,020 | \$961 | \$901 | \$842 | \$782 |
| 231 | Moderate | \$1,303 | \$1,139 | \$1,094 | \$1,049 | \$1,004 | \$959 | \$914 | \$869 |
| 232 | Conservative | \$1,303 | \$1,139 | \$1,137 | \$1,135 | \$1,132 | \$1,130 | \$1,128 | \$1,126 |
| 233 |  |  |  |  |  |  |  |  |  |
| 234 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 235 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |
| 236 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 237 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 238 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |
| 239 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 240 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 241 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |
| 242 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 243 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 244 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 245 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 246 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 247 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |
| 248 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 249 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 250 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |
| 251 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 252 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 253 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |
| 254 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 255 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 256 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |
| 257 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 258 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 259 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |
| 260 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 261 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 262 | Advanced | \$23 | \$21 | \$20 | \$19 | \$18 | \$17 | \$16 | \$16 |
| 263 | Moderate | \$23 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 |
| 264 | Conservative | \$23 | \$21 | \$20 | \$20 | \$20 | \$20 | \$20 | \$20 |
| 265 |  |  |  |  |  |  |  |  |  |
| 266 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 267 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 268 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 269 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 270 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 271 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 272 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 273 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 274 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 275 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 276 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 277 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 278 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 279 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 315 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 316 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 317 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 318 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 319 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 320 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 321 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 322 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 323 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 324 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 325 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 326 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 327 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 328 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 329 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 330 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 331 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 332 |  |  |  |  |  |  |  |  |  |
| 333 |  |  |  |  |  |  |  |  |  |
| 334 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 335 | Advanced | \$50 | \$43 | \$41 | \$38 | \$35 | \$33 | \$30 | \$28 |
| 336 | Moderate | \$50 | \$44 | \$42 | \$40 | \$38 | \$36 | \$34 | \$32 |
| 337 | Conservative | \$51 | \$45 | \$45 | \$45 | \$45 | \$44 | \$44 | \$44 |
| 338 | Advanced | \$46 | \$40 | \$37 | \$35 | \$32 | \$30 | \$28 | \$25 |
| 339 | Moderate | \$46 | \$40 | \$39 | \$37 | \$35 | \$33 | \$31 | \$30 |
| 340 | Conservative | \$47 | \$41 | \$41 | \$41 | \$41 | \$41 | \$41 | \$41 |
| 341 | Advanced | \$44 | \$38 | \$35 | \$33 | \$31 | \$28 | \$26 | \$24 |
| 342 | Moderate | \$44 | \$38 | \$37 | \$35 | \$33 | \$31 | \$30 | \$28 |
| 343 | Conservative | \$44 | \$39 | \$39 | \$39 | \$39 | \$39 | \$39 | \$39 |
| 344 | Advanced | \$42 | \$36 | \$34 | \$31 | \$29 | \$27 | \$25 | \$23 |
| 345 | Moderate | \$42 | \$37 | \$35 | \$33 | \$32 | \$30 | \$28 | \$27 |
| 346 | Conservative | \$42 | \$37 | \$37 | \$37 | \$37 | \$37 | \$37 | \$37 |
| 347 | Advanced | \$40 | \$34 | \$32 | \$30 | \$28 | \$26 | \$24 | \$22 |
| 348 | Moderate | \$40 | \$35 | \$33 | \$32 | \$30 | \$29 | \$27 | \$26 |
| 349 | Conservative | \$40 | \$36 | \$35 | \$35 | \$35 | \$35 | \$35 | \$35 |


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| 350 | Advanced | \$38 | \$33 | \$31 | \$29 | \$27 | \$25 | \$23 | \$21 |
| 351 | Moderate | \$38 | \$34 | \$32 | \$30 | \$29 | \$27 | \$26 | \$25 |
| 352 | Conservative | \$39 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 353 | Advanced | \$36 | \$31 | \$29 | \$27 | \$25 | \$23 | \$21 | \$20 |
| 354 | Moderate | \$36 | \$31 | \$30 | \$28 | \$27 | \$26 | \$24 | \$23 |
| 355 | Conservative | \$36 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 356 | Advanced | \$34 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$19 |
| 357 | Moderate | \$34 | \$30 | \$28 | \$27 | \$26 | \$24 | \$23 | \$22 |
| 358 | Conservative | \$34 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 |
| 359 | Advanced | \$32 | \$28 | \$26 | \$24 | \$23 | \$21 | \$19 | \$18 |
| 360 | Moderate | \$32 | \$28 | \$27 | \$26 | \$24 | \$23 | \$22 | \$21 |
| 361 | Conservative | \$33 | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 | \$28 |
| 362 | Advanced | \$31 | \$27 | \$25 | \$24 | \$22 | \$20 | \$19 | \$17 |
| 363 | Moderate | \$31 | \$27 | \$26 | \$25 | \$24 | \$22 | \$21 | \$20 |
| 364 | Conservative | \$32 | \$28 | \$28 | \$28 | \$28 | \$28 | \$28 | \$28 |
| 365 |  |  |  |  |  |  |  |  |  |
| 366 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 367 | Advanced | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 368 | Moderate | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 369 | Conservative | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 370 | * | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 371 | Advanced | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 |
| 372 | Moderate | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 |
| 373 | Conservative | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 |
| 374 | Advanced | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 |
| 375 | Moderate | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 |
| 376 | Conservative | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 |
| 377 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 378 |  | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 379 |  | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 380 |  | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 381 |  | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 382 |  | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 383 |  | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 384 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 385 |  | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 386 |  | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 387 |  | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 388 |  | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 389 |  | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 390 |  | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 391 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 392 |  | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 393 |  | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 394 |  | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 395 |  | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 396 |  | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 397 |  | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 398 |  |  |  |  |  |  |  |  |  |
| 399 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 400 | Advanced | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 |
| 401 | Moderate | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 |
| 402 | Conservative | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 |
| 403 |  |  |  |  |  |  |  |  |  |
| 404 | * | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 405 | , | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 406 |  | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 407 | Advanced | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 |
| 408 | Advanced | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 |
| 409 | Advanced | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 |
| 410 | Moderate | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 |
| 411 | Moderate | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 |
| 412 | Moderate | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 |
| 413 | Conservative | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 |
| 414 | Conservative | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 |
| 415 | Conservative | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 |
| 416 |  |  |  |  |  |  |  |  |  |
| 417 |  |  |  |  |  |  |  |  |  |
| 418 | Data Sources for Default Inputs |  |  |  |  |  |  |  |  |
| 419 |  |  |  |  |  |  |  |  |  |


|  | L | M | N | O | P | Q | R | S |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
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|  | U | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |
| 2 | Inputs |  |  |  |  |  |  |  |  |
| 3 | Calculated |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |
| 5 | Input from other tab |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |
| 31 |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |



|  | U |  | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 |  |  |  |  |  |  |  |  |  |  |
| 71 |  |  |  |  |  |  |  |  |  |  |
| 72 |  |  |  |  |  |  |  |  |  |  |
| 73 |  |  |  |  |  |  |  |  |  |  |
| 74 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 75 |  | 21\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% | 22\% |
| 76 |  | 20\% | 20\% | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% |
| 77 |  | 18\% | 18\% | 18\% | 19\% | 19\% | 19\% | 19\% | 19\% | 19\% |
| 78 |  | 23\% | 24\% | 24\% | 24\% | 24\% | 24\% | 24\% | 24\% | 24\% |
| 79 |  | 22\% | 22\% | 22\% | 22\% | 23\% | 23\% | 23\% | 23\% | 23\% |
| 80 |  | 20\% | 20\% | 20\% | 20\% | 20\% | 20\% | 21\% | 21\% | 21\% |
| 81 |  | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 26\% | 26\% |
| 82 |  | 23\% | 23\% | 24\% | 24\% | 24\% | 24\% | 24\% | 24\% | 24\% |
| 83 |  | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 22\% | 22\% | 22\% |
| 84 |  | 26\% | 26\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |
| 85 |  | 24\% | 24\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 86 |  | 22\% | 22\% | 22\% | 22\% | 22\% | 23\% | 23\% | 23\% | 23\% |
| 87 |  | 27\% | 27\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% |
| 88 |  | 25\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 27\% |
| 89 |  | 23\% | 23\% | 23\% | 23\% | 24\% | 24\% | 24\% | 24\% | 24\% |
| 90 |  | 28\% | 28\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% |
| 91 |  | 26\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 28\% |
| 92 |  | 24\% | 24\% | 24\% | 24\% | 24\% | 25\% | 25\% | 25\% | 25\% |
| 93 |  | 30\% | 30\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |
| 94 |  | 28\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% |
| 95 |  | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 27\% | 27\% |
| 96 |  | 32\% | 32\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% |
| 97 |  | 30\% | 30\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |
| 98 |  | 27\% | 27\% | 27\% | 27\% | 28\% | 28\% | 28\% | 28\% | 28\% |
| 99 |  | 33\% | 34\% | 34\% | 34\% | 34\% | 35\% | 35\% | 35\% | 35\% |
| 100 |  | 31\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 33\% | 33\% |
| 101 |  | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 30\% |
| 102 |  | 34\% | 35\% | 35\% | 35\% | 36\% | 36\% | 36\% | 36\% | 36\% |
| 103 |  | 32\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 34\% | 34\% |
| 104 |  | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 31\% |


|  | U |  | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 |  |  |  |  |  |  |  |  |  |  |
| 106 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 107 | 1,876 |  | 1,905 | 1,934 | 1,938 | 1,943 | 1,947 | 1,951 | 1,955 | 1,959 |
| 108 | 1,769 |  | 1,786 | 1,803 | 1,810 | 1,817 | 1,823 | 1,830 | 1,836 | 1,843 |
| 109 | 1,612 |  | 1,612 | 1,612 | 1,622 | 1,631 | 1,641 | 1,650 | 1,660 | 1,669 |
| 110 | 2,042 |  | 2,074 | 2,106 | 2,110 | 2,115 | 2,119 | 2,124 | 2,128 | 2,133 |
| 111 | 1,925 |  | 1,944 | 1,963 | 1,970 | 1,978 | 1,985 | 1,992 | 1,999 | 2,006 |
| 112 | 1,755 |  | 1,755 | 1,755 | 1,765 | 1,776 | 1,786 | 1,797 | 1,807 | 1,817 |
| 113 | 2,147 |  | 2,180 | 2,214 | 2,218 | 2,223 | 2,228 | 2,233 | 2,238 | 2,243 |
| 114 | 2,024 |  | 2,044 | 2,064 | 2,072 | 2,079 | 2,087 | 2,094 | 2,101 | 2,109 |
| 115 | 1,845 |  | 1,845 | 1,845 | 1,856 | 1,867 | 1,878 | 1,889 | 1,900 | 1,911 |
| 116 | 2,253 |  | 2,289 | 2,324 | 2,329 | 2,334 | 2,339 | 2,344 | 2,349 | 2,354 |
| 117 | 2,125 |  | 2,146 | 2,167 | 2,175 | 2,182 | 2,190 | 2,198 | 2,206 | 2,214 |
| 118 | 1,937 |  | 1,937 | 1,937 | 1,948 | 1,960 | 1,971 | 1,983 | 1,994 | 2,006 |
| 119 | 2,368 |  | 2,405 | 2,442 | 2,447 | 2,452 | 2,458 | 2,463 | 2,468 | 2,473 |
| 120 | 2,233 |  | 2,255 | 2,277 | 2,285 | 2,293 | 2,301 | 2,310 | 2,318 | 2,326 |
| 121 | 2,035 |  | 2,035 | 2,035 | 2,047 | 2,059 | 2,071 | 2,083 | 2,095 | 2,108 |
| 122 | 2,457 |  | 2,495 | 2,534 | 2,539 | 2,545 | 2,550 | 2,556 | 2,561 | 2,567 |
| 123 | 2,317 |  | 2,340 | 2,363 | 2,371 | 2,380 | 2,388 | 2,397 | 2,405 | 2,414 |
| 124 | 2,112 |  | 2,112 | 2,112 | 2,124 | 2,137 | 2,149 | 2,162 | 2,175 | 2,187 |
| 125 | 2,630 |  | 2,671 | 2,712 | 2,718 | 2,724 | 2,730 | 2,736 | 2,742 | 2,748 |
| 126 | 2,480 |  | 2,505 | 2,529 | 2,538 | 2,547 | 2,556 | 2,566 | 2,575 | 2,584 |
| 127 |  | 2,261 | 2,261 | 2,261 | 2,274 | 2,287 | 2,301 | 2,314 | 2,328 | 2,341 |
| 128 |  | 2,783 | 2,826 | 2,870 | 2,876 | 2,882 | 2,889 | 2,895 | 2,901 | 2,907 |
| 129 |  | 2,624 | 2,650 | 2,676 | 2,686 | 2,695 | 2,705 | 2,715 | 2,724 | 2,734 |
| 130 |  | 2,392 | 2,392 | 2,392 | 2,406 | 2,420 | 2,435 | 2,449 | 2,463 | 2,477 |
| 131 |  | 2,918 | 2,964 | 3,009 | 3,016 | 3,022 | 3,029 | 3,035 | 3,042 | 3,048 |
| 132 |  | 2,752 | 2,779 | 2,806 | 2,816 | 2,826 | 2,836 | 2,846 | 2,857 | 2,867 |
| 133 |  | 2,508 | 2,508 | 2,508 | 2,523 | 2,538 | 2,553 | 2,568 | 2,582 | 2,597 |
| 134 |  | 3,008 | 3,055 | 3,102 | 3,109 | 3,116 | 3,122 | 3,129 | 3,136 | 3,143 |
| 135 |  | 2,837 | 2,865 | 2,893 | 2,903 | 2,914 | 2,924 | 2,935 | 2,945 | 2,956 |
| 136 |  | 2,586 | 2,586 | 2,586 | 2,601 | 2,616 | 2,632 | 2,647 | 2,662 | 2,678 |
| 137 |  |  |  |  |  |  |  |  |  |  |
| 138 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 139 |  | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |


|  | U | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 141 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 142 | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |
| 143 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 144 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 145 | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |
| 146 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 147 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 148 | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |
| 149 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 150 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 151 | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |
| 152 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 153 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 154 | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |
| 155 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 156 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 157 | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |
| 158 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 159 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 160 | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |
| 161 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 162 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 163 | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |
| 164 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 165 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 166 | \$739 | \$679 | \$618 | \$610 | \$602 | \$595 | \$587 | \$580 | \$572 |
| 167 | \$844 | \$798 | \$752 | \$745 | \$738 | \$731 | \$725 | \$718 | \$711 |
| 168 | \$1,150 | \$1,148 | \$1,145 | \$1,126 | \$1,106 | \$1,086 | \$1,067 | \$1,047 | \$1,027 |
| 169 |  |  |  |  |  |  |  |  |  |
| 170 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 171 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 172 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 173 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 174 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |


|  | U | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 176 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 177 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 178 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 179 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 180 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 181 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 182 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 183 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 184 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 185 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 186 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 187 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 188 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 189 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 190 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 191 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 192 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 193 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 194 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 195 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 196 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 197 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 198 | \$17 | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 199 | \$19 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 200 | \$26 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 201 |  |  |  |  |  |  |  |  |  |
| 202 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 203 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |
| 204 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 205 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 206 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |
| 207 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 208 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 209 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |


|  | U | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 210 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 211 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 212 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |
| 213 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 214 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 215 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |
| 216 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 217 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 218 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |
| 219 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 220 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 221 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |
| 222 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 223 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 224 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |
| 225 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 226 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 227 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |
| 228 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 229 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 230 | \$723 | \$663 | \$603 | \$596 | \$589 | \$581 | \$574 | \$566 | \$559 |
| 231 | \$824 | \$779 | \$734 | \$728 | \$721 | \$715 | \$708 | \$702 | \$695 |
| 232 | \$1,123 | \$1,121 | \$1,119 | \$1,100 | \$1,081 | \$1,061 | \$1,042 | \$1,023 | \$1,004 |
| 233 |  |  |  |  |  |  |  |  |  |
| 234 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 235 | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 236 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 237 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 238 | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 239 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 240 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 241 | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 242 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 243 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 244 | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |


|  | U |  | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 245 |  | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 246 |  | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 247 |  | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 248 |  | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 249 |  | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 250 |  | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 251 |  | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 252 |  | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 253 |  | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 254 |  | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 255 |  | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 256 |  | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 257 |  | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 258 |  | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 259 |  | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 260 |  | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 261 |  | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 262 |  | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 263 |  | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 264 |  | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$19 |
| 265 |  |  |  |  |  |  |  |  |  |  |
| 266 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 267 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 268 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 269 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 270 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 271 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 272 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 273 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 274 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 275 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 276 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 277 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 278 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 279 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |


|  | U |  | V |  | W |  | X |  | Y |  | Z |  | AA |  | AB |  | AC |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 280 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 281 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 282 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 283 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 284 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 285 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 286 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 287 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 288 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 289 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 290 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 291 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 292 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 293 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 294 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 295 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 296 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 297 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 298 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 299 |  |  |  |  |  | - |  | - |  | - |  | - |  | - |  |  |  |  |
| 300 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 301 | 2028 |  | 2029 |  | 2030 |  | 2031 |  | 2032 |  | 2033 |  | 2034 |  | 2035 |  | 2036 |  |
| 302 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 303 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 304 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 305 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 306 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 307 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 308 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 309 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 310 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 311 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 312 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 313 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 314 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |



|  | U |  | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 350 | \$19 |  | \$18 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 |
| 351 | \$23 |  | \$22 | \$21 | \$20 | \$20 | \$20 | \$20 | \$19 | \$19 |
| 352 | \$34 |  | \$34 | \$34 | \$33 | \$32 | \$31 | \$31 | \$30 | \$29 |
| 353 | \$18 |  | \$17 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 |
| 354 | \$22 |  | \$20 | \$19 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 |
| 355 | \$32 |  | \$31 | \$31 | \$31 | \$30 | \$29 | \$29 | \$28 | \$27 |
| 356 | \$17 |  | \$16 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 |
| 357 | \$21 |  | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 358 | \$30 |  | \$30 | \$30 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 |
| 359 | \$16 |  | \$15 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$12 |
| 360 | \$20 |  | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 361 | \$28 |  | \$28 | \$28 | \$28 | \$27 | \$26 | \$26 | \$25 | \$25 |
| 362 | \$16 |  | \$14 | \$13 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 |
| 363 | \$19 |  | \$18 | \$17 | \$17 | \$16 | \$16 | \$16 | \$16 | \$16 |
| 364 | \$28 |  | \$27 | \$27 | \$27 | \$26 | \$26 | \$25 | \$25 | \$24 |
| 365 |  |  |  |  |  |  |  |  |  |  |
| 366 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 367 | 11.61\% |  | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 368 | 11.61\% |  | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 369 | 11.61\% |  | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 370 | 0.0\% |  | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 371 | 0.892 |  | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 |
| 372 | 0.892 |  | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 |
| 373 | 0.892 |  | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 |
| 374 | 1.038 |  | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 |
| 375 | 1.038 |  | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 |
| 376 | 1.038 |  | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 |
| 377 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 378 | 0.9592 |  | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 379 | 0.9201 |  | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 380 | 0.8826 |  | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 381 | 0.8466 |  | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 382 | 0.8121 |  | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 383 | 0.7790 |  | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 384 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |


|  | U |  | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 385 | 0.9592 |  | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 386 | 0.9201 |  | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 387 | 0.8826 |  | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 388 | 0.8466 |  | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 389 | 0.8121 |  | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 390 | 0.7790 |  | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 391 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 392 | 0.9592 |  | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 393 | 0.9201 |  | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 394 | 0.8826 |  | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 395 | 0.8466 |  | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 396 | 0.8121 |  | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 397 | 0.7790 |  | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 398 |  |  |  |  |  |  |  |  |  |  |
| 399 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 400 |  | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 |
| 401 |  | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 |
| 402 |  | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 |
| 403 |  |  |  |  |  |  |  |  |  |  |
| 404 |  | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 405 |  | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 406 |  | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 407 |  | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 |
| 408 |  | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 |
| 409 |  | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 |
| 410 |  | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 |
| 411 |  | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 |
| 412 |  | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 |
| 413 |  | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 |
| 414 |  | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 |
| 415 |  | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 |
| 416 |  |  |  |  |  |  |  |  |  |  |
| 417 |  |  |  |  |  |  |  |  |  |  |
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|  | U | V | W | X | Y | Z | AA | AB | AC |
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| 420 |  |  |  |  |  |  |  |  |  |
| 421 |  |  |  |  |  |  |  |  | Techno-Econ |
| 422 |  |  |  |  |  |  |  |  |  |
| 423 |  |  |  |  |  |  |  |  | U.S. Solar Phd |
| 424 |  |  |  |  |  |  |  |  | U.S. Solar Phd |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
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| 3 |  |  |  |  |  |  |  |  |  |  |
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| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 40 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 41 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 42 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 43 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 44 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 45 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 46 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 47 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 48 | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% |
| 49 | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% |
| 50 | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% | 7.8\% |
| 51 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 52 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 53 | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 54 | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% |
| 55 | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% |
| 56 | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% | 73.5\% |
| 57 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 58 | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 59 | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 60 | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 61 | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% |
| 62 | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% |
| 63 | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% | 1.7\% |
| 64 | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 65 | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 66 | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 67 | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 68 | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 69 | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% | 4.3\% |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 |  |  |  |  |  |  |  |  |  |  |
| 71 |  |  |  |  |  |  |  |  |  |  |
| 72 |  |  |  |  |  |  |  |  |  |  |
| 73 |  |  |  |  |  |  |  |  |  |  |
| 74 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 75 | 22\% | 22\% | 23\% | 23\% | 23\% | 23\% | 23\% | 23\% | 23\% | 23\% |
| 76 | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 22\% | 22\% | 22\% | 22\% |
| 77 | 19\% | 19\% | 19\% | 19\% | 20\% | 20\% | 20\% | 20\% | 20\% | 20\% |
| 78 | 24\% | 24\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 79 | 23\% | 23\% | 23\% | 23\% | 23\% | 23\% | 23\% | 24\% | 24\% | 24\% |
| 80 | 21\% | 21\% | 21\% | 21\% | 21\% | 21\% | 22\% | 22\% | 22\% | 22\% |
| 81 | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% |
| 82 | 24\% | 24\% | 24\% | 24\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 83 | 22\% | 22\% | 22\% | 22\% | 22\% | 23\% | 23\% | 23\% | 23\% | 23\% |
| 84 | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |
| 85 | 25\% | 25\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% |
| 86 | 23\% | 23\% | 23\% | 23\% | 24\% | 24\% | 24\% | 24\% | 24\% | 24\% |
| 87 | 28\% | 28\% | 28\% | 28\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% |
| 88 | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% | 27\% |
| 89 | 24\% | 24\% | 24\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| 90 | 29\% | 29\% | 29\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% |
| 91 | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 28\% | 29\% |
| 92 | 25\% | 25\% | 25\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% | 26\% |
| 93 | 31\% | 31\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 94 | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 30\% | 31\% |
| 95 | 27\% | 27\% | 27\% | 27\% | 27\% | 28\% | 28\% | 28\% | 28\% | 28\% |
| 96 | 33\% | 33\% | 33\% | 33\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |
| 97 | 31\% | 31\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 98 | 28\% | 29\% | 29\% | 29\% | 29\% | 29\% | 29\% | 30\% | 30\% | 30\% |
| 99 | 35\% | 35\% | 35\% | 35\% | 35\% | 35\% | 35\% | 35\% | 35\% | 36\% |
| 100 | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 34\% | 34\% | 34\% | 34\% |
| 101 | 30\% | 30\% | 30\% | 30\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |
| 102 | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 36\% | 37\% | 37\% |
| 103 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 35\% | 35\% | 35\% | 35\% |
| 104 | 31\% | 31\% | 31\% | 31\% | 31\% | 32\% | 32\% | 32\% | 32\% | 32\% |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 |  |  |  |  |  |  |  |  |  |  |
| 106 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 107 | 1,964 | 1,968 | 1,972 | 1,976 | 1,980 | 1,985 | 1,989 | 1,993 | 1,997 | 2,001 |
| 108 | 1,849 | 1,856 | 1,862 | 1,869 | 1,875 | 1,882 | 1,888 | 1,895 | 1,901 | 1,908 |
| 109 | 1,679 | 1,689 | 1,698 | 1,708 | 1,717 | 1,727 | 1,736 | 1,746 | 1,756 | 1,765 |
| 110 | 2,138 | 2,142 | 2,147 | 2,151 | 2,156 | 2,161 | 2,165 | 2,170 | 2,174 | 2,179 |
| 111 | 2,013 | 2,020 | 2,027 | 2,034 | 2,042 | 2,049 | 2,056 | 2,063 | 2,070 | 2,077 |
| 112 | 1,828 | 1,838 | 1,849 | 1,859 | 1,870 | 1,880 | 1,890 | 1,901 | 1,911 | 1,922 |
| 113 | 2,247 | 2,252 | 2,257 | 2,262 | 2,267 | 2,271 | 2,276 | 2,281 | 2,286 | 2,291 |
| 114 | 2,116 | 2,124 | 2,131 | 2,139 | 2,146 | 2,154 | 2,161 | 2,169 | 2,176 | 2,184 |
| 115 | 1,922 | 1,933 | 1,944 | 1,955 | 1,966 | 1,976 | 1,987 | 1,998 | 2,009 | 2,020 |
| 116 | 2,359 | 2,364 | 2,369 | 2,374 | 2,379 | 2,384 | 2,389 | 2,394 | 2,400 | 2,405 |
| 117 | 2,222 | 2,230 | 2,237 | 2,245 | 2,253 | 2,261 | 2,269 | 2,277 | 2,284 | 2,292 |
| 118 | 2,017 | 2,029 | 2,040 | 2,052 | 2,063 | 2,075 | 2,086 | 2,098 | 2,109 | 2,121 |
| 119 | 2,479 | 2,484 | 2,489 | 2,495 | 2,500 | 2,505 | 2,511 | 2,516 | 2,521 | 2,527 |
| 120 | 2,334 | 2,343 | 2,351 | 2,359 | 2,367 | 2,376 | 2,384 | 2,392 | 2,400 | 2,409 |
| 121 | 2,120 | 2,132 | 2,144 | 2,156 | 2,168 | 2,180 | 2,192 | 2,204 | 2,216 | 2,228 |
| 122 | 2,572 | 2,578 | 2,583 | 2,589 | 2,594 | 2,600 | 2,605 | 2,611 | 2,616 | 2,622 |
| 123 | 2,423 | 2,431 | 2,440 | 2,448 | 2,457 | 2,465 | 2,474 | 2,482 | 2,491 | 2,500 |
| 124 | 2,200 | 2,212 | 2,225 | 2,237 | 2,250 | 2,262 | 2,275 | 2,287 | 2,300 | 2,312 |
| 125 | 2,753 | 2,759 | 2,765 | 2,771 | 2,777 | 2,783 | 2,789 | 2,795 | 2,801 | 2,807 |
| 126 | 2,593 | 2,602 | 2,611 | 2,621 | 2,630 | 2,639 | 2,648 | 2,657 | 2,666 | 2,676 |
| 127 | 2,354 | 2,368 | 2,381 | 2,395 | 2,408 | 2,422 | 2,435 | 2,448 | 2,462 | 2,475 |
| 128 | 2,914 | 2,920 | 2,926 | 2,932 | 2,938 | 2,945 | 2,951 | 2,957 | 2,963 | 2,970 |
| 129 | 2,744 | 2,754 | 2,763 | 2,773 | 2,783 | 2,792 | 2,802 | 2,812 | 2,821 | 2,831 |
| 130 | 2,491 | 2,506 | 2,520 | 2,534 | 2,548 | 2,562 | 2,577 | 2,591 | 2,605 | 2,619 |
| 131 | 3,055 | 3,061 | 3,068 | 3,075 | 3,081 | 3,088 | 3,094 | 3,101 | 3,107 | 3,114 |
| 132 | 2,877 | 2,887 | 2,897 | 2,907 | 2,918 | 2,928 | 2,938 | 2,948 | 2,958 | 2,968 |
| 133 | 2,612 | 2,627 | 2,642 | 2,657 | 2,672 | 2,687 | 2,702 | 2,716 | 2,731 | 2,746 |
| 134 | 3,149 | 3,156 | 3,163 | 3,170 | 3,176 | 3,183 | 3,190 | 3,197 | 3,203 | 3,210 |
| 135 | 2,966 | 2,976 | 2,987 | 2,997 | 3,008 | 3,018 | 3,029 | 3,039 | 3,050 | 3,060 |
| 136 | 2,693 | 2,708 | 2,724 | 2,739 | 2,754 | 2,770 | 2,785 | 2,801 | 2,816 | 2,831 |
| 137 |  |  |  |  |  |  |  |  |  |  |
| 138 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 139 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 141 | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 142 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |
| 143 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 144 | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 145 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |
| 146 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 147 | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 148 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |
| 149 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 150 | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 151 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |
| 152 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 153 | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 154 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |
| 155 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 156 | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 157 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |
| 158 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 159 | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 160 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |
| 161 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 162 | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 163 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |
| 164 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 165 | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 166 | \$564 | \$557 | \$549 | \$542 | \$534 | \$526 | \$519 | \$511 | \$504 | \$496 |
| 167 | \$705 | \$698 | \$691 | \$685 | \$678 | \$671 | \$664 | \$658 | \$651 | \$644 |
| 168 \| | \$1,007 | \$988 | \$968 | \$948 | \$929 | \$909 | \$889 | \$870 | \$850 | \$830 |
| 169 |  |  |  |  |  |  |  |  |  |  |
| 170 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 171 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 172 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 173 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 174 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 176 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 177 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 178 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 179 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 180 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 181 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 182 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 183 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 184 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 185 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 186 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 187 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 188 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 189 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 190 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 191 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 192 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 193 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 194 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 195 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 196 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 197 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 198 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 199 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 |
| 200 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 201 |  |  |  |  |  |  |  |  |  |  |
| 202 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 203 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |
| 204 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 205 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 206 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |
| 207 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 208 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 209 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 210 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 211 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 212 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |
| 213 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 214 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 215 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |
| 216 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 217 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 218 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |
| 219 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 220 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 221 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |
| 222 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 223 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 224 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |
| 225 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 226 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 227 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |
| 228 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 229 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 230 | \$552 | \$544 | \$537 | \$529 | \$522 | \$514 | \$507 | \$500 | \$492 | \$485 |
| 231 | \$689 | \$682 | \$675 | \$669 | \$662 | \$656 | \$649 | \$643 | \$636 | \$630 |
| 232 | \$984 | \$965 | \$946 | \$927 | \$907 | \$888 | \$869 | \$850 | \$831 | \$811 |
| 233 |  |  |  |  |  |  |  |  |  |  |
| 234 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 235 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 236 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 237 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 238 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 239 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 240 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 241 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 242 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 243 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 244 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 245 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 246 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 247 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 248 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 249 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 250 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 251 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 252 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 253 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 254 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 255 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 256 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 257 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 258 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 259 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 260 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 261 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 262 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 263 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 | \$14 |
| 264 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 |
| 265 |  |  |  |  |  |  |  |  |  |  |
| 266 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 267 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 268 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 269 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 270 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 271 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 272 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 273 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 274 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 275 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 276 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 277 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 278 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 279 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |




|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 350 | \$15 | \$14 | \$14 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 351 | \$19 | \$19 | \$18 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 352 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 |
| 353 | \$14 | \$13 | \$13 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 |
| 354 | \$18 | \$17 | \$17 | \$17 | \$17 | \$17 | \$16 | \$16 | \$16 | \$16 |
| 355 | \$27 | \$26 | \$26 | \$25 | \$24 | \$24 | \$23 | \$23 | \$22 | \$21 |
| 356 | \$13 | \$13 | \$13 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 |
| 357 | \$17 | \$17 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 |
| 358 <br> 359 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 |
| 359 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 | \$11 | \$11 | \$11 | \$11 |
| 360 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 |
| 361 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 |
| 362 | \$12 | \$12 | \$12 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 |
| 363 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$14 |
| 364 | \$23 | \$23 | \$22 | \$22 | \$21 | \$21 | \$20 | \$20 | \$19 | \$19 |
| 365 |  |  |  |  |  |  |  |  |  |  |
| 366 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 367 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 368 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 369 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 370 | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 371 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 |
| 372 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 |
| 373 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 | 0.892 |
| 374 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 |
| 375 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 |
| 376 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 | 1.038 |
| 377 \| | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 378 <br> 379 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 379 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 380 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 381 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 382 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 383 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 384 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 385 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 386 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 387 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 388 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 389 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 390 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 391 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 392 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 393 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 394 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 395 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 396 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 397 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 398 |  |  |  |  |  |  |  |  |  |  |
| 399 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 400 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 |
| 401 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 |
| 402 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 | 1.023 |
| 403 |  |  |  |  |  |  |  |  |  |  |
| 404 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 405 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 406 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 407 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 |
| 408 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 |
| 409 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 |
| 410 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 |
| 411 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 |
| 412 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 |
| 413 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 | 1.048 |
| 414 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 | 1.151 |
| 415 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 | 1.263 |
| 416 |  |  |  |  |  |  |  |  |  |  |
| 417 |  |  |  |  |  |  |  |  |  |  |
| 418 |  |  |  |  |  |  |  |  |  |  |
| 419 |  |  |  |  |  |  |  |  |  |  |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 420 |  |  |  |  |  |  |  |  |  |  |
| 421 mmic Renewable Energy Potential on Tribal Lands. Golden, CO: National Renewable Energy Laboratory |  |  |  |  |  |  |  |  |  |  |
| 422 |  |  |  |  |  |  |  |  |  |  |
| 423 ptovoltaic System and Energy Storage Cost Benchmarks: Q1 2021. Golden, CO: National Renewable Energy Laboratory |  |  |  |  |  |  |  |  |  |  |
| 424 ptovoltaic System and Energy Storage Cost Benchmarks: Q1 2021. Golden, CO: National Renewable Energy Laboratory |  |  |  |  |  |  |  |  |  |  |


|  | AN | AO | AP | AQ |
| ---: | :--- | :--- | :--- | :--- |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
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| 24 |  |  |  |  |
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| 33 |  |  |  |  |
| 34 |  |  |  |  |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 35 |  |  |  |  |
| 36 |  |  |  |  |
| 37 |  |  |  |  |
| 38 |  |  |  |  |
| 39 | 2047 | 2048 | 2049 | 2050 |
| 40 | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 41 | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 42 | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 43 | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 44 | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 45 | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 46 | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 47 | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 48 | 7.8\% | 7.8\% | 7.8\% | 7.8\% |
| 49 | 7.8\% | 7.8\% | 7.8\% | 7.8\% |
| 50 | 7.8\% | 7.8\% | 7.8\% | 7.8\% |
| 51 | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 52 | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 53 | 5.2\% | 5.2\% | 5.2\% | 5.2\% |
| 54 | 73.5\% | 73.5\% | 73.5\% | 73.5\% |
| 55 | 73.5\% | 73.5\% | 73.5\% | 73.5\% |
| 56 | 73.5\% | 73.5\% | 73.5\% | 73.5\% |
| 57 | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 58 | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 59 | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 60 | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 61 | 1.7\% | 1.7\% | 1.7\% | 1.7\% |
| 62 | 1.7\% | 1.7\% | 1.7\% | 1.7\% |
| 63 | 1.7\% | 1.7\% | 1.7\% | 1.7\% |
| 64 | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 65 | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 66 | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 67 | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 68 | 4.3\% | 4.3\% | 4.3\% | 4.3\% |
| 69 | 4.3\% | 4.3\% | 4.3\% | 4.3\% |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 70 |  |  |  |  |
| 71 |  |  |  |  |
| 72 |  |  |  |  |
| 73 |  |  |  |  |
| 74 | 2047 | 2048 | 2049 | 2050 |
| 75 | 23\% | 23\% | 23\% | 23\% |
| 76 | 22\% | 22\% | 22\% | 22\% |
| 77 | 20\% | 20\% | 20\% | 21\% |
| 78 | 25\% | 25\% | 25\% | 25\% |
| 79 | 24\% | 24\% | 24\% | 24\% |
| 80 | 22\% | 22\% | 22\% | 22\% |
| 81 | 26\% | 26\% | 26\% | 26\% |
| 82 | 25\% | 25\% | 25\% | 25\% |
| 83 | 23\% | 23\% | 23\% | 24\% |
| 84 | 28\% | 28\% | 28\% | 28\% |
| 85 | 26\% | 26\% | 26\% | 27\% |
| 86 | 24\% | 24\% | 25\% | 25\% |
| 87 | 29\% | 29\% | 29\% | 29\% |
| 88 | 28\% | 28\% | 28\% | 28\% |
| 89 | 26\% | 26\% | 26\% | 26\% |
| 90 | 30\% | 30\% | 30\% | 30\% |
| 91 | 29\% | 29\% | 29\% | 29\% |
| 92 | 27\% | 27\% | 27\% | 27\% |
| 93 | 32\% | 32\% | 32\% | 32\% |
| 94 | 31\% | 31\% | 31\% | 31\% |
| 95 | 28\% | 29\% | 29\% | 29\% |
| 96 | 34\% | 34\% | 34\% | 34\% |
| 97 | 32\% | 33\% | 33\% | 33\% |
| 98 | 30\% | 30\% | 30\% | 31\% |
| 99 | 36\% | 36\% | 36\% | 36\% |
| 100 | 34\% | 34\% | 34\% | 34\% |
| 101 | 32\% | 32\% | 32\% | 32\% |
| 102 | 37\% | 37\% | 37\% | 37\% |
| 103 | 35\% | 35\% | 35\% | 35\% |
| 104 | 32\% | 33\% | 33\% | 33\% |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 105 |  |  |  |  |
| 106 | 2047 | 2048 | 2049 | 2050 |
| 107 | 2,006 | 2,010 | 2,014 | 2,018 |
| 108 | 1,915 | 1,921 | 1,928 | 1,934 |
| 109 | 1,775 | 1,784 | 1,794 | 1,803 |
| 110 | 2,183 | 2,188 | 2,193 | 2,197 |
| 111 | 2,084 | 2,091 | 2,098 | 2,106 |
| 112 | 1,932 | 1,942 | 1,953 | 1,963 |
| 113 | 2,295 | 2,300 | 2,305 | 2,310 |
| 114 | 2,191 | 2,199 | 2,206 | 2,214 |
| 115 | 2,031 | 2,042 | 2,053 | 2,064 |
| 116 | 2,410 | 2,415 | 2,420 | 2,425 |
| 117 | 2,300 | 2,308 | 2,316 | 2,324 |
| 118 | 2,132 | 2,144 | 2,155 | 2,167 |
| 119 | 2,532 | 2,537 | 2,542 | 2,548 |
| 120 | 2,417 | 2,425 | 2,433 | 2,442 |
| 121 | 2,240 | 2,253 | 2,265 | 2,277 |
| 122 | 2,627 | 2,633 | 2,638 | 2,644 |
| 123 | 2,508 | 2,517 | 2,525 | 2,534 |
| 124 | 2,325 | 2,338 | 2,350 | 2,363 |
| 125 | 2,812 | 2,818 | 2,824 | 2,830 |
| 126 | 2,685 | 2,694 | 2,703 | 2,712 |
| 127 | 2,489 | 2,502 | 2,516 | 2,529 |
| 128 | 2,976 | 2,982 | 2,988 | 2,995 |
| 129 | 2,841 | 2,850 | 2,860 | 2,870 |
| 130 | 2,633 | 2,648 | 2,662 | 2,676 |
| 131 | 3,120 | 3,127 | 3,133 | 3,140 |
| 132 | 2,979 | 2,989 | 2,999 | 3,009 |
| 133 | 2,761 | 2,776 | 2,791 | 2,806 |
| 134 | 3,217 | 3,224 | 3,230 | 3,237 |
| 135 | 3,071 | 3,081 | 3,092 | 3,102 |
| 136 | 2,847 | 2,862 | 2,877 | 2,893 |
| 137 |  |  |  |  |
| 138 | 2047 | 2048 | 2049 | 2050 |
| 139 | \$488 | \$481 | \$473 | \$466 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 140 | \$638 | \$631 | \$624 | \$618 |
| 141 | \$811 | \$791 | \$771 | \$752 |
| 142 | \$488 | \$481 | \$473 | \$466 |
| 143 | \$638 | \$631 | \$624 | \$618 |
| 144 | \$811 | \$791 | \$771 | \$752 |
| 145 | \$488 | \$481 | \$473 | \$466 |
| 146 | \$638 | \$631 | \$624 | \$618 |
| 147 | \$811 | \$791 | \$771 | \$752 |
| 148 | \$488 | \$481 | \$473 | \$466 |
| 149 | \$638 | \$631 | \$624 | \$618 |
| 150 | \$811 | \$791 | \$771 | \$752 |
| 151 | \$488 | \$481 | \$473 | \$466 |
| 152 | \$638 | \$631 | \$624 | \$618 |
| 153 | \$811 | \$791 | \$771 | \$752 |
| 154 | \$488 | \$481 | \$473 | \$466 |
| 155 | \$638 | \$631 | \$624 | \$618 |
| 156 | \$811 | \$791 | \$771 | \$752 |
| 157 | \$488 | \$481 | \$473 | \$466 |
| 158 | \$638 | \$631 | \$624 | \$618 |
| 159 | \$811 | \$791 | \$771 | \$752 |
| 160 | \$488 | \$481 | \$473 | \$466 |
| 161 | \$638 | \$631 | \$624 | \$618 |
| 162 | \$811 | \$791 | \$771 | \$752 |
| 163 | \$488 | \$481 | \$473 | \$466 |
| 164 | \$638 | \$631 | \$624 | \$618 |
| 165 | \$811 | \$791 | \$771 | \$752 |
| 166 | \$488 | \$481 | \$473 | \$466 |
| 167 | \$638 | \$631 | \$624 | \$618 |
| 168 | \$811 | \$791 | \$771 | \$752 |
| 169 |  |  |  |  |
| 170 | 2047 | 2048 | 2049 | 2050 |
| 171 | \$11 | \$11 | \$11 | \$11 |
| 172 | \$15 | \$14 | \$14 | \$14 |
| 173 | \$19 | \$18 | \$18 | \$17 |
| 174 | \$11 | \$11 | \$11 | \$11 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 175 | \$15 | \$14 | \$14 | \$14 |
| 176 | \$19 | \$18 | \$18 | \$17 |
| 177 | \$11 | \$11 | \$11 | \$11 |
| 178 | \$15 | \$14 | \$14 | \$14 |
| 179 | \$19 | \$18 | \$18 | \$17 |
| 180 | \$11 | \$11 | \$11 | \$11 |
| 181 | \$15 | \$14 | \$14 | \$14 |
| 182 | \$19 | \$18 | \$18 | \$17 |
| 183 | \$11 | \$11 | \$11 | \$11 |
| 184 | \$15 | \$14 | \$14 | \$14 |
| 185 | \$19 | \$18 | \$18 | \$17 |
| 186 | \$11 | \$11 | \$11 | \$11 |
| 187 | \$15 | \$14 | \$14 | \$14 |
| 188 | \$19 | \$18 | \$18 | \$17 |
| 189 | \$11 | \$11 | \$11 | \$11 |
| 190 | \$15 | \$14 | \$14 | \$14 |
| 191 | \$19 | \$18 | \$18 | \$17 |
| 192 | \$11 | \$11 | \$11 | \$11 |
| 193 | \$15 | \$14 | \$14 | \$14 |
| 194 | \$19 | \$18 | \$18 | \$17 |
| 195 | \$11 | \$11 | \$11 | \$11 |
| 196 | \$15 | \$14 | \$14 | \$14 |
| 197 | \$19 | \$18 | \$18 | \$17 |
| 198 | \$11 | \$11 | \$11 | \$11 |
| 199 | \$15 | \$14 | \$14 | \$14 |
| 200 | \$19 | \$18 | \$18 | \$17 |
| 201 |  |  |  |  |
| 202 | 2047 | 2048 | 2049 | 2050 |
| 203 | \$477 | \$470 | \$462 | \$455 |
| 204 | \$623 | \$617 | \$610 | \$603 |
| 205 | \$792 | \$773 | \$754 | \$734 |
| 206 | \$477 | \$470 | \$462 | \$455 |
| 207 | \$623 | \$617 | \$610 | \$603 |
| 208 | \$792 | \$773 | \$754 | \$734 |
| 209 | \$477 | \$470 | \$462 | \$455 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 210 | \$623 | \$617 | \$610 | \$603 |
| 211 | \$792 | \$773 | \$754 | \$734 |
| 212 | \$477 | \$470 | \$462 | \$455 |
| 213 | \$623 | \$617 | \$610 | \$603 |
| 214 | \$792 | \$773 | \$754 | \$734 |
| 215 | \$477 | \$470 | \$462 | \$455 |
| 216 | \$623 | \$617 | \$610 | \$603 |
| 217 | \$792 | \$773 | \$754 | \$734 |
| 218 | \$477 | \$470 | \$462 | \$455 |
| 219 | \$623 | \$617 | \$610 | \$603 |
| 220 | \$792 | \$773 | \$754 | \$734 |
| 221 | \$477 | \$470 | \$462 | \$455 |
| 222 | \$623 | \$617 | \$610 | \$603 |
| 223 | \$792 | \$773 | \$754 | \$734 |
| 224 | \$477 | \$470 | \$462 | \$455 |
| 225 | \$623 | \$617 | \$610 | \$603 |
| 226 | \$792 | \$773 | \$754 | \$734 |
| 227 | \$477 | \$470 | \$462 | \$455 |
| 228 | \$623 | \$617 | \$610 | \$603 |
| 229 | \$792 | \$773 | \$754 | \$734 |
| 230 | \$477 | \$470 | \$462 | \$455 |
| 231 | \$623 | \$617 | \$610 | \$603 |
| 232 | \$792 | \$773 | \$754 | \$734 |
| 233 |  |  |  |  |
| 234 | 2047 | 2048 | 2049 | 2050 |
| 235 | \$11 | \$11 | \$11 | \$11 |
| 236 | \$14 | \$13 | \$13 | \$13 |
| 237 | \$16 | \$16 | \$15 | \$15 |
| 238 | \$11 | \$11 | \$11 | \$11 |
| 239 | \$14 | \$13 | \$13 | \$13 |
| 240 | \$16 | \$16 | \$15 | \$15 |
| 241 | \$11 | \$11 | \$11 | \$11 |
| 242 | \$14 | \$13 | \$13 | \$13 |
| 243 | \$16 | \$16 | \$15 | \$15 |
| 244 | \$11 | \$11 | \$11 | \$11 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 245 | \$14 | \$13 | \$13 | \$13 |
| 246 | \$16 | \$16 | \$15 | \$15 |
| 247 | \$11 | \$11 | \$11 | \$11 |
| 248 | \$14 | \$13 | \$13 | \$13 |
| 249 | \$16 | \$16 | \$15 | \$15 |
| 250 | \$11 | \$11 | \$11 | \$11 |
| 251 | \$14 | \$13 | \$13 | \$13 |
| 252 | \$16 | \$16 | \$15 | \$15 |
| 253 | \$11 | \$11 | \$11 | \$11 |
| 254 | \$14 | \$13 | \$13 | \$13 |
| 255 | \$16 | \$16 | \$15 | \$15 |
| 256 | \$11 | \$11 | \$11 | \$11 |
| 257 | \$14 | \$13 | \$13 | \$13 |
| 258 | \$16 | \$16 | \$15 | \$15 |
| 259 | \$11 | \$11 | \$11 | \$11 |
| 260 | \$14 | \$13 | \$13 | \$13 |
| 261 | \$16 | \$16 | \$15 | \$15 |
| 262 | \$11 | \$11 | \$11 | \$11 |
| 263 | \$14 | \$13 | \$13 | \$13 |
| 264 | \$16 | \$16 | \$15 | \$15 |
| 265 |  |  |  |  |
| 266 | 2047 | 2048 | 2049 | 2050 |
| 267 | \$0 | \$0 | \$0 | \$0 |
| 268 | \$0 | \$0 | \$0 | \$0 |
| 269 | \$0 | \$0 | \$0 | \$0 |
| 270 | \$0 | \$0 | \$0 | \$0 |
| 271 | \$0 | \$0 | \$0 | \$0 |
| 272 | \$0 | \$0 | \$0 | \$0 |
| 273 | \$0 | \$0 | \$0 | \$0 |
| 274 | \$0 | \$0 | \$0 | \$0 |
| 275 | \$0 | \$0 | \$0 | \$0 |
| 276 | \$0 | \$0 | \$0 | \$0 |
| 277 | \$0 | \$0 | \$0 | \$0 |
| 278 | \$0 | \$0 | \$0 | \$0 |
| 279 | \$0 | \$0 | \$0 | \$0 |


|  | AN |  | AO |  | AP |  | AQ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 280 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 281 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 282 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 283 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 284 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 285 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 286 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 287 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 288 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 289 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 290 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 291 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 292 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 293 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 294 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 295 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 296 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 297 |  |  |  |  |  |  |  |  |
| 298 |  |  |  |  |  |  |  |  |
| 299 |  |  |  |  |  |  |  |  |
| 300 |  |  |  |  |  |  |  |  |
| 301 | 2047 |  | 2048 |  | 2049 |  | 2050 |  |
| 302 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 303 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 304 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 305 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 306 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 307 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 308 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 309 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 310 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 311 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 312 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 313 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 314 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 315 | \$0 | \$0 | \$0 | \$0 |
| 316 | \$0 | \$0 | \$0 | \$0 |
| 317 | \$0 | \$0 | \$0 | \$0 |
| 318 | \$0 | \$0 | \$0 | \$0 |
| 319 | \$0 | \$0 | \$0 | \$0 |
| 320 | \$0 | \$0 | \$0 | \$0 |
| 321 | \$0 | \$0 | \$0 | \$0 |
| 322 | \$0 | \$0 | \$0 | \$0 |
| 323 | \$0 | \$0 | \$0 | \$0 |
| 324 | \$0 | \$0 | \$0 | \$0 |
| 325 | \$0 | \$0 | \$0 | \$0 |
| 326 | \$0 | \$0 | \$0 | \$0 |
| 327 | \$0 | \$0 | \$0 | \$0 |
| 328 | \$0 | \$0 | \$0 | \$0 |
| 329 | \$0 | \$0 | \$0 | \$0 |
| 330 | \$0 | \$0 | \$0 | \$0 |
| 331 | \$0 | \$0 | \$0 | \$0 |
| 332 |  |  |  |  |
| 333 |  |  |  |  |
| 334 | 2047 | 2048 | 2049 | 2050 |
| 335 | \$16 | \$16 | \$16 | \$16 |
| 336 | \$22 | \$22 | \$21 | \$21 |
| 337 | \$29 | \$29 | \$28 | \$27 |
| 338 | \$15 | \$15 | \$15 | \$14 |
| 339 | \$20 | \$20 | \$20 | \$19 |
| 340 | \$27 | \$26 | \$25 | \$25 |
| 341 | \$14 | \$14 | \$14 | \$14 |
| 342 | \$19 | \$19 | \$19 | \$18 |
| 343 | \$26 | \$25 | \$24 | \$24 |
| 344 | \$14 | \$13 | \$13 | \$13 |
| 345 | \$18 | \$18 | \$18 | \$18 |
| 346 | \$24 | \$24 | \$23 | \$22 |
| 347 | \$13 | \$13 | \$13 | \$12 |
| 348 | \$17 | \$17 | \$17 | \$17 |
| 349 | \$23 | \$23 | \$22 | \$21 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 350 | \$13 | \$12 | \$12 | \$12 |
| 351 | \$17 | \$16 | \$16 | \$16 |
| 352 | \$22 | \$22 | \$21 | \$21 |
| 353 | \$12 | \$12 | \$11 | \$11 |
| 354 | \$16 | \$15 | \$15 | \$15 |
| 355 | \$21 | \$20 | \$20 | \$19 |
| 356 | \$11 | \$11 | \$11 | \$11 |
| 357 | \$15 | \$15 | \$14 | \$14 |
| 358 | \$20 | \$19 | \$19 | \$18 |
| 359 | \$11 | \$10 | \$10 | \$10 |
| 360 | \$14 | \$14 | \$14 | \$14 |
| 361 | \$19 | \$18 | \$18 | \$17 |
| 362 | \$10 | \$10 | \$10 | \$10 |
| 363 | \$14 | \$13 | \$13 | \$13 |
| 364 | \$18 | \$18 | \$17 | \$17 |
| 365 |  |  |  |  |
| 366 | 2047 | 2048 | 2049 | 2050 |
| 367 | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 368 | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 369 | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 370 | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| 371 | 0.892 | 0.892 | 0.892 | 0.892 |
| 372 | 0.892 | 0.892 | 0.892 | 0.892 |
| 373 | 0.892 | 0.892 | 0.892 | 0.892 |
| 374 | 1.038 | 1.038 | 1.038 | 1.038 |
| 375 | 1.038 | 1.038 | 1.038 | 1.038 |
| 376 | 1.038 | 1.038 | 1.038 | 1.038 |
| 377 | 2047 | 2048 | 2049 | 2050 |
| 378 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 379 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 380 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 381 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 382 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 383 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 384 | 2047 | 2048 | 2049 | 2050 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 385 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 386 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 387 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 388 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 389 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 390 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 391 | 2047 | 2048 | 2049 | 2050 |
| 392 | 0.9592 | 0.9592 | 0.9592 | 0.9592 |
| 393 | 0.9201 | 0.9201 | 0.9201 | 0.9201 |
| 394 | 0.8826 | 0.8826 | 0.8826 | 0.8826 |
| 395 | 0.8466 | 0.8466 | 0.8466 | 0.8466 |
| 396 | 0.8121 | 0.8121 | 0.8121 | 0.8121 |
| 397 | 0.7790 | 0.7790 | 0.7790 | 0.7790 |
| 398 |  |  |  |  |
| 399 | 2047 | 2048 | 2049 | 2050 |
| 400 | 1.023 | 1.023 | 1.023 | 1.023 |
| 401 | 1.023 | 1.023 | 1.023 | 1.023 |
| 402 | 1.023 | 1.023 | 1.023 | 1.023 |
| 403 |  |  |  |  |
| 404 | 1.017 | 1.017 | 1.017 | 1.017 |
| 405 | 1.053 | 1.053 | 1.053 | 1.053 |
| 406 | 1.090 | 1.090 | 1.090 | 1.090 |
| 407 | 1.048 | 1.048 | 1.048 | 1.048 |
| 408 | 1.151 | 1.151 | 1.151 | 1.151 |
| 409 | 1.263 | 1.263 | 1.263 | 1.263 |
| 410 | 1.048 | 1.048 | 1.048 | 1.048 |
| 411 | 1.151 | 1.151 | 1.151 | 1.151 |
| 412 | 1.263 | 1.263 | 1.263 | 1.263 |
| 413 | 1.048 | 1.048 | 1.048 | 1.048 |
| 414 | 1.151 | 1.151 | 1.151 | 1.151 |
| 415 | 1.263 | 1.263 | 1.263 | 1.263 |
| 416 |  |  |  |  |
| 417 |  |  |  |  |
| 418 |  |  |  |  |
| 419 |  |  |  |  |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 420 |  |  |  |  |
| 421 |  |  |  |  |
| 422 |  |  |  |  |
| 423 |  |  |  |  |
| 424 |  |  |  |  |



|  | A | B ${ }^{\text {a }}$ | CD | E | FG | H | 1 | J | K |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 |  |  |  |  |  |  |  | Construction Durat |  |  |
| 37 |  |  |  |  |  |  |  | Year | Capital |  |
| 38 |  |  |  |  |  |  |  | Index | Fraction |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  | 0 |  | 100\% |
| 42 |  |  |  |  |  |  |  | 1 |  | 0\% |
| 43 |  |  |  |  |  |  |  | 2 |  | 0\% |
| 44 |  |  |  |  |  |  |  |  |  |  |
| 45 |  |  |  |  |  |  |  |  |  |  |
| 46 |  |  |  |  |  |  |  |  |  |  |
| 47 |  |  |  |  |  |  |  |  | Inflation Rate |  |
| 48 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 49 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 50 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 51 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 52 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 53 |  |  |  |  |  | $\stackrel{0}{0}$ |  |  | Calculated Interest Rate Real |  |
| 54 |  |  |  |  |  | $\stackrel{\text { coiv }}{0}$ |  |  | Interest During Construction - Nominal |  |
| 55 |  |  |  |  |  | \#1 |  |  | Rate of Return on Equity Nominal |  |
| 56 |  |  |  |  |  |  |  |  | Rate of Return on Equity Nominal |  |
| 57 |  |  |  |  |  |  |  |  | Rate of Return on Equity Nominal |  |
| 58 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  |
| 59 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  |
| 60 |  |  |  |  |  |  |  | Assumptions | Calculated Rate of Return on Equity Real |  |
| 61 |  |  |  |  |  |  |  |  | Debt Fraction |  |
| 62 |  |  |  |  |  |  |  |  | Debt Fraction |  |
| 63 |  |  |  |  |  |  |  |  | Debt Fraction |  |
| 64 |  |  |  |  |  |  |  |  | Tax Rate (Federal and State) |  |
| 65 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 66 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 67 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 68 |  |  |  |  |  |  |  |  | WACC Real |  |
| 69 |  |  |  |  |  |  |  |  | WACC Real |  |
| 70 |  |  |  |  |  |  |  |  | WACC Real |  |


|  | A |  | CD | E F | FG | H | I | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |
| 72 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |
| 73 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal |
| 74 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |
| 75 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |
| 76 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real |
| 77 |  |  |  |  |  |  |  |  |  |
| 78 |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |
| 81 |  |  | X |  |  |  |  |  |  |
| 82 |  |  |  |  |  |  |  |  |  |
| 83 |  |  |  |  |  |  |  |  |  |
| 84 |  |  |  |  |  |  |  |  | Commercial PV - Class 10 |
| 85 |  |  |  |  |  |  |  |  | Commercial PV - Class 10 |
| 86 |  |  |  |  |  |  |  |  | Commercial PV - Class 10 |
| 87 |  |  |  |  |  |  |  |  | Commercial PV - Class 9 |
| 88 |  |  |  |  |  |  |  |  | Commercial PV - Class 9 |
| 89 |  |  |  |  |  |  |  |  | Commercial PV - Class 9 |
| 90 |  |  |  |  |  |  |  |  | Commercial PV - Class 8 |
| 91 |  |  |  |  |  |  |  |  | Commercial PV - Class 8 |
| 92 |  |  |  |  |  |  |  |  | Commercial PV - Class 8 |
| 93 |  |  |  |  |  |  |  |  | Commercial PV - Class 7 |
| 94 |  |  |  |  |  |  |  |  | Commercial PV - Class 7 |
| 95 |  |  |  |  |  |  |  |  | Commercial PV - Class 7 |
| 96 |  |  |  |  |  |  |  |  | Commercial PV - Class 6 |
| 97 |  |  |  |  |  |  |  |  | Commercial PV - Class 6 |
| 98 |  |  |  |  |  |  |  | Net Capacity Factor | Commercial PV - Class 6 |
| 99 |  |  |  |  |  |  |  | (\%) | Commercial PV - Class 5 |
| 100 |  |  |  |  |  |  |  |  | Commercial PV - Class 5 |
| 101 |  |  |  |  |  |  |  |  | Commercial PV - Class 5 |
| 102 |  |  |  |  |  |  |  |  | Commercial PV - Class 4 |
| 103 |  |  |  |  |  |  |  |  | Commercial PV - Class 4 |
| 104 |  |  |  |  |  |  |  |  | Commercial PV - Class 4 |
| 105 |  |  |  |  |  |  |  |  | Commercial PV - Class 3 |



|  | A | B | CD | E | FG | H | I | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 141 |  |  |  |  |  |  |  |  | Commercial PV - Class 2 |
| 142 |  |  |  |  |  |  |  |  | Commercial PV - Class 2 |
| 143 |  |  |  |  |  |  |  |  | Commercial PV - Class 1 |
| 144 |  |  |  |  |  |  |  |  | Commercial PV - Class 1 |
| 145 |  |  |  |  |  |  |  |  | Commercial PV - Class 1 |
| 146 |  |  |  |  |  |  |  |  |  |
| 147 |  |  |  |  |  |  |  |  |  |
| 148 |  |  |  |  |  |  |  |  | Commercial PV - Class 10 |
| 149 |  |  |  |  |  |  |  |  | Commercial PV - Class 10 |
| 150 |  |  |  |  |  |  |  |  | Commercial PV - Class 10 |
| 151 |  |  |  |  |  |  |  |  | Commercial PV - Class 9 |
| 152 |  |  |  |  |  |  |  |  | Commercial PV - Class 9 |
| 153 |  |  |  |  |  |  |  |  | Commercial PV - Class 9 |
| 154 |  |  |  |  |  |  |  |  | Commercial PV - Class 8 |
| 155 |  |  |  |  |  |  |  |  | Commercial PV - Class 8 |
| 156 |  |  |  |  |  |  |  |  | Commercial PV - Class 8 |
| 157 |  |  |  |  |  |  |  |  | Commercial PV - Class 7 |
| 158 |  |  |  |  |  |  |  |  | Commercial PV - Class 7 |
| 159 |  |  |  |  |  |  |  |  | Commercial PV - Class 7 |
| 160 |  |  |  |  |  |  |  |  | Commercial PV - Class 6 |
| 161 |  |  |  |  |  |  |  |  | Commercial PV - Class 6 |
| 162 |  |  |  |  |  |  |  | CAPEX (\$/kW) | Commercial PV - Class 6 |
| 163 |  |  |  |  |  |  |  | CAPEX (\$/kW) | Commercial PV - Class 5 |
| 164 |  |  |  |  |  |  |  |  | Commercial PV - Class 5 |
| 165 |  |  |  |  |  |  |  |  | Commercial PV - Class 5 |
| 166 |  |  |  |  |  |  |  |  | Commercial PV - Class 4 |
| 167 |  |  |  |  |  |  |  |  | Commercial PV - Class 4 |
| 168 |  |  |  |  |  |  |  |  | Commercial PV - Class 4 |
| 169 |  |  |  |  |  |  |  |  | Commercial PV - Class 3 |
| 170 |  |  |  |  |  |  |  |  | Commercial PV - Class 3 |
| 171 |  |  |  |  |  |  |  |  | Commercial PV - Class 3 |
| 172 |  |  |  |  |  |  |  |  | Commercial PV - Class 2 |
| 173 |  |  |  |  |  |  |  |  | Commercial PV - Class 2 |
| 174 |  |  |  |  |  | O |  |  | Commercial PV - Class 2 |
| 175 |  |  |  |  |  | ¢ |  |  | Commercial PV - Class 1 |







|  | A |  | [DE\| | FG | H | 1 | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 351 |  |  |  |  |  |  |  | PFF |
| 352 |  |  |  |  |  | MACRS |  | Year (Advanced) |
| 353 |  |  |  |  |  | 0.2 |  | 1 |
| 354 |  |  |  |  |  | 0.32 |  | 2 |
| 355 |  |  |  |  |  | 0.192 |  | 3 |
| 356 |  |  |  |  |  | 0.1152 |  | 4 |
| 357 |  |  |  |  |  | 0.1152 |  | 5 |
| 358 |  |  |  |  |  | 0.0576 |  | 6 |
| 359 |  |  |  |  |  |  |  | Year (Moderate) |
| 360 |  |  |  |  |  |  |  | 1 |
| 361 |  |  |  |  |  |  |  | 2 |
| 362 |  |  |  |  |  |  | Depreciation Factor | 3 |
| 363 |  |  |  |  |  |  | Depreciation Factor | 4 |
| 364 |  |  |  |  |  |  |  | 5 |
| 365 |  |  |  |  |  |  |  | 6 |
| 366 |  |  |  |  |  |  |  | Year (Conservative) |
| 367 |  |  |  |  |  |  |  | 1 |
| 368 |  |  |  |  |  |  |  | 2 |
| 369 |  |  |  |  |  |  |  | 3 |
| 370 |  |  |  |  |  |  |  | 4 |
| 371 |  |  |  |  |  |  |  | 5 |
| 372 |  |  |  |  |  |  |  | 6 |
| 373 |  |  |  |  |  |  |  |  |
| 374 |  |  |  |  |  |  |  |  |
| 375 |  |  |  |  |  |  |  | CFF |
| 376 |  |  |  |  |  |  | Construction Finance | CFF |
| 377 |  |  |  |  |  |  |  | CFF |
| 378 |  |  |  |  |  |  |  |  |
| 379 |  |  |  |  |  |  |  | Accumulated Interest - Year 1 |
| 380 |  |  |  |  |  |  |  | Accumulated Interest - Year 2 |
| 381 |  |  |  |  |  |  |  | Accumulated Interest - Year 3 |
| 382 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 |
| 383 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 |
| 384 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 |
| 385 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 |




|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 |  |  |  | 1 |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |
| 38 | Percent of | Percent of |  |  |  |  |  |  |  |
| 39 | Leverage During | Equity During |  |  |  |  |  |  |  |
| 40 | Construction | Construction |  |  |  |  |  |  |  |
| 41 | 80\% | 20\% |  |  |  |  |  |  |  |
| 42 | 80\% | 20\% |  |  |  |  |  |  |  |
| 43 | 80\% | 20\% |  |  |  |  |  |  |  |
| 44 |  |  |  |  |  |  |  |  |  |
| 45 |  | Base Year |  |  |  |  |  |  |  |
| 46 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 47 | * | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 48 | Advanced | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 49 | Moderate | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 | Conservative | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 51 | Advanced | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 52 | Moderate | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 53 | Conservative | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 54 | * | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 55 | Advanced | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 56 | Moderate | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 57 | Conservative | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 58 | Advanced | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 59 | Moderate | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 60 | Conservative | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 61 | Advanced | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 62 | Moderate | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 63 | Conservative | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 64 | * | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 65 | Advanced | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 66 | Moderate | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 67 | Conservative | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 68 | Advanced | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 69 | Moderate | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 70 | Conservative | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 | Advanced | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 72 | Moderate | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 73 | Conservative | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 74 | Advanced | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 75 | Moderate | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 76 | Conservative | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 77 |  |  |  |  |  |  |  |  |  |
| 78 |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |
| 81 |  | Projections |  |  |  |  |  |  |  |
| 82 |  | Basis Year |  |  |  |  |  |  |  |
| 83 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 84 | Advanced | 12.2\% | 12.4\% | 12.6\% | 12.8\% | 13.1\% | 13.3\% | 13.5\% | 13.7\% |
| 85 | Moderate | 12.1\% | 12.2\% | 12.4\% | 12.5\% | 12.6\% | 12.7\% | 12.9\% | 13.0\% |
| 86 | Conservative | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% |
| 87 | Advanced | 13.4\% | 13.6\% | 13.9\% | 14.1\% | 14.4\% | 14.6\% | 14.8\% | 15.1\% |
| 88 | Moderate | 13.3\% | 13.4\% | 13.6\% | 13.7\% | 13.9\% | 14.0\% | 14.2\% | 14.3\% |
| 89 | Conservative | 13.2\% | 13.2\% | 13.2\% | 13.2\% | 13.2\% | 13.2\% | 13.2\% | 13.2\% |
| 90 | Advanced | 14.0\% | 14.2\% | 14.5\% | 14.7\% | 15.0\% | 15.2\% | 15.5\% | 15.7\% |
| 91 | Moderate | 13.9\% | 14.0\% | 14.2\% | 14.3\% | 14.5\% | 14.6\% | 14.8\% | 14.9\% |
| 92 | Conservative | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% |
| 93 | Advanced | 14.7\% | 15.0\% | 15.2\% | 15.5\% | 15.8\% | 16.0\% | 16.3\% | 16.5\% |
| 94 | Moderate | 14.6\% | 14.8\% | 14.9\% | 15.1\% | 15.2\% | 15.4\% | 15.5\% | 15.7\% |
| 95 | Conservative | 14.4\% | 14.4\% | 14.4\% | 14.4\% | 14.4\% | 14.4\% | 14.4\% | 14.4\% |
| 96 | Advanced | 15.4\% | 15.7\% | 16.0\% | 16.3\% | 16.5\% | 16.8\% | 17.1\% | 17.4\% |
| 97 | Moderate | 15.3\% | 15.5\% | 15.6\% | 15.8\% | 16.0\% | 16.1\% | 16.3\% | 16.5\% |
| 98 | Conservative | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% |
| 99 | Advanced | 15.6\% | 15.9\% | 16.2\% | 16.5\% | 16.8\% | 17.0\% | 17.3\% | 17.6\% |
| 100 | Moderate | 15.5\% | 15.7\% | 15.9\% | 16.0\% | 16.2\% | 16.4\% | 16.5\% | 16.7\% |
| 101 | Conservative | 15.4\% | 15.4\% | 15.4\% | 15.4\% | 15.4\% | 15.4\% | 15.4\% | 15.4\% |
| 102 | Advanced | 16.4\% | 16.7\% | 17.0\% | 17.3\% | 17.6\% | 17.8\% | 18.1\% | 18.4\% |
| 103 | Moderate | 16.3\% | 16.4\% | 16.6\% | 16.8\% | 17.0\% | 17.1\% | 17.3\% | 17.5\% |
| 104 | Conservative | 16.1\% | 16.1\% | 16.1\% | 16.1\% | 16.1\% | 16.1\% | 16.1\% | 16.1\% |
| 105 | Advanced | 17.3\% | 17.6\% | 17.9\% | 18.2\% | 18.5\% | 18.8\% | 19.2\% | 19.5\% |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 106 | Moderate | 17.2\% | 17.4\% | 17.5\% | 17.7\% | 17.9\% | 18.1\% | 18.3\% | 18.5\% |
| 107 | Conservative | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% |
| 108 | Advanced | 18.3\% | 18.6\% | 18.9\% | 19.3\% | 19.6\% | 19.9\% | 20.2\% | 20.6\% |
| 109 | Moderate | 18.1\% | 18.3\% | 18.5\% | 18.7\% | 18.9\% | 19.1\% | 19.3\% | 19.5\% |
| 110 | Conservative | 18.0\% | 18.0\% | 18.0\% | 18.0\% | 18.0\% | 18.0\% | 18.0\% | 18.0\% |
| 111 | Advanced | 19.0\% | 19.3\% | 19.6\% | 20.0\% | 20.3\% | 20.7\% | 21.0\% | 21.3\% |
| 112 | Moderate | 18.8\% | 19.0\% | 19.2\% | 19.4\% | 19.6\% | 19.8\% | 20.0\% | 20.2\% |
| 113 | Conservative | 18.6\% | 18.6\% | 18.6\% | 18.6\% | 18.6\% | 18.6\% | 18.6\% | 18.6\% |
| 114 |  |  |  |  |  |  |  |  |  |
| 115 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 116 | Advanced | 1,068 | 1,087 | 1,106 | 1,125 | 1,144 | 1,163 | 1,182 | 1,201 |
| 117 | Moderate | 1,060 | 1,072 | 1,083 | 1,094 | 1,106 | 1,117 | 1,128 | 1,140 |
| 118 | Conservative | 1,049 | 1,049 | 1,049 | 1,049 | 1,049 | 1,049 | 1,049 | 1,049 |
| 119 | Advanced | 1,174 | 1,195 | 1,216 | 1,237 | 1,258 | 1,279 | 1,300 | 1,321 |
| 120 | Moderate | 1,166 | 1,178 | 1,190 | 1,203 | 1,215 | 1,228 | 1,240 | 1,253 |
| 121 | Conservative | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 |
| 122 | Advanced | 1,223 | 1,245 | 1,267 | 1,289 | 1,310 | 1,332 | 1,354 | 1,376 |
| 123 | Moderate | 1,214 | 1,227 | 1,240 | 1,253 | 1,266 | 1,279 | 1,292 | 1,305 |
| 124 | Conservative | 1,201 | 1,201 | 1,201 | 1,201 | 1,201 | 1,201 | 1,201 | 1,201 |
| 125 | Advanced | 1,288 | 1,311 | 1,334 | 1,357 | 1,380 | 1,403 | 1,426 | 1,449 |
| 126 | Moderate | 1,279 | 1,292 | 1,306 | 1,320 | 1,333 | 1,347 | 1,360 | 1,374 |
| 127 | Conservative | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 |
| 128 | Advanced | 1,352 | 1,376 | 1,400 | 1,424 | 1,448 | 1,472 | 1,496 | 1,520 |
| 129 | Moderate | 1,342 | 1,356 | 1,371 | 1,385 | 1,399 | 1,414 | 1,428 | 1,442 |
| 130 | Conservative | 1,328 | 1,328 | 1,328 | 1,328 | 1,328 | 1,328 | 1,328 | 1,328 |
| 131 | Advanced | 1,370 | 1,394 | 1,419 | 1,443 | 1,468 | 1,492 | 1,516 | 1,541 |
| 132 | Moderate | 1,360 | 1,374 | 1,389 | 1,404 | 1,418 | 1,433 | 1,447 | 1,462 |
| 133 | Conservative | 1,345 | 1,345 | 1,345 | 1,345 | 1,345 | 1,345 | 1,345 | 1,345 |
| 134 | Advanced | 1,435 | 1,461 | 1,487 | 1,512 | 1,538 | 1,564 | 1,589 | 1,615 |
| 135 | Moderate | 1,425 | 1,440 | 1,456 | 1,471 | 1,486 | 1,501 | 1,516 | 1,532 |
| 136 | Conservative | 1,410 | 1,410 | 1,410 | 1,410 | 1,410 | 1,410 | 1,410 | 1,410 |
| 137 | Advanced | 1,516 | 1,543 | 1,570 | 1,597 | 1,624 | 1,651 | 1,678 | 1,705 |
| 138 | Moderate | 1,505 | 1,521 | 1,537 | 1,553 | 1,569 | 1,585 | 1,601 | 1,617 |
| 139 | Conservative | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 |
| 140 | Advanced | 1,601 | 1,630 | 1,658 | 1,687 | 1,715 | 1,744 | 1,772 | 1,801 |


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| 141 | Moderate | 1,589 | 1,606 | 1,623 | 1,640 | 1,657 | 1,674 | 1,691 | 1,708 |
| 142 | Conservative | 1,572 | 1,572 | 1,572 | 1,572 | 1,572 | 1,572 | 1,572 | 1,572 |
| 143 | Advanced | 1,661 | 1,691 | 1,721 | 1,750 | 1,780 | 1,809 | 1,839 | 1,869 |
| 144 | Moderate | 1,649 | 1,667 | 1,684 | 1,702 | 1,720 | 1,737 | 1,755 | 1,773 |
| 145 | Conservative | 1,632 | 1,632 | 1,632 | 1,632 | 1,632 | 1,632 | 1,632 | 1,632 |
| 146 |  |  |  |  |  |  |  |  |  |
| 147 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 148 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |
| 149 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 150 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 151 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |
| 152 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 153 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 154 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |
| 155 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 156 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 157 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |
| 158 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 159 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 160 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |
| 161 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 162 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 163 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |
| 164 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 165 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 166 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |
| 167 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 168 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 169 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |
| 170 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 171 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 172 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |
| 173 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 174 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 175 | Advanced | \$1,784 | \$1,598 | \$1,499 | \$1,400 | \$1,302 | \$1,203 | \$1,104 | \$1,005 |


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| 176 | Moderate | \$1,784 | \$1,598 | \$1,523 | \$1,448 | \$1,373 | \$1,298 | \$1,223 | \$1,148 |
| 177 | Conservative | \$1,784 | \$1,598 | \$1,586 | \$1,574 | \$1,561 | \$1,549 | \$1,537 | \$1,525 |
| 178 |  |  |  |  |  |  |  |  |  |
| 179 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 180 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 181 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 182 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 183 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 184 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 185 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 186 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 187 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 188 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 189 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 190 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 191 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 192 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 193 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 194 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 195 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 196 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 197 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 198 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 199 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 200 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 201 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 202 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 203 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 204 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 205 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 206 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 207 | Advanced | \$1,741 | \$1,560 | \$1,464 | \$1,367 | \$1,271 | \$1,174 | \$1,078 | \$981 |
| 208 | Moderate | \$1,741 | \$1,560 | \$1,487 | \$1,414 | \$1,340 | \$1,267 | \$1,194 | \$1,121 |
| 209 | Conservative | \$1,741 | \$1,560 | \$1,548 | \$1,536 | \$1,524 | \$1,512 | \$1,501 | \$1,489 |
| 210 |  |  |  |  |  |  |  |  |  |


|  | L | M | N | 0 | P | Q | R | S | T |
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| 211 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 212 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 213 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 214 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 215 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 216 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 217 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 218 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 219 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 220 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 221 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 222 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 223 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 224 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 225 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 226 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 227 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 228 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 229 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 230 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 231 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 232 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 233 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 234 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 235 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 236 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 237 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 238 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 239 | Advanced | \$19 | \$18 | \$17 | \$16 | \$15 | \$14 | \$13 | \$12 |
| 240 | Moderate | \$19 | \$18 | \$17 | \$17 | \$16 | \$15 | \$14 | \$14 |
| 241 | Conservative | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 242 |  |  |  |  |  |  |  |  |  |
| 243 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 244 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 245 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 281 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 282 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 283 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 284 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 285 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 286 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 287 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 288 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 289 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 290 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 291 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 292 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 293 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 294 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 295 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 296 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 297 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 298 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 299 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 300 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 301 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 302 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 303 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 304 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 305 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 306 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 307 |  |  |  |  |  |  |  |  |  |
| 308 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 309 | Advanced | \$93 | \$83 | \$77 | \$71 | \$65 | \$59 | \$54 | \$48 |
| 310 | Moderate | \$94 | \$84 | \$80 | \$75 | \$71 | \$66 | \$62 | \$58 |
| 311 | Conservative | \$95 | \$86 | \$85 | \$85 | \$84 | \$84 | \$83 | \$82 |
| 312 | Advanced | \$85 | \$76 | \$70 | \$64 | \$59 | \$54 | \$49 | \$44 |
| 313 | Moderate | \$85 | \$77 | \$72 | \$68 | \$64 | \$60 | \$56 | \$52 |
| 314 | Conservative | \$86 | \$78 | \$78 | \$77 | \$77 | \$76 | \$75 | \$75 |
| 315 | Advanced | \$81 | \$73 | \$67 | \$62 | \$57 | \$52 | \$47 | \$42 |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 316 | Moderate | \$82 | \$74 | \$70 | \$66 | \$62 | \$58 | \$54 | \$50 |
| 317 | Conservative | \$83 | \$75 | \$75 | \$74 | \$74 | \$73 | \$72 | \$72 |
| 318 | Advanced | \$77 | \$69 | \$64 | \$59 | \$54 | \$49 | \$44 | \$40 |
| 319 | Moderate | \$78 | \$70 | \$66 | \$62 | \$59 | \$55 | \$51 | \$48 |
| 320 | Conservative | \$79 | \$71 | \$71 | \$70 | \$70 | \$69 | \$69 | \$68 |
| 321 | Advanced | \$74 | \$66 | \$61 | \$56 | \$51 | \$47 | \$42 | \$38 |
| 322 | Moderate | \$74 | \$67 | \$63 | \$59 | \$56 | \$52 | \$49 | \$46 |
| 323 | Conservative | \$75 | \$68 | \$68 | \$67 | \$67 | \$66 | \$66 | \$65 |
| 324 | Advanced | \$73 | \$65 | \$60 | \$55 | \$50 | \$46 | \$42 | \$38 |
| 325 | Moderate | \$73 | \$66 | \$62 | \$59 | \$55 | \$52 | \$48 | \$45 |
| 326 | Conservative | \$74 | \$67 | \$67 | \$66 | \$66 | \$65 | \$65 | \$64 |
| 327 | Advanced | \$69 | \$62 | \$57 | \$53 | \$48 | \$44 | \$40 | \$36 |
| 328 | Moderate | \$70 | \$63 | \$59 | \$56 | \$52 | \$49 | \$46 | \$43 |
| 329 | Conservative | \$71 | \$64 | \$64 | \$63 | \$63 | \$62 | \$62 | \$61 |
| 330 | Advanced | \$66 | \$59 | \$54 | \$50 | \$46 | \$42 | \$38 | \$34 |
| 331 | Moderate | \$66 | \$59 | \$56 | \$53 | \$50 | \$47 | \$44 | \$41 |
| 332 | Conservative | \$67 | \$61 | \$60 | \$60 | \$59 | \$59 | \$58 | \$58 |
| 333 | Advanced | \$62 | \$55 | \$51 | \$47 | \$43 | \$39 | \$36 | \$32 |
| 334 | Moderate | \$63 | \$56 | \$53 | \$50 | \$47 | \$44 | \$41 | \$38 |
| 335 | Conservative | \$63 | \$57 | \$57 | \$57 | \$56 | \$56 | \$55 | \$55 |
| 336 | Advanced | \$60 | \$53 | \$49 | \$45 | \$42 | \$38 | \$34 | \$31 |
| 337 | Moderate | \$60 | \$54 | \$51 | \$48 | \$45 | \$43 | \$40 | \$37 |
| 338 | Conservative | \$61 | \$55 | \$55 | \$55 | \$54 | \$54 | \$53 | \$53 |
| 339 |  |  |  |  |  |  |  |  |  |
| 340 |  |  |  |  |  |  |  |  |  |
| 341 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 342 | Advanced | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 343 | Moderate | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 344 | Conservative | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 345 | * | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 346 | Advanced | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 347 | Moderate | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 348 | Conservative | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 349 | Advanced | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 350 | Moderate | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 351 | Conservative | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 352 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 353 |  | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 354 |  | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 355 |  | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 356 |  | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 357 |  | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 358 |  | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 359 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 360 |  | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 361 |  | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 362 |  | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 363 |  | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 364 |  | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 365 |  | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 366 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 367 |  | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 368 |  | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 369 |  | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 370 |  | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 371 |  | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 372 |  | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 373 |  |  |  |  |  |  |  |  |  |
| 374 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 375 | Advanced | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 |
| 376 | Moderate | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 |
| 377 | Conservative | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 |
| 378 |  |  |  |  |  |  |  |  |  |
| 379 | * | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 380 | * | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 381 | * | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 382 | Advanced | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 383 | Advanced | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 384 | Advanced | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 385 | Moderate | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |


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| 386 | Moderate | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 387 | Moderate | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 388 | Conservative | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 389 | Conservative | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 390 | Conservative | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 391 |  |  |  |  |  |  |  |  |  |
| 392 |  |  |  |  |  |  |  |  |  |
| 393 |  |  |  |  |  |  |  |  |  |
| 394 | Data Sources for Default Inputs |  |  |  |  |  |  |  |  |
| 395 |  |  |  |  |  |  |  |  |  |
| 396 |  |  |  |  |  |  |  |  |  |
| 397 |  |  |  |  |  |  |  |  |  |
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|  | U | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |
| 2 | Inputs |  |  |  |  |  |  |  |  |
| 3 | Calculated |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |
| 5 | Input from other tab |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |
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|  | U |  | V | W | X | Y | Z | AA | AB | AC |
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| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
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| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  |  |  |  |
| 42 |  |  |  |  |  |  |  |  |  |  |
| 43 |  |  |  |  |  |  |  |  |  |  |
| 44 |  |  |  |  |  |  |  |  |  |  |
| 45 |  |  |  |  |  |  |  |  |  |  |
| 46 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 47 |  | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 48 |  | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 49 |  | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 |  | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 51 |  | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 52 |  | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 53 |  | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 54 |  | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 55 |  | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 56 |  | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 57 |  | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 58 |  | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 59 |  | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 60 |  | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 61 |  | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 62 |  | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 63 |  | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 64 |  | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 65 |  | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 66 |  | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 67 |  | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 68 |  | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 69 |  | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 70 |  | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |


|  | U |  | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 |  | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 72 |  | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 73 |  | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 74 |  | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 75 |  | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 76 |  | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 77 |  |  |  |  |  |  |  |  |  |  |
| 78 |  |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |  |
| 81 |  |  |  |  |  |  |  |  |  |  |
| 82 |  |  |  |  |  |  |  |  |  |  |
| 83 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 84 |  | 13.9\% | 14.1\% | 14.4\% | 14.4\% | 14.4\% | 14.5\% | 14.5\% | 14.5\% | 14.6\% |
| 85 |  | 13.1\% | 13.3\% | 13.4\% | 13.4\% | 13.5\% | 13.5\% | 13.6\% | 13.6\% | 13.7\% |
| 86 |  | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.1\% | 12.2\% | 12.3\% | 12.3\% | 12.4\% |
| 87 |  | 15.3\% | 15.6\% | 15.8\% | 15.8\% | 15.9\% | 15.9\% | 15.9\% | 16.0\% | 16.0\% |
| 88 |  | 14.4\% | 14.6\% | 14.7\% | 14.8\% | 14.8\% | 14.9\% | 14.9\% | 15.0\% | 15.0\% |
| 89 |  | 13.2\% | 13.2\% | 13.2\% | 13.2\% | 13.3\% | 13.4\% | 13.5\% | 13.6\% | 13.6\% |
| 90 |  | 16.0\% | 16.2\% | 16.5\% | 16.5\% | 16.5\% | 16.6\% | 16.6\% | 16.6\% | 16.7\% |
| 91 |  | 15.0\% | 15.2\% | 15.3\% | 15.4\% | 15.5\% | 15.5\% | 15.6\% | 15.6\% | 15.7\% |
| 92 |  | 13.7\% | 13.7\% | 13.7\% | 13.8\% | 13.9\% | 14.0\% | 14.0\% | 14.1\% | 14.2\% |
| 93 |  | 16.8\% | 17.1\% | 17.3\% | 17.4\% | 17.4\% | 17.4\% | 17.5\% | 17.5\% | 17.6\% |
| 94 |  | 15.8\% | 16.0\% | 16.2\% | 16.2\% | 16.3\% | 16.3\% | 16.4\% | 16.4\% | 16.5\% |
| 95 |  | 14.4\% | 14.4\% | 14.4\% | 14.5\% | 14.6\% | 14.7\% | 14.8\% | 14.9\% | 15.0\% |
| 96 |  | 17.6\% | 17.9\% | 18.2\% | 18.2\% | 18.3\% | 18.3\% | 18.3\% | 18.4\% | 18.4\% |
| 97 |  | 16.6\% | 16.8\% | 17.0\% | 17.0\% | 17.1\% | 17.1\% | 17.2\% | 17.3\% | 17.3\% |
| 98 |  | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.3\% | 15.4\% | 15.5\% | 15.6\% | 15.7\% |
| 99 |  | 17.9\% | 18.1\% | 18.4\% | 18.5\% | 18.5\% | 18.5\% | 18.6\% | 18.6\% | 18.7\% |
| 100 |  | 16.9\% | 17.0\% | 17.2\% | 17.2\% | 17.3\% | 17.4\% | 17.4\% | 17.5\% | 17.6\% |
| 101 |  | 15.4\% | 15.4\% | 15.4\% | 15.4\% | 15.5\% | 15.6\% | 15.7\% | 15.8\% | 15.9\% |
| 102 |  | 18.7\% | 19.0\% | 19.3\% | 19.4\% | 19.4\% | 19.4\% | 19.5\% | 19.5\% | 19.6\% |
| 103 |  | 17.7\% | 17.8\% | 18.0\% | 18.1\% | 18.1\% | 18.2\% | 18.3\% | 18.3\% | 18.4\% |
| 104 |  | 16.1\% | 16.1\% | 16.1\% | 16.2\% | 16.3\% | 16.4\% | 16.5\% | 16.6\% | 16.7\% |
| 105 |  | 19.8\% | 20.1\% | 20.4\% | 20.4\% | 20.5\% | 20.5\% | 20.6\% | 20.6\% | 20.7\% |


|  | U |  | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 106 |  | 18.6\% | 18.8\% | 19.0\% | 19.1\% | 19.1\% | 19.2\% | 19.3\% | 19.4\% | 19.4\% |
| 107 |  | 17.0\% | 17.0\% | 17.0\% | 17.1\% | 17.2\% | 17.3\% | 17.4\% | 17.5\% | 17.6\% |
| 108 |  | 20.9\% | 21.2\% | 21.5\% | 21.6\% | 21.6\% | 21.7\% | 21.7\% | 21.8\% | 21.8\% |
| 109 |  | 19.7\% | 19.9\% | 20.1\% | 20.2\% | 20.2\% | 20.3\% | 20.4\% | 20.4\% | 20.5\% |
| 110 |  | 18.0\% | 18.0\% | 18.0\% | 18.1\% | 18.2\% | 18.3\% | 18.4\% | 18.5\% | 18.6\% |
| 111 |  | 21.7\% | 22.0\% | 22.3\% | 22.4\% | 22.4\% | 22.5\% | 22.5\% | 22.6\% | 22.6\% |
| 112 |  | 20.4\% | 20.6\% | 20.8\% | 20.9\% | 21.0\% | 21.1\% | 21.1\% | 21.2\% | 21.3\% |
| 113 |  | 18.6\% | 18.6\% | 18.6\% | 18.7\% | 18.8\% | 19.0\% | 19.1\% | 19.2\% | 19.3\% |
| 114 |  |  |  |  |  |  |  |  |  |  |
| 115 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 116 |  | 1,220 | 1,239 | 1,259 | 1,261 | 1,264 | 1,267 | 1,269 | 1,272 | 1,275 |
| 117 |  | 1,151 | 1,162 | 1,174 | 1,178 | 1,182 | 1,186 | 1,191 | 1,195 | 1,199 |
| 118 |  | 1,049 | 1,049 | 1,049 | 1,055 | 1,061 | 1,068 | 1,074 | 1,080 | 1,086 |
| 119 |  | 1,342 | 1,363 | 1,384 | 1,387 | 1,390 | 1,393 | 1,396 | 1,399 | 1,402 |
| 120 |  | 1,265 | 1,278 | 1,290 | 1,295 | 1,299 | 1,304 | 1,309 | 1,313 | 1,318 |
| 121 |  | 1,153 | 1,153 | 1,153 | 1,160 | 1,167 | 1,174 | 1,181 | 1,187 | 1,194 |
| 122 |  | 1,398 | 1,420 | 1,441 | 1,444 | 1,448 | 1,451 | 1,454 | 1,457 | 1,460 |
| 123 |  | 1,318 | 1,331 | 1,344 | 1,349 | 1,354 | 1,359 | 1,363 | 1,368 | 1,373 |
| 124 |  | 1,201 | 1,201 | 1,201 | 1,208 | 1,216 | 1,223 | 1,230 | 1,237 | 1,244 |
| 125 |  | 1,472 | 1,495 | 1,518 | 1,521 | 1,524 | 1,528 | 1,531 | 1,534 | 1,537 |
| 126 |  | 1,388 | 1,401 | 1,415 | 1,420 | 1,425 | 1,430 | 1,436 | 1,441 | 1,446 |
| 127 |  | 1,265 | 1,265 | 1,265 | 1,272 | 1,280 | 1,287 | 1,295 | 1,302 | 1,310 |
| 128 |  | 1,545 | 1,569 | 1,593 | 1,596 | 1,600 | 1,603 | 1,607 | 1,610 | 1,614 |
| 129 |  | 1,457 | 1,471 | 1,485 | 1,491 | 1,496 | 1,501 | 1,507 | 1,512 | 1,517 |
| 130 |  | 1,328 | 1,328 | 1,328 | 1,335 | 1,343 | 1,351 | 1,359 | 1,367 | 1,375 |
| 131 |  | 1,565 | 1,590 | 1,614 | 1,618 | 1,621 | 1,625 | 1,628 | 1,632 | 1,635 |
| 132 |  | 1,476 | 1,491 | 1,505 | 1,511 | 1,516 | 1,522 | 1,527 | 1,532 | 1,538 |
| 133 |  | 1,345 | 1,345 | 1,345 | 1,353 | 1,361 | 1,369 | 1,377 | 1,385 | 1,393 |
| 134 |  | 1,640 | 1,666 | 1,692 | 1,695 | 1,699 | 1,703 | 1,706 | 1,710 | 1,714 |
| 135 |  | 1,547 | 1,562 | 1,577 | 1,583 | 1,589 | 1,594 | 1,600 | 1,606 | 1,612 |
| 136 |  | 1,410 | 1,410 | 1,410 | 1,418 | 1,427 | 1,435 | 1,443 | 1,452 | 1,460 |
| 137 |  | 1,732 | 1,759 | 1,786 | 1,790 | 1,794 | 1,798 | 1,801 | 1,805 | 1,809 |
| 138 |  | 1,633 | 1,649 | 1,665 | 1,671 | 1,677 | 1,683 | 1,689 | 1,695 | 1,701 |
| 139 |  | 1,489 | 1,489 | 1,489 | 1,497 | 1,506 | 1,515 | 1,524 | 1,533 | 1,542 |
| 140 |  | 1,830 | 1,858 | 1,887 | 1,891 | 1,895 | 1,899 | 1,903 | 1,907 | 1,911 |


|  | U | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 141 | 1,725 | 1,742 | 1,759 | 1,766 | 1,772 | 1,778 | 1,785 | 1,791 | 1,797 |
| 142 | 1,572 | 1,572 | 1,572 | 1,582 | 1,591 | 1,600 | 1,610 | 1,619 | 1,628 |
| 143 | 1,898 | 1,928 | 1,958 | 1,962 | 1,966 | 1,970 | 1,975 | 1,979 | 1,983 |
| 144 | 1,790 | 1,808 | 1,825 | 1,832 | 1,839 | 1,845 | 1,852 | 1,858 | 1,865 |
| 145 | 1,632 | 1,632 | 1,632 | 1,641 | 1,651 | 1,661 | 1,670 | 1,680 | 1,690 |
| 146 |  |  |  |  |  |  |  |  |  |
| 147 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 148 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |
| 149 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 150 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 151 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |
| 152 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 153 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 154 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |
| 155 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 156 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 157 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |
| 158 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 159 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 160 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |
| 161 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 162 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 163 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |
| 164 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 165 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 166 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |
| 167 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 168 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 169 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |
| 170 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 171 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 172 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |
| 173 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 174 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 175 | \$907 | \$808 | \$709 | \$700 | \$691 | \$682 | \$672 | \$663 | \$654 |


|  | U | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 176 | \$1,073 | \$998 | \$923 | \$913 | \$902 | \$891 | \$881 | \$870 | \$859 |
| 177 | \$1,513 | \$1,501 | \$1,488 | \$1,460 | \$1,432 | \$1,404 | \$1,375 | \$1,347 | \$1,319 |
| 178 |  |  |  |  |  |  |  |  |  |
| 179 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 180 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 181 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 182 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 183 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 184 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 185 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 186 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 187 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 188 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 189 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 190 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 191 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 192 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 193 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 194 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 195 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 196 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 197 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 198 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 199 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 200 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 201 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 202 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 203 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 204 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 205 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 206 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 207 | \$885 | \$788 | \$692 | \$683 | \$674 | \$665 | \$656 | \$647 | \$639 |
| 208 | \$1,048 | \$975 | \$901 | \$891 | \$881 | \$870 | \$860 | \$849 | \$839 |
| 209 | \$1,477 | \$1,465 | \$1,453 | \$1,425 | \$1,398 | \$1,370 | \$1,343 | \$1,315 | \$1,287 |
| 210 |  |  |  |  |  |  |  |  |  |


|  | U |  | V |  | W |  | X |  | Y |  | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 211 | 2028 |  | 2029 |  | 2030 |  | 2031 |  | 2032 |  | 2033 | 2034 | 2035 | 2036 |
| 212 |  | \$11 | \$11 |  | \$10 |  | \$10 |  | \$9 |  | \$9 | \$9 | \$9 | \$9 |
| 213 | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 |  | \$11 | \$11 | \$11 | \$11 |
| 214 | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 |  | \$16 | \$16 | \$16 | \$15 |
| 215 | \$11 |  | \$11 |  | \$10 |  | \$10 |  | \$9 |  | \$9 | \$9 | \$9 | \$9 |
| 216 | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 |  | \$11 | \$11 | \$11 | \$11 |
| 217 | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 |  | \$16 | \$16 | \$16 | \$15 |
| 218 | \$11 |  | \$11 |  | \$10 |  | \$10 |  | \$9 |  | \$9 | \$9 | \$9 | \$9 |
| 219 | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 |  | \$11 | \$11 | \$11 | \$11 |
| 220 | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 |  | \$16 | \$16 | \$16 | \$15 |
| 221 | \$11 |  | \$11 |  | \$10 |  | \$10 |  | \$9 |  | \$9 | \$9 | \$9 | \$9 |
| 222 | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 |  | \$11 | \$11 | \$11 | \$11 |
| 223 | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 |  | \$16 | \$16 | \$16 | \$15 |
| 224 | \$11 |  | \$11 |  | \$10 |  | \$10 |  | \$9 |  | \$9 | \$9 | \$9 | \$9 |
| 225 | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 |  | \$11 | \$11 | \$11 | \$11 |
| 226 | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 |  | \$16 | \$16 | \$16 | \$15 |
| 227 | \$11 |  | \$11 |  | \$10 |  | \$10 |  | \$9 |  | \$9 | \$9 | \$9 | \$9 |
| 228 | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 |  | \$11 | \$11 | \$11 | \$11 |
| 229 | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 |  | \$16 | \$16 | \$16 | \$15 |
| 230 | \$11 |  | \$11 |  | \$10 |  |  | \$10 |  | \$9 | \$9 | \$9 | \$9 | \$9 |
| 231 |  | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 | \$11 | \$11 | \$11 | \$11 |
| 232 |  | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 | \$16 | \$16 | \$16 | \$15 |
| 233 |  | \$11 |  | \$11 |  | \$10 |  | \$10 |  | \$9 | \$9 | \$9 | \$9 | \$9 |
| 234 |  | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 | \$11 | \$11 | \$11 | \$11 |
| 235 |  | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 | \$16 | \$16 | \$16 | \$15 |
| 236 |  | \$11 |  | \$11 |  | \$10 |  | \$10 |  | \$9 | \$9 | \$9 | \$9 | \$9 |
| 237 |  | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 | \$11 | \$11 | \$11 | \$11 |
| 238 |  | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 | \$16 | \$16 | \$16 | \$15 |
| 239 |  | \$11 |  | \$11 |  | \$10 |  | \$10 |  | \$9 | \$9 | \$9 | \$9 | \$9 |
| 240 |  | \$13 |  | \$12 |  | \$12 |  | \$12 |  | \$11 | \$11 | \$11 | \$11 | \$11 |
| 241 |  | \$17 |  | \$17 |  | \$17 |  | \$17 |  | \$16 | \$16 | \$16 | \$16 | \$15 |
| 242 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 243 | 2028 |  | 2029 |  | 2030 |  | 2031 |  | 2032 |  | 2033 | 2034 | 2035 | 2036 |
| 244 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 | \$0 | \$0 | \$0 |
| 245 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | U |  | V |  | W |  | X |  | Y |  | Z |  | AA |  | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 281 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |
| 282 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 283 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 284 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 285 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 286 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 287 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 288 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 289 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 290 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 291 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 292 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 293 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 294 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 295 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 296 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 297 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 298 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |
| 299 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0$\$ 0$$\$ 0$ |
| 300 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |  |
| 301 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 | \$0 |
| 302 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 | \$0 |
| 303 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 | \$0 |
| 304 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 | \$0 |
| 305 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 | \$0 |
| 306 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 | \$0 |
| 307 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 308 | 2028 |  | 202 |  | 2030 |  | 203 |  | 2032 |  | 203 |  | 2034 |  | 2035 | 2036 |
| 309 |  | \$43 |  | \$38 |  | \$33 |  | \$33 |  | \$32 |  | \$32 |  | \$31 | \$31 | \$30 |
| 310 |  | \$54 |  | \$50 |  | \$46 |  | \$45 |  | \$44 |  | \$44 |  | \$43 | \$42 | \$42 |
| 311 |  | \$82 |  | \$81 |  | \$80 |  | \$78 |  | \$77 |  | \$75 |  | \$73 | \$71 | \$69 |
| 312 |  | \$39 |  | \$35 |  | \$30 |  | \$30 |  | \$29 |  | \$29 |  | \$28 | \$28 | \$28 |
| 313 |  | \$49 |  | \$45 |  | \$41 |  | \$41 |  | \$40 |  | \$40 |  | \$39 | \$38 | \$38 |
| 314 |  | \$74 |  | \$74 |  | \$73 |  | \$71 |  | \$70 |  | \$68 |  | \$66 | \$65 | \$63 |
| 315 |  | \$38 |  | \$33 |  | \$29 |  | \$29 |  | \$28 |  | \$28 |  | \$27 | \$27 | \$27 |


|  | U |  | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 316 |  | \$47 | \$43 | \$40 | \$39 | \$39 | \$38 | \$37 | \$37 | \$36 |
| 317 |  | \$71 | \$71 | \$70 | \$68 | \$67 | \$65 | \$64 | \$62 | \$60 |
| 318 |  | \$36 | \$32 | \$27 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 |
| 319 |  | \$44 | \$41 | \$38 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 |
| 320 |  | \$68 | \$67 | \$67 | \$65 | \$63 | \$62 | \$60 | \$59 | \$57 |
| 321 |  | \$34 | \$30 | \$26 | \$26 | \$25 | \$25 | \$25 | \$24 | \$24 |
| 322 |  | \$42 | \$39 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 |
| 323 |  | \$65 | \$64 | \$64 | \$62 | \$60 | \$59 | \$57 | \$56 | \$55 |
| 324 |  | \$34 | \$30 | \$26 | \$25 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 325 |  | \$42 | \$39 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 |
| 326 |  | \$64 | \$63 | \$63 | \$61 | \$60 | \$58 | \$57 | \$55 | \$54 |
| 327 |  | \$32 | \$28 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 |
| 328 |  | \$40 | \$37 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 329 |  | \$61 | \$60 | \$60 | \$58 | \$57 | \$56 | \$54 | \$53 | \$51 |
| 330 |  | \$30 | \$27 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 331 |  | \$38 | \$35 | \$32 | \$32 | \$31 | \$31 | \$30 | \$30 | \$29 |
| 332 |  | \$58 | \$57 | \$57 | \$55 | \$54 | \$53 | \$51 | \$50 | \$49 |
| 333 |  | \$29 | \$25 | \$22 | \$22 | \$21 | \$21 | \$21 | \$21 | \$20 |
| 334 |  | \$36 | \$33 | \$30 | \$30 | \$29 | \$29 | \$29 | \$28 | \$28 |
| 335 |  | \$54 | \$54 | \$54 | \$52 | \$51 | \$50 | \$49 | \$47 | \$46 |
| 336 |  | \$28 | \$24 | \$21 | \$21 | \$21 | \$20 | \$20 | \$20 | \$20 |
| 337 |  | \$34 | \$32 | \$29 | \$29 | \$28 | \$28 | \$28 | \$27 | \$27 |
| 338 |  | \$52 | \$52 | \$52 | \$50 | \$49 | \$48 | \$47 | \$46 | \$44 |
| 339 |  |  |  |  |  |  |  |  |  |  |
| 340 |  |  |  |  |  |  |  |  |  |  |
| 341 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 342 | 11.61\% |  | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 343 | 11.61\% |  | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 344 | 11.61\% |  | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 345 | 0.00\% |  | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 346 | 0.889 |  | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 347 | 0.889 |  | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 348 | 0.889 |  | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 349 | 1.039 |  | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 350 | 1.039 |  | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |


|  | U |  | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 351 | 1.039 |  | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 352 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 353 | 0.9581 |  | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 354 | 0.9179 |  | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 355 | 0.8794 |  | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 356 | 0.8426 |  | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 357 | 0.8073 |  | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 358 | 0.7734 |  | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 359 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 360 | 0.9581 |  | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 361 | 0.9179 |  | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 362 | 0.8794 |  | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 363 | 0.8426 |  | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 364 | 0.8073 |  | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 365 | 0.7734 |  | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 366 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 367 | 0.9581 |  | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 368 | 0.9179 |  | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 369 | 0.8794 |  | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 370 | 0.8426 |  | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 371 | 0.8073 |  | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 372 | 0.7734 |  | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 373 |  |  |  |  |  |  |  |  |  |  |
| 374 | 2028 |  | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 375 |  | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 |
| 376 |  | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 |
| 377 |  | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 |
| 378 |  |  |  |  |  |  |  |  |  |  |
| 379 |  | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 380 |  | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 381 |  | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 382 |  | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 383 |  | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 384 |  | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 385 |  | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |



|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |  |
| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |  |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  |  |  |  |
| 42 |  |  |  |  |  |  |  |  |  |  |
| 43 |  |  |  |  |  |  |  |  |  |  |
| 44 |  |  |  |  |  |  |  |  |  |  |
| 45 |  |  |  |  |  |  |  |  |  |  |
| 46 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 47 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 48 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 49 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 51 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 52 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 53 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 54 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 55 | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 56 | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 57 | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 58 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 59 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 60 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 61 | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 62 | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 63 | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 64 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 65 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 66 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 67 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 68 | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 69 | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 70 | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 72 | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 73 | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 74 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 75 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 76 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 77 |  |  |  |  |  |  |  |  |  |  |
| 78 |  |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |  |
| 81 |  |  |  |  |  |  |  |  |  |  |
| 82 |  |  |  |  |  |  |  |  |  |  |
| 83 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 84 | 14.6\% | 14.6\% | 14.6\% | 14.7\% | 14.7\% | 14.7\% | 14.8\% | 14.8\% | 14.8\% | 14.9\% |
| 85 | 13.7\% | 13.8\% | 13.8\% | 13.9\% | 13.9\% | 14.0\% | 14.0\% | 14.1\% | 14.1\% | 14.2\% |
| 86 | 12.5\% | 12.5\% | 12.6\% | 12.7\% | 12.8\% | 12.8\% | 12.9\% | 13.0\% | 13.0\% | 13.1\% |
| 87 | 16.0\% | 16.1\% | 16.1\% | 16.1\% | 16.2\% | 16.2\% | 16.2\% | 16.3\% | 16.3\% | 16.3\% |
| 88 | 15.1\% | 15.2\% | 15.2\% | 15.3\% | 15.3\% | 15.4\% | 15.4\% | 15.5\% | 15.5\% | 15.6\% |
| 89 | 13.7\% | 13.8\% | 13.9\% | 13.9\% | 14.0\% | 14.1\% | 14.2\% | 14.3\% | 14.3\% | 14.4\% |
| 90 | 16.7\% | 16.7\% | 16.8\% | 16.8\% | 16.8\% | 16.9\% | 16.9\% | 17.0\% | 17.0\% | 17.0\% |
| 91 | 15.7\% | 15.8\% | 15.8\% | 15.9\% | 16.0\% | 16.0\% | 16.1\% | 16.1\% | 16.2\% | 16.2\% |
| 92 | 14.3\% | 14.4\% | 14.4\% | 14.5\% | 14.6\% | 14.7\% | 14.8\% | 14.9\% | 14.9\% | 15.0\% |
| 93 | 17.6\% | 17.6\% | 17.7\% | 17.7\% | 17.7\% | 17.8\% | 17.8\% | 17.9\% | 17.9\% | 17.9\% |
| 94 | 16.6\% | 16.6\% | 16.7\% | 16.7\% | 16.8\% | 16.9\% | 16.9\% | 17.0\% | 17.0\% | 17.1\% |
| 95 | 15.0\% | 15.1\% | 15.2\% | 15.3\% | 15.4\% | 15.5\% | 15.6\% | 15.6\% | 15.7\% | 15.8\% |
| 96 | 18.5\% | 18.5\% | 18.5\% | 18.6\% | 18.6\% | 18.7\% | 18.7\% | 18.7\% | 18.8\% | 18.8\% |
| 97 | 17.4\% | 17.4\% | 17.5\% | 17.6\% | 17.6\% | 17.7\% | 17.8\% | 17.8\% | 17.9\% | 17.9\% |
| 98 | 15.8\% | 15.9\% | 16.0\% | 16.1\% | 16.1\% | 16.2\% | 16.3\% | 16.4\% | 16.5\% | 16.6\% |
| 99 | 18.7\% | 18.7\% | 18.8\% | 18.8\% | 18.9\% | 18.9\% | 18.9\% | 19.0\% | 19.0\% | 19.1\% |
| 100 | 17.6\% | 17.7\% | 17.7\% | 17.8\% | 17.9\% | 17.9\% | 18.0\% | 18.1\% | 18.1\% | 18.2\% |
| 101 | 16.0\% | 16.1\% | 16.2\% | 16.3\% | 16.4\% | 16.5\% | 16.5\% | 16.6\% | 16.7\% | 16.8\% |
| 102 | 19.6\% | 19.6\% | 19.7\% | 19.7\% | 19.8\% | 19.8\% | 19.9\% | 19.9\% | 19.9\% | 20.0\% |
| 103 | 18.5\% | 18.5\% | 18.6\% | 18.7\% | 18.7\% | 18.8\% | 18.9\% | 18.9\% | 19.0\% | 19.0\% |
| 104 | 16.8\% | 16.9\% | 17.0\% | 17.0\% | 17.1\% | 17.2\% | 17.3\% | 17.4\% | 17.5\% | 17.6\% |
| 105 | 20.7\% | 20.7\% | 20.8\% | 20.8\% | 20.9\% | 20.9\% | 21.0\% | 21.0\% | 21.1\% | 21.1\% |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 106 | 19.5\% | 19.6\% | 19.6\% | 19.7\% | 19.8\% | 19.8\% | 19.9\% | 20.0\% | 20.0\% | 20.1\% |
| 107 | 17.7\% | 17.8\% | 17.9\% | 18.0\% | 18.1\% | 18.2\% | 18.3\% | 18.4\% | 18.5\% | 18.6\% |
| 108 | 21.9\% | 21.9\% | 22.0\% | 22.0\% | 22.1\% | 22.1\% | 22.1\% | 22.2\% | 22.2\% | 22.3\% |
| 109 | 20.6\% | 20.7\% | 20.7\% | 20.8\% | 20.9\% | 21.0\% | 21.0\% | 21.1\% | 21.2\% | 21.2\% |
| 110 | 18.7\% | 18.8\% | 18.9\% | 19.0\% | 19.1\% | 19.2\% | 19.3\% | 19.4\% | 19.5\% | 19.7\% |
| 111 | 22.7\% | 22.7\% | 22.8\% | 22.8\% | 22.9\% | 22.9\% | 23.0\% | 23.0\% | 23.1\% | 23.1\% |
| 112 | 21.4\% | 21.4\% | 21.5\% | 21.6\% | 21.7\% | 21.7\% | 21.8\% | 21.9\% | 22.0\% | 22.0\% |
| 113 | 19.4\% | 19.5\% | 19.6\% | 19.7\% | 19.8\% | 20.0\% | 20.1\% | 20.2\% | 20.3\% | 20.4\% |
| 114 |  |  |  |  |  |  |  |  |  |  |
| 115 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 116 | 1,278 | 1,280 | 1,283 | 1,286 | 1,289 | 1,291 | 1,294 | 1,297 | 1,300 | 1,302 |
| 117 | 1,203 | 1,208 | 1,212 | 1,216 | 1,220 | 1,225 | 1,229 | 1,233 | 1,237 | 1,242 |
| 118 | 1,093 | 1,099 | 1,105 | 1,111 | 1,117 | 1,124 | 1,130 | 1,136 | 1,142 | 1,149 |
| 119 | 1,405 | 1,408 | 1,411 | 1,414 | 1,417 | 1,420 | 1,423 | 1,426 | 1,429 | 1,432 |
| 120 | 1,323 | 1,327 | 1,332 | 1,337 | 1,341 | 1,346 | 1,351 | 1,355 | 1,360 | 1,365 |
| 121 | 1,201 | 1,208 | 1,215 | 1,222 | 1,228 | 1,235 | 1,242 | 1,249 | 1,256 | 1,263 |
| 122 | 1,463 | 1,466 | 1,470 | 1,473 | 1,476 | 1,479 | 1,482 | 1,485 | 1,488 | 1,491 |
| 123 | 1,378 | 1,383 | 1,388 | 1,393 | 1,398 | 1,402 | 1,407 | 1,412 | 1,417 | 1,422 |
| 124 | 1,251 | 1,258 | 1,266 | 1,273 | 1,280 | 1,287 | 1,294 | 1,301 | 1,308 | 1,315 |
| 125 | 1,541 | 1,544 | 1,547 | 1,551 | 1,554 | 1,557 | 1,561 | 1,564 | 1,567 | 1,570 |
| 126 | 1,451 | 1,456 | 1,461 | 1,466 | 1,471 | 1,477 | 1,482 | 1,487 | 1,492 | 1,497 |
| 127 | 1,317 | 1,325 | 1,333 | 1,340 | 1,348 | 1,355 | 1,363 | 1,370 | 1,378 | 1,385 |
| 128 | 1,617 | 1,621 | 1,624 | 1,627 | 1,631 | 1,634 | 1,638 | 1,641 | 1,645 | 1,648 |
| 129 | 1,523 | 1,528 | 1,534 | 1,539 | 1,544 | 1,550 | 1,555 | 1,561 | 1,566 | 1,571 |
| 130 | 1,383 | 1,391 | 1,399 | 1,406 | 1,414 | 1,422 | 1,430 | 1,438 | 1,446 | 1,454 |
| 131 | 1,639 | 1,642 | 1,646 | 1,649 | 1,653 | 1,656 | 1,660 | 1,663 | 1,667 | 1,670 |
| 132 | 1,543 | 1,549 | 1,554 | 1,560 | 1,565 | 1,571 | 1,576 | 1,581 | 1,587 | 1,592 |
| 133 | 1,401 | 1,409 | 1,417 | 1,425 | 1,433 | 1,441 | 1,449 | 1,457 | 1,465 | 1,473 |
| 134 | 1,717 | 1,721 | 1,725 | 1,728 | 1,732 | 1,736 | 1,739 | 1,743 | 1,747 | 1,750 |
| 135 | 1,617 | 1,623 | 1,629 | 1,634 | 1,640 | 1,646 | 1,652 | 1,657 | 1,663 | 1,669 |
| 136 | 1,468 | 1,477 | 1,485 | 1,494 | 1,502 | 1,510 | 1,519 | 1,527 | 1,535 | 1,544 |
| 137 | 1,813 | 1,817 | 1,821 | 1,825 | 1,829 | 1,833 | 1,836 | 1,840 | 1,844 | 1,848 |
| 138 | 1,707 | 1,714 | 1,720 | 1,726 | 1,732 | 1,738 | 1,744 | 1,750 | 1,756 | 1,762 |
| 139 | 1,550 | 1,559 | 1,568 | 1,577 | 1,586 | 1,595 | 1,603 | 1,612 | 1,621 | 1,630 |
| 140 | 1,915 | 1,919 | 1,924 | 1,928 | 1,932 | 1,936 | 1,940 | 1,944 | 1,948 | 1,952 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 141 | 1,804 | 1,810 | 1,817 | 1,823 | 1,829 | 1,836 | 1,842 | 1,848 | 1,855 | 1,861 |
| 142 | 1,638 | 1,647 | 1,656 | 1,666 | 1,675 | 1,684 | 1,694 | 1,703 | 1,713 | 1,722 |
| 143 | 1,987 | 1,992 | 1,996 | 2,000 | 2,004 | 2,009 | 2,013 | 2,017 | 2,021 | 2,026 |
| 144 | 1,872 | 1,878 | 1,885 | 1,891 | 1,898 | 1,905 | 1,911 | 1,918 | 1,925 | 1,931 |
| 145 | 1,699 | 1,709 | 1,719 | 1,729 | 1,738 | 1,748 | 1,758 | 1,767 | 1,777 | 1,787 |
| 146 |  |  |  |  |  |  |  |  |  |  |
| 147 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 148 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |
| 149 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 150 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 151 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |
| 152 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 153 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 154 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |
| 155 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 156 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 157 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |
| 158 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 159 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 160 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |
| 161 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 162 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 163 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |
| 164 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 165 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 166 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |
| 167 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 168 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 169 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |
| 170 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 171 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 172 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |
| 173 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 174 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 175 | \$645 | \$636 | \$627 | \$618 | \$608 | \$599 | \$590 | \$581 | \$572 | \$563 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 176 | \$848 | \$838 | \$827 | \$816 | \$805 | \$795 | \$784 | \$773 | \$763 | \$752 |
| 177 | \$1,291 | \$1,262 | \$1,234 | \$1,206 | \$1,178 | \$1,149 | \$1,121 | \$1,093 | \$1,065 | \$1,036 |
| 178 |  |  |  |  |  |  |  |  |  |  |
| 179 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 180 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 181 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 182 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 183 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 184 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 185 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 186 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 187 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 188 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 189 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 190 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 191 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 192 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 193 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 194 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 195 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 196 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 197 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 198 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 199 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 200 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 201 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 202 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 203 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 204 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 205 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 206 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 207 | \$630 | \$621 | \$612 | \$603 | \$594 | \$585 | \$576 | \$567 | \$558 | \$549 |
| 208 | \$828 | \$818 | \$807 | \$797 | \$786 | \$776 | \$765 | \$755 | \$744 | \$734 |
| 209 | \$1,260 | \$1,232 | \$1,205 | \$1,177 | \$1,150 | \$1,122 | \$1,094 | \$1,067 | \$1,039 | \$1,012 |
| 210 |  |  |  |  |  |  |  |  |  |  |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 211 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 212 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 213 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 214 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 215 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 216 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 217 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 218 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 219 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 220 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 221 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 222 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 223 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 224 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 225 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 226 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 227 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 228 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 229 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 230 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 231 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 232 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 233 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 234 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 235 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 236 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 237 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 238 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 239 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$9 | \$8 | \$8 | \$8 |
| 240 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 | \$10 | \$10 | \$10 |
| 241 | \$15 | \$15 | \$15 | \$14 | \$14 | \$14 | \$13 | \$13 | \$13 | \$13 |
| 242 |  |  |  |  |  |  |  |  |  |  |
| 243 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 244 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 245 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 281 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 282 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 283 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 284 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 285 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 286 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 287 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 288 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 289 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 290 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 291 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 292 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 293 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 294 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 295 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 296 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 297 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 298 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 299 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 300 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 301 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 302 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 303 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 304 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 305 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 306 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 307 |  |  |  |  |  |  |  |  |  |  |
| 308 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 309 | \$30 | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 310 | \$41 | \$40 | \$40 | \$39 | \$39 | \$38 | \$37 | \$37 | \$36 | \$35 |
| 311 | \$67 | \$65 | \$64 | \$62 | \$60 | \$59 | \$57 | \$55 | \$54 | \$52 |
| 312 | \$27 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 313 | \$37 | \$37 | \$36 | \$36 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 |
| 314 | \$61 | \$60 | \$58 | \$56 | \$55 | \$53 | \$52 | \$50 | \$49 | \$47 |
| 315 | \$26 | \$26 | \$25 | \$25 | \$25 | \$24 | \$24 | \$23 | \$23 | \$23 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 316 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 |
| 317 | \$59 | \$57 | \$56 | \$54 | \$53 | \$51 | \$50 | \$48 | \$47 | \$45 |
| 318 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$21 |
| 319 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 | \$30 | \$30 | \$29 |
| 320 | \$56 | \$54 | \$53 | \$51 | \$50 | \$49 | \$47 | \$46 | \$44 | \$43 |
| 321 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 | \$20 |
| 322 | \$32 | \$32 | \$31 | \$31 | \$30 | \$30 | \$29 | \$29 | \$29 | \$28 |
| 323 | \$53 | \$52 | \$50 | \$49 | \$48 | \$46 | \$45 | \$44 | \$42 | \$41 |
| 324 | \$23 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$20 |
| 325 | \$32 | \$31 | \$31 | \$31 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 |
| 326 | \$52 | \$51 | \$50 | \$48 | \$47 | \$46 | \$44 | \$43 | \$42 | \$40 |
| 327 | \$22 | \$22 | \$22 | \$21 | \$21 | \$21 | \$20 | \$20 | \$20 | \$19 |
| 328 | \$31 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 |
| 329 | \$50 | \$49 | \$47 | \$46 | \$45 | \$44 | \$42 | \$41 | \$40 | \$39 |
| 330 | \$21 | \$21 | \$20 | \$20 | \$20 | \$19 | \$19 | \$19 | \$19 | \$18 |
| 331 | \$29 | \$28 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 | \$25 | \$25 |
| 332 | \$47 | \$46 | \$45 | \$44 | \$42 | \$41 | \$40 | \$39 | \$38 | \$37 |
| 333 | \$20 | \$20 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 |
| 334 | \$27 | \$27 | \$27 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 |
| 335 | \$45 | \$44 | \$43 | \$41 | \$40 | \$39 | \$38 | \$37 | \$36 | \$35 |
| 336 | \$19 | \$19 | \$19 | \$18 | \$18 | \$18 | \$18 | \$17 | \$17 | \$17 |
| 337 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 |
| 338 | \$43 | \$42 | \$41 | \$40 | \$39 | \$38 | \$37 | \$35 | \$34 | \$33 |
| 339 |  |  |  |  |  |  |  |  |  |  |
| 340 |  |  |  |  |  |  |  |  |  |  |
| 341 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 342 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 343 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 344 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 345 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 346 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 347 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 348 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 349 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 350 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 351 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 352 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 353 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 354 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 355 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 356 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 357 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 358 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 359 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 360 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 361 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 362 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 363 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 364 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 365 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 366 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 367 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 368 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 369 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 370 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 371 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 372 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 373 |  |  |  |  |  |  |  |  |  |  |
| 374 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
| 375 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 |
| 376 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 |
| 377 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 | 1.024 |
| 378 |  |  |  |  |  |  |  |  |  |  |
| 379 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 380 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 381 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 382 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 383 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 384 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 385 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 386 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 387 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 388 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 389 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 390 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 391 |  |  |  |  |  |  |  |  |  |  |
| 392 |  |  |  |  |  |  |  |  |  |  |
| 393 |  |  |  |  |  |  |  |  |  |  |
| 394 |  |  |  |  |  |  |  |  |  |  |
| 395 |  |  |  |  |  |  |  |  |  |  |
| 396 |  |  |  |  |  |  |  |  |  |  |
| 397 |  |  |  |  |  |  |  |  |  |  |
| 398 |  |  |  |  |  |  |  |  |  |  |
| 399 |  |  |  |  |  |  |  |  |  |  |
| 400 | U.S. Solar Pho | oltaic Syste | and Energy | rage Cost | chmarks: | 021. Golde | O: Nationa | newable | y Laborat |  |
| 401 | U.S. Solar Pho | olaic Syste | nd Energy | rage Cost | chmarks: Q1 | 021. Golde | O: Nationa | newable | y Laborat |  |


|  | AN | AO | AP | AQ |
| :---: | :--- | :--- | :--- | :--- |
| 1 |  |  |  |  |
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| 4 |  |  |  |  |
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| 6 |  |  |  |  |
| 7 |  |  |  |  |
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| 33 |  |  |  |  |
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| 35 |  |  |  |  |
|  |  |  |  |  |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 36 |  |  |  |  |
| 37 |  |  |  |  |
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| 41 |  |  |  |  |
| 42 |  |  |  |  |
| 43 |  |  |  |  |
| 44 |  |  |  |  |
| 45 |  |  |  |  |
| 46 | 2047 | 2048 | 2049 | 2050 |
| 47 | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 48 | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 49 | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 51 | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 52 | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 53 | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 54 | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 55 | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 56 | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 57 | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 58 | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 59 | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 60 | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 61 | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 62 | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 63 | 75.9\% | 75.9\% | 75.9\% | 75.9\% |
| 64 | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 65 | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 66 | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 67 | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 68 | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 69 | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 70 | 1.8\% | 1.8\% | 1.8\% | 1.8\% |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 71 | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 72 | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 73 | 6.0\% | 6.0\% | 6.0\% | 6.0\% |
| 74 | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 75 | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 76 | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 77 |  |  |  |  |
| 78 |  |  |  |  |
| 79 |  |  |  |  |
| 80 |  |  |  |  |
| 81 |  |  |  |  |
| 82 |  |  |  |  |
| 83 | 2047 | 2048 | 2049 | 2050 |
| 84 | 14.9\% | 14.9\% | 15.0\% | 15.0\% |
| 85 | 14.2\% | 14.3\% | 14.3\% | 14.4\% |
| 86 | 13.2\% | 13.3\% | 13.3\% | 13.4\% |
| 87 | 16.4\% | 16.4\% | 16.4\% | 16.5\% |
| 88 | 15.6\% | 15.7\% | 15.7\% | 15.8\% |
| 89 | 14.5\% | 14.6\% | 14.6\% | 14.7\% |
| 90 | 17.1\% | 17.1\% | 17.1\% | 17.2\% |
| 91 | 16.3\% | 16.3\% | 16.4\% | 16.5\% |
| 92 | 15.1\% | 15.2\% | 15.3\% | 15.3\% |
| 93 | 18.0\% | 18.0\% | 18.0\% | 18.1\% |
| 94 | 17.1\% | 17.2\% | 17.3\% | 17.3\% |
| 95 | 15.9\% | 16.0\% | 16.1\% | 16.2\% |
| 96 | 18.9\% | 18.9\% | 18.9\% | 19.0\% |
| 97 | 18.0\% | 18.1\% | 18.1\% | 18.2\% |
| 98 | 16.7\% | 16.8\% | 16.9\% | 17.0\% |
| 99 | 19.1\% | 19.1\% | 19.2\% | 19.2\% |
| 100 | 18.2\% | 18.3\% | 18.4\% | 18.4\% |
| 101 | 16.9\% | 17.0\% | 17.1\% | 17.2\% |
| 102 | 20.0\% | 20.1\% | 20.1\% | 20.1\% |
| 103 | 19.1\% | 19.2\% | 19.2\% | 19.3\% |
| 104 | 17.7\% | 17.8\% | 17.9\% | 18.0\% |
| 105 | 21.1\% | 21.2\% | 21.2\% | 21.3\% |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 106 | 20.2\% | 20.2\% | 20.3\% | 20.4\% |
| 107 | 18.7\% | 18.8\% | 18.9\% | 19.0\% |
| 108 | 22.3\% | 22.4\% | 22.4\% | 22.5\% |
| 109 | 21.3\% | 21.4\% | 21.5\% | 21.5\% |
| 110 | 19.8\% | 19.9\% | 20.0\% | 20.1\% |
| 111 | 23.2\% | 23.2\% | 23.3\% | 23.3\% |
| 112 | 22.1\% | 22.2\% | 22.3\% | 22.3\% |
| 113 | 20.5\% | 20.6\% | 20.7\% | 20.8\% |
| 114 |  |  |  |  |
| 115 | 2047 | 2048 | 2049 | 2050 |
| 116 | 1,305 | 1,308 | 1,311 | 1,313 |
| 117 | 1,246 | 1,250 | 1,254 | 1,259 |
| 118 | 1,155 | 1,161 | 1,167 | 1,174 |
| 119 | 1,435 | 1,438 | 1,441 | 1,444 |
| 120 | 1,370 | 1,374 | 1,379 | 1,384 |
| 121 | 1,270 | 1,276 | 1,283 | 1,290 |
| 122 | 1,495 | 1,498 | 1,501 | 1,504 |
| 123 | 1,427 | 1,432 | 1,436 | 1,441 |
| 124 | 1,323 | 1,330 | 1,337 | 1,344 |
| 125 | 1,574 | 1,577 | 1,580 | 1,584 |
| 126 | 1,502 | 1,507 | 1,512 | 1,518 |
| 127 | 1,393 | 1,400 | 1,408 | 1,415 |
| 128 | 1,652 | 1,655 | 1,659 | 1,662 |
| 129 | 1,577 | 1,582 | 1,587 | 1,593 |
| 130 | 1,462 | 1,469 | 1,477 | 1,485 |
| 131 | 1,674 | 1,677 | 1,681 | 1,684 |
| 132 | 1,598 | 1,603 | 1,609 | 1,614 |
| 133 | 1,481 | 1,489 | 1,497 | 1,505 |
| 134 | 1,754 | 1,758 | 1,761 | 1,765 |
| 135 | 1,674 | 1,680 | 1,686 | 1,692 |
| 136 | 1,552 | 1,561 | 1,569 | 1,577 |
| 137 | 1,852 | 1,856 | 1,860 | 1,864 |
| 138 | 1,768 | 1,774 | 1,780 | 1,786 |
| 139 | 1,639 | 1,648 | 1,656 | 1,665 |
| 140 | 1,956 | 1,960 | 1,965 | 1,969 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 141 | 1,868 | 1,874 | 1,880 | 1,887 |
| 142 | 1,731 | 1,741 | 1,750 | 1,759 |
| 143 | 2,030 | 2,034 | 2,038 | 2,043 |
| 144 | 1,938 | 1,944 | 1,951 | 1,958 |
| 145 | 1,796 | 1,806 | 1,816 | 1,825 |
| 146 |  |  |  |  |
| 147 | 2047 | 2048 | 2049 | 2050 |
| 148 | \$554 | \$544 | \$535 | \$526 |
| 149 | \$741 | \$730 | \$720 | \$709 |
| 150 | \$1,008 | \$980 | \$952 | \$923 |
| 151 | \$554 | \$544 | \$535 | \$526 |
| 152 | \$741 | \$730 | \$720 | \$709 |
| 153 | \$1,008 | \$980 | \$952 | \$923 |
| 154 | \$554 | \$544 | \$535 | \$526 |
| 155 | \$741 | \$730 | \$720 | \$709 |
| 156 | \$1,008 | \$980 | \$952 | \$923 |
| 157 | \$554 | \$544 | \$535 | \$526 |
| 158 | \$741 | \$730 | \$720 | \$709 |
| 159 | \$1,008 | \$980 | \$952 | \$923 |
| 160 | \$554 | \$544 | \$535 | \$526 |
| 161 | \$741 | \$730 | \$720 | \$709 |
| 162 | \$1,008 | \$980 | \$952 | \$923 |
| 163 | \$554 | \$544 | \$535 | \$526 |
| 164 | \$741 | \$730 | \$720 | \$709 |
| 165 | \$1,008 | \$980 | \$952 | \$923 |
| 166 | \$554 | \$544 | \$535 | \$526 |
| 167 | \$741 | \$730 | \$720 | \$709 |
| 168 | \$1,008 | \$980 | \$952 | \$923 |
| 169 | \$554 | \$544 | \$535 | \$526 |
| 170 | \$741 | \$730 | \$720 | \$709 |
| 171 | \$1,008 | \$980 | \$952 | \$923 |
| 172 | \$554 | \$544 | \$535 | \$526 |
| 173 | \$741 | \$730 | \$720 | \$709 |
| 174 | \$1,008 | \$980 | \$952 | \$923 |
| 175 | \$554 | \$544 | \$535 | \$526 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 176 | \$741 | \$730 | \$720 | \$709 |
| 177 | \$1,008 | \$980 | \$952 | \$923 |
| 178 |  |  |  |  |
| 179 | 2047 | 2048 | 2049 | 2050 |
| 180 | \$540 | \$531 | \$523 | \$514 |
| 181 | \$723 | \$713 | \$703 | \$692 |
| 182 | \$984 | \$957 | \$929 | \$901 |
| 183 | \$540 | \$531 | \$523 | \$514 |
| 184 | \$723 | \$713 | \$703 | \$692 |
| 185 | \$984 | \$957 | \$929 | \$901 |
| 186 | \$540 | \$531 | \$523 | \$514 |
| 187 | \$723 | \$713 | \$703 | \$692 |
| 188 | \$984 | \$957 | \$929 | \$901 |
| 189 | \$540 | \$531 | \$523 | \$514 |
| 190 | \$723 | \$713 | \$703 | \$692 |
| 191 | \$984 | \$957 | \$929 | \$901 |
| 192 | \$540 | \$531 | \$523 | \$514 |
| 193 | \$723 | \$713 | \$703 | \$692 |
| 194 | \$984 | \$957 | \$929 | \$901 |
| 195 | \$540 | \$531 | \$523 | \$514 |
| 196 | \$723 | \$713 | \$703 | \$692 |
| 197 | \$984 | \$957 | \$929 | \$901 |
| 198 | \$540 | \$531 | \$523 | \$514 |
| 199 | \$723 | \$713 | \$703 | \$692 |
| 200 | \$984 | \$957 | \$929 | \$901 |
| 201 | \$540 | \$531 | \$523 | \$514 |
| 202 | \$723 | \$713 | \$703 | \$692 |
| 203 | \$984 | \$957 | \$929 | \$901 |
| 204 | \$540 | \$531 | \$523 | \$514 |
| 205 | \$723 | \$713 | \$703 | \$692 |
| 206 | \$984 | \$957 | \$929 | \$901 |
| 207 | \$540 | \$531 | \$523 | \$514 |
| 208 | \$723 | \$713 | \$703 | \$692 |
| 209 | \$984 | \$957 | \$929 | \$901 |
| 210 |  |  |  |  |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 211 | 2047 | 2048 | 2049 | 2050 |
| 212 | \$8 | \$8 | \$8 | \$8 |
| 213 | \$10 | \$10 | \$10 | \$10 |
| 214 | \$12 | \$12 | \$12 | \$12 |
| 215 | \$8 | \$8 | \$8 | \$8 |
| 216 | \$10 | \$10 | \$10 | \$10 |
| 217 | \$12 | \$12 | \$12 | \$12 |
| 218 | \$8 | \$8 | \$8 | \$8 |
| 219 | \$10 | \$10 | \$10 | \$10 |
| 220 | \$12 | \$12 | \$12 | \$12 |
| 221 | \$8 | \$8 | \$8 | \$8 |
| 222 | \$10 | \$10 | \$10 | \$10 |
| 223 | \$12 | \$12 | \$12 | \$12 |
| 224 | \$8 | \$8 | \$8 | \$8 |
| 225 | \$10 | \$10 | \$10 | \$10 |
| 226 | \$12 | \$12 | \$12 | \$12 |
| 227 | \$8 | \$8 | \$8 | \$8 |
| 228 | \$10 | \$10 | \$10 | \$10 |
| 229 | \$12 | \$12 | \$12 | \$12 |
| 230 | \$8 | \$8 | \$8 | \$8 |
| 231 | \$10 | \$10 | \$10 | \$10 |
| 232 | \$12 | \$12 | \$12 | \$12 |
| 233 | \$8 | \$8 | \$8 | \$8 |
| 234 | \$10 | \$10 | \$10 | \$10 |
| 235 | \$12 | \$12 | \$12 | \$12 |
| 236 | \$8 | \$8 | \$8 | \$8 |
| 237 | \$10 | \$10 | \$10 | \$10 |
| 238 | \$12 | \$12 | \$12 | \$12 |
| 239 | \$8 | \$8 | \$8 | \$8 |
| 240 | \$10 | \$10 | \$10 | \$10 |
| 241 | \$12 | \$12 | \$12 | \$12 |
| 242 |  |  |  |  |
| 243 | 2047 | 2048 | 2049 | 2050 |
| 244 | \$0 | \$0 | \$0 | \$0 |
| 245 | \$0 | \$0 | \$0 | \$0 |


|  | AN |  | AO |  | AP |  | AQ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 246 | \$0 |  | \$0 |  | \$0 |  |  | \$0 |
| 247 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 248 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 249 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 250 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 251 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 252 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 253 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 254 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 255 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 256 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 257 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 258 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 259 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 260 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 261 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 262 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 263 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 264 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 265 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 266 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 267 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 268 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 269 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 270 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 271 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 272 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |
| 273 | \$0 |  | \$0 |  | \$0 |  |  | \$0 |
| 274 |  |  |  |  |  |  |  |  |
| 275 |  |  |  |  |  |  |  |  |
| 276 | 2047 |  | 2048 |  | 2049 |  | 2050 |  |
| 277 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 278 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 279 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 280 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 281 | \$0 \$0 |  | \$0 | \$0 |
| 282 | \$0 | \$0 | \$0 | \$0 |
| 283 | \$0 | \$0 | \$0 | \$0 |
| 284 | \$0 | \$0 | \$0 | \$0 |
| 285 | \$0 | \$0 | \$0 | \$0 |
| 286 | \$0 | \$0 | \$0 | \$0 |
| 287 | \$0 | \$0 | \$0 | \$0 |
| 288 | \$0 | \$0 | \$0 | \$0 |
| 289 | \$0 | \$0 | \$0 | \$0 |
| 290 | \$0 | \$0 | \$0 | \$0 |
| 291 | \$0 | \$0 | \$0 | \$0 |
| 292 | \$0 | \$0 | \$0 | \$0 |
| 293 | \$0 | \$0 | \$0 | \$0 |
| 294 | \$0 | \$0 | \$0 | \$0 |
| 295 | \$0 | \$0 | \$0 | \$0 |
| 296 | \$0 | \$0 | \$0 | \$0 |
| 297 | \$0 | \$0 | \$0 | \$0 |
| 298 | \$0 | \$0 | \$0 | \$0 |
| 299 | \$0 | \$0 | \$0 | \$0 |
| 300 | \$0 | \$0 | \$0 | \$0 |
| 301 | \$0 | \$0 | \$0 | \$0 |
| 302 | \$0 | \$0 | \$0 | \$0 |
| 303 | \$0 | \$0 | \$0 | \$0 |
| 304 | \$0 | \$0 | \$0 | \$0 |
| 305 | \$0 | \$0 | \$0 | \$0 |
| 306 | \$0 | \$0 | \$0 | \$0 |
| 307 |  |  |  |  |
| 308 | 2047 | 2048 | 2049 | 2050 |
| 309 | \$25 | \$25 | \$25 | \$24 |
| 310 | \$35 | \$34 | \$34 | \$33 |
| 311 | \$50 | \$49 | \$47 | \$46 |
| 312 | \$23 | \$23 | \$22 | \$22 |
| 313 | \$32 | \$31 | \$31 | \$30 |
| 314 | \$46 | \$44 | \$43 | \$41 |
| 315 | \$22 | \$22 | \$21 | \$21 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 316 | \$30 | \$30 | \$29 | \$29 |
| 317 | \$44 | \$43 | \$41 | \$40 |
| 318 | \$21 | \$21 | \$20 | \$20 |
| 319 | \$29 | \$28 | \$28 | \$27 |
| 320 | \$42 | \$40 | \$39 | \$38 |
| 321 | \$20 | \$20 | \$19 | \$19 |
| 322 | \$28 | \$27 | \$27 | \$26 |
| 323 | \$40 | \$38 | \$37 | \$36 |
| 324 | \$20 | \$20 | \$19 | \$19 |
| 325 | \$27 | \$27 | \$26 | \$26 |
| 326 | \$39 | \$38 | \$37 | \$36 |
| 327 | \$19 | \$19 | \$18 | \$18 |
| 328 | \$26 | \$26 | \$25 | \$25 |
| 329 | \$37 | \$36 | \$35 | \$34 |
| 330 | \$18 | \$18 | \$17 | \$17 |
| 331 | \$25 | \$24 | \$24 | \$23 |
| 332 | \$35 | \$34 | \$33 | \$32 |
| 333 | \$17 | \$17 | \$16 | \$16 |
| 334 | \$23 | \$23 | \$23 | \$22 |
| 335 | \$34 | \$32 | \$31 | \$30 |
| 336 | \$16 | \$16 | \$16 | \$16 |
| 337 | \$22 | \$22 | \$22 | \$21 |
| 338 | \$32 | \$31 | \$30 | \$29 |
| 339 |  |  |  |  |
| 340 |  |  |  |  |
| 341 | 2047 | 2048 | 2049 | 2050 |
| 342 | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 343 | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 344 | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 345 | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 346 | 0.889 | 0.889 | 0.889 | 0.889 |
| 347 | 0.889 | 0.889 | 0.889 | 0.889 |
| 348 | 0.889 | 0.889 | 0.889 | 0.889 |
| 349 | 1.039 | 1.039 | 1.039 | 1.039 |
| 350 | 1.039 | 1.039 | 1.039 | 1.039 |


|  | AN | AO | AP | AQ |
| :---: | :---: | :---: | :---: | :---: |
| 351 | 1.039 | 1.039 | 1.039 | 1.039 |
| 352 | 2047 | 2048 | 2049 | 2050 |
| 353 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 354 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 355 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 356 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 357 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 358 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 359 | 2047 | 2048 | 2049 | 2050 |
| 360 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 361 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 362 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 363 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 364 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 365 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 366 | 2047 | 2048 | 2049 | 2050 |
| 367 | 0.9581 | 0.9581 | 0.9581 | 0.9581 |
| 368 | 0.9179 | 0.9179 | 0.9179 | 0.9179 |
| 369 | 0.8794 | 0.8794 | 0.8794 | 0.8794 |
| 370 | 0.8426 | 0.8426 | 0.8426 | 0.8426 |
| 371 | 0.8073 | 0.8073 | 0.8073 | 0.8073 |
| 372 | 0.7734 | 0.7734 | 0.7734 | 0.7734 |
| 373 |  |  |  |  |
| 374 | 2047 | 2048 | 2049 | 2050 |
| 375 | 1.024 | 1.024 | 1.024 | 1.024 |
| 376 | 1.024 | 1.024 | 1.024 | 1.024 |
| 377 | 1.024 | 1.024 | 1.024 | 1.024 |
| 378 |  |  |  |  |
| 379 | 1.017 | 1.017 | 1.017 | 1.017 |
| 380 | 1.053 | 1.053 | 1.053 | 1.053 |
| 381 | 1.090 | 1.090 | 1.090 | 1.090 |
| 382 | 1.053 | 1.053 | 1.053 | 1.053 |
| 383 | 1.166 | 1.166 | 1.166 | 1.166 |
| 384 | 1.292 | 1.292 | 1.292 | 1.292 |
| 385 | 1.053 | 1.053 | 1.053 | 1.053 |


|  | AN | AO | AP | AQ |
| ---: | ---: | ---: | ---: | ---: |
| 386 | 1.166 | 1.166 | 1.166 | 1.166 |
| 387 | 1.292 | 1.292 | 1.292 | 1.292 |
| 388 | 1.053 | 1.053 | 1.053 | 1.053 |
| 389 | 1.166 | 1.166 | 1.166 | 1.166 |
| 390 | 1.292 | 1.292 | 1.292 | 1.292 |
| 391 |  |  |  |  |
| 392 |  |  |  |  |
| 393 |  |  |  |  |
| 394 |  |  |  |  |
| 395 |  |  |  |  |
| 396 |  |  |  |  |
| 397 |  |  |  |  |
| 398 |  |  |  |  |
| 399 |  |  |  |  |
| 400 |  |  |  |  |
| 401 |  |  |  |  |



|  | A | B | CD | E E | FG | H | I | J | K |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 |  |  |  |  |  |  |  | Depreciation Period |  |  |
| 36 |  |  |  |  |  |  |  | Equity Premium During | nstruction |  |
| 37 |  |  |  |  |  |  |  | Construction Durat |  |  |
| 38 |  |  |  |  |  |  |  | Year | Capital |  |
| 39 |  |  |  |  |  |  |  | Index | Fraction |  |
| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  |  |  |  |
| 42 |  |  |  |  |  |  |  | 0 |  | 100\% |
| 43 |  |  |  |  |  |  |  | 1 |  | 0\% |
| 44 |  |  |  |  |  |  |  | 2 |  | 0\% |
| 45 |  |  |  |  |  |  |  |  |  |  |
| 46 |  |  |  |  |  |  |  |  |  |  |
| 47 |  |  |  |  |  |  |  |  |  |  |
| 48 |  |  |  |  |  |  |  |  | Inflation Rate |  |
| 49 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 50 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 51 |  |  |  |  |  |  |  |  | Interest Rate Nominal |  |
| 52 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 53 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 54 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real |  |
| 55 |  |  |  |  |  | \% |  |  | Interest During Construction - Nominal |  |
| 56 |  |  |  |  |  | ¢ |  |  | Rate of Return on Equity Nominal |  |
| 57 |  |  |  |  |  |  |  |  | Rate of Return on Equity Nominal |  |
| 58 |  |  |  |  |  |  |  |  | Rate of Return on Equity Nominal |  |
| 59 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  |
| 60 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real |  |
| 61 |  |  |  |  |  |  |  | sumptions | Calculated Rate of Return on Equity Real |  |
| 62 |  |  |  |  |  |  |  | sumptions | Debt Fraction |  |
| 63 |  |  |  |  |  |  |  |  | Debt Fraction |  |
| 64 |  |  |  |  |  |  |  |  | Debt Fraction |  |
| 65 |  |  |  |  |  |  |  |  | Tax Rate (Federal and State) |  |
| 66 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 67 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 68 |  |  |  |  |  |  |  |  | WACC Nominal |  |
| 69 |  |  |  |  |  |  |  |  | WACC Real |  |





|  | A | B | CD |  | FG | H | I | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 |  |  |  |  |  | 8 |  |  | Residential PV - Class 2 |
| 176 |  |  |  |  |  | त |  |  | Residential PV - Class 1 |
| 177 |  |  |  |  |  | E |  |  | Residential PV - Class 1 |
| 178 |  |  |  |  |  | $\frac{4}{0}$ |  |  | Residential PV - Class 1 |
| 179 |  |  |  |  |  | 0 |  |  |  |
| 180 |  |  |  |  |  | 竺 |  |  |  |
| 181 |  |  |  |  |  | * |  |  | Residential PV - Class 10 |
| 182 |  |  |  |  |  | 0 |  |  | Residential PV - Class 10 |
| 183 |  |  |  |  |  | . |  |  | Residential PV - Class 10 |
| 184 |  |  |  |  |  | $\bigcirc$ |  |  | Residential PV - Class 9 |
| 185 |  |  |  |  |  | O |  |  | Residential PV - Class 9 |
| 186 |  |  |  |  |  | ! |  |  | Residential PV - Class 9 |
| 187 |  |  |  |  |  | E |  |  | Residential PV - Class 8 |
| 188 |  |  |  |  |  | - |  |  | Residential PV - Class 8 |
| 189 |  |  |  |  |  | 1 |  |  | Residential PV - Class 8 |
| 190 |  |  |  |  |  |  |  |  | Residential PV - Class 7 |
| 191 |  |  |  |  |  |  |  |  | Residential PV - Class 7 |
| 192 |  |  |  |  |  |  |  |  | Residential PV - Class 7 |
| 193 |  |  |  |  |  |  |  |  | Residential PV - Class 6 |
| 194 |  |  |  |  |  |  |  |  | Residential PV - Class 6 |
| 195 |  |  |  |  |  |  |  | Overnight Capital Cost | Residential PV - Class 6 |
| 196 |  |  |  |  |  |  |  | (\$/kW) | Residential PV - Class 5 |
| 197 |  |  |  |  |  |  |  |  | Residential PV - Class 5 |
| 198 |  |  |  |  |  |  |  |  | Residential PV - Class 5 |
| 199 |  |  |  |  |  |  |  |  | Residential PV - Class 4 |
| 200 |  |  |  |  |  |  |  |  | Residential PV - Class 4 |
| 201 |  |  |  |  |  |  |  |  | Residential PV - Class 4 |
| 202 |  |  |  |  |  |  |  |  | Residential PV - Class 3 |
| 203 |  |  |  |  |  |  |  |  | Residential PV - Class 3 |
| 204 |  |  |  |  |  |  |  |  | Residential PV - Class 3 |
| 205 |  |  |  |  |  |  |  |  | Residential PV - Class 2 |
| 206 |  |  |  |  |  |  |  |  | Residential PV - Class 2 |
| 207 |  |  |  |  |  |  |  |  | Residential PV - Class 2 |
| 208 |  |  |  |  |  |  |  |  | Residential PV - Class 1 |
| 209 |  |  |  |  |  |  |  |  | Residential PV - Class 1 |




|  | A | B | CD ${ }^{\text {d }}$ | EF | G | H | I | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 280 |  |  |  |  |  |  |  |  | Residential PV - Class 10 |
| 281 |  |  |  |  |  |  |  |  | Residential PV - Class 9 |
| 282 |  |  |  |  |  |  |  |  | Residential PV - Class 9 |
| 283 |  |  |  |  |  |  |  |  | Residential PV - Class 9 |
| 284 |  |  |  |  |  |  |  |  | Residential PV - Class 8 |
| 285 |  |  |  |  |  |  |  |  | Residential PV - Class 8 |
| 286 |  |  |  |  |  |  |  |  | Residential PV - Class 8 |
| 287 |  |  |  |  |  |  |  |  | Residential PV - Class 7 |
| 288 |  |  |  |  |  |  |  |  | Residential PV - Class 7 |
| 289 |  |  |  |  |  | \% |  |  | Residential PV - Class 7 |
| 290 |  |  |  |  |  | - |  |  | Residential PV - Class 6 |
| 291 |  |  |  |  |  | $\bigcirc$ |  |  | Residential PV - Class 6 |
| 292 |  |  |  |  |  | \% |  | Grid Connection Costs | Residential PV - Class 6 |
| 293 |  |  |  |  |  | $\stackrel{\text { ® }}{\Xi}$ |  | (GCC) (\$/kW) | Residential PV - Class 5 |
| 294 |  |  |  |  |  | סo |  |  | Residential PV - Class 5 |
| 295 |  |  |  |  |  | - |  |  | Residential PV - Class 5 |
| 296 |  |  |  |  |  | - |  |  | Residential PV - Class 4 |
| 297 |  |  |  |  |  |  |  |  | Residential PV - Class 4 |
| 298 |  |  |  |  |  |  |  |  | Residential PV - Class 4 |
| 299 |  |  |  |  |  |  |  |  | Residential PV - Class 3 |
| 300 |  |  |  |  |  |  |  |  | Residential PV - Class 3 |
| 301 |  |  |  |  |  |  |  |  | Residential PV - Class 3 |
| 302 |  |  |  |  |  |  |  |  | Residential PV - Class 2 |
| 303 |  |  |  |  |  |  |  |  | Residential PV - Class 2 |
| 304 |  |  |  |  |  |  |  |  | Residential PV - Class 2 |
| 305 |  |  |  |  |  |  |  |  | Residential PV - Class 1 |
| 306 |  |  |  |  |  |  |  |  | Residential PV - Class 1 |
| 307 |  |  |  |  |  |  |  |  | Residential PV - Class 1 |
| 308 |  |  |  |  |  |  |  |  |  |
| 309 |  |  |  |  |  |  |  |  |  |
| 310 |  |  |  |  |  |  |  |  | Residential PV - Class 10 |
| 311 |  |  |  |  |  |  |  |  | Residential PV - Class 10 |
| 312 |  |  |  |  |  |  |  |  | Residential PV - Class 10 |
| 313 \| |  |  |  |  |  |  |  |  | Residential PV - Class 9 |
| 314 |  |  |  |  |  |  |  |  | Residential PV - Class 9 |



|  | A | B | CD |  | FG | H | 1 | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 350 |  |  |  |  |  | \% |  |  | PFF |
| 351 |  |  |  |  |  |  |  |  | PFF |
| 352 |  |  |  |  |  |  |  |  | PFF |
| 353 |  |  |  |  |  |  | MACRS |  | Year (Advanced) |
| 354 |  |  |  |  |  |  | 0.2 |  | 1 |
| 355 |  |  |  |  |  |  | 0.32 |  | 2 |
| 356 |  |  |  |  |  |  | 0.192 |  | 3 |
| 357 |  |  |  |  |  |  | 0.1152 |  | 4 |
| 358 |  |  |  |  |  |  | 0.1152 |  | 5 |
| 359 |  |  |  |  |  |  | 0.0576 |  | 6 |
| 360 |  |  |  |  |  |  |  |  | Year (Moderate) |
| 361 |  |  |  |  |  |  |  |  | 1 |
| 362 |  |  |  |  |  |  |  |  | 2 |
| 363 |  |  |  |  |  |  |  | on Factor | 3 |
| 364 |  |  |  |  |  |  |  | preciation ractor | 4 |
| 365 |  |  |  |  |  |  |  |  | 5 |
| 366 |  |  |  |  |  |  |  |  | 6 |
| 367 |  |  |  |  |  |  |  |  | Year (Conservative) |
| 368 |  |  |  |  |  |  |  |  | 1 |
| 369 |  |  |  |  |  |  |  |  | 2 |
| 370 |  |  |  |  |  |  |  |  | 3 |
| 371 |  |  |  |  |  |  |  |  | 4 |
| 372 <br> 373 |  |  |  |  |  |  |  |  | 5 |
| 373 |  |  |  |  |  |  |  |  | 6 |
| 374 |  |  |  |  |  |  |  |  |  |
| 375 |  |  |  |  |  |  |  |  |  |
| 376 <br> 377 |  |  |  |  |  |  |  |  | CFF |
| 377 |  |  |  |  |  |  |  | Construction Finance | CFF |
| 378 |  |  |  |  |  |  |  |  | CFF |
| 379 |  |  |  |  |  |  |  |  |  |
| 380 |  |  |  |  |  |  |  |  | Accumulated Interest - Year 1 |
| 381 |  |  |  |  |  |  |  |  | Accumulated Interest - Year 2 |
| 382 |  |  |  |  |  |  |  |  | Accumulated Interest - Year 3 |
| 383 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 |
| 384 |  |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 |




|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 |  |  |  | 5 |  | Capital Recover | eriod | 30 |  |
| 36 |  |  |  | 2.0\% |  |  |  |  |  |
| 37 |  |  |  | 0 |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |
| 39 |  | Percent of |  |  |  |  |  |  |  |
| 40 | Percent of Leverage | Equity During |  |  |  |  |  |  |  |
| 41 | During Construction | Construction |  |  |  |  |  |  |  |
| 42 | 80\% | 20\% |  |  |  |  |  |  |  |
| 43 | 80\% | 20\% |  |  |  |  |  |  |  |
| 44 | 80\% | 20\% |  |  |  |  |  |  |  |
| 45 |  |  |  |  |  |  |  |  |  |
| 46 |  | Base Year |  |  |  |  |  |  |  |
| 47 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 48 | * | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 49 | Advanced | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 | Moderate | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 51 | Conservative | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 52 | Advanced | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 53 | Moderate | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 54 | Conservative | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 55 | * | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 56 | Advanced | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 57 | Moderate | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 58 | Conservative | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 59 | Advanced | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 60 | Moderate | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 61 | Conservative | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 62 | Advanced | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% |
| 63 | Moderate | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% |
| 64 | Conservative | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% |
| 65 | * | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 66 | Advanced | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 67 | Moderate | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 68 | Conservative | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 69 | Advanced | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 | Moderate | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 71 | Conservative | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 72 | Advanced | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 73 | Moderate | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 74 | Conservative | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 75 | Advanced | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 76 | Moderate | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 77 | Conservative | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 78 |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |
| 81 |  |  |  |  |  |  |  |  |  |
| 82 | Future | ctions |  |  |  |  |  |  |  |
| 83 |  | Base Year |  |  |  |  |  |  |  |
| 84 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 85 | Advanced | 12.0\% | 12.1\% | 12.1\% | 12.2\% | 12.2\% | 12.2\% | 12.3\% | 12.3\% |
| 86 | Moderate | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.1\% | 12.1\% | 12.1\% | 12.1\% |
| 87 | Conservative | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% |
| 88 | Advanced | 13.2\% | 13.2\% | 13.3\% | 13.3\% | 13.4\% | 13.4\% | 13.5\% | 13.5\% |
| 89 | Moderate | 13.1\% | 13.1\% | 13.2\% | 13.2\% | 13.2\% | 13.2\% | 13.2\% | 13.3\% |
| 90 | Conservative | 13.1\% | 13.1\% | 13.1\% | 13.1\% | 13.1\% | 13.1\% | 13.1\% | 13.1\% |
| 91 | Advanced | 13.7\% | 13.8\% | 13.8\% | 13.9\% | 13.9\% | 14.0\% | 14.0\% | 14.1\% |
| 92 | Moderate | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.8\% | 13.8\% | 13.8\% | 13.8\% |
| 93 | Conservative | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% |
| 94 | Advanced | 14.4\% | 14.4\% | 14.5\% | 14.6\% | 14.6\% | 14.7\% | 14.7\% | 14.8\% |
| 95 | Moderate | 14.4\% | 14.4\% | 14.4\% | 14.4\% | 14.4\% | 14.5\% | 14.5\% | 14.5\% |
| 96 | Conservative | 14.3\% | 14.3\% | 14.3\% | 14.3\% | 14.3\% | 14.3\% | 14.3\% | 14.3\% |
| 97 | Advanced | 15.0\% | 15.1\% | 15.2\% | 15.2\% | 15.3\% | 15.3\% | 15.4\% | 15.5\% |
| 98 | Moderate | 15.0\% | 15.0\% | 15.1\% | 15.1\% | 15.1\% | 15.1\% | 15.2\% | 15.2\% |
| 99 | Conservative | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% |
| 100 | Advanced | 15.2\% | 15.3\% | 15.4\% | 15.4\% | 15.5\% | 15.5\% | 15.6\% | 15.7\% |
| 101 | Moderate | 15.2\% | 15.2\% | 15.2\% | 15.3\% | 15.3\% | 15.3\% | 15.3\% | 15.4\% |
| 102 | Conservative | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% |
| 103 | Advanced | 16.1\% | 16.2\% | 16.2\% | 16.3\% | 16.3\% | 16.4\% | 16.5\% | 16.5\% |
| 104 | Moderate | 16.1\% | 16.1\% | 16.1\% | 16.1\% | 16.1\% | 16.2\% | 16.2\% | 16.2\% |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 | Conservative | 16.0\% | 16.0\% | 16.0\% | 16.0\% | 16.0\% | 16.0\% | 16.0\% | 16.0\% |
| 106 | Advanced | 17.0\% | 17.1\% | 17.2\% | 17.2\% | 17.3\% | 17.4\% | 17.4\% | 17.5\% |
| 107 | Moderate | 17.0\% | 17.0\% | 17.0\% | 17.1\% | 17.1\% | 17.1\% | 17.1\% | 17.2\% |
| 108 | Conservative | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% |
| 109 | Advanced | 18.2\% | 18.3\% | 18.4\% | 18.5\% | 18.5\% | 18.6\% | 18.7\% | 18.8\% |
| 110 | Moderate | 18.2\% | 18.2\% | 18.3\% | 18.3\% | 18.3\% | 18.3\% | 18.4\% | 18.4\% |
| 111 | Conservative | 18.2\% | 18.2\% | 18.2\% | 18.2\% | 18.2\% | 18.2\% | 18.2\% | 18.2\% |
| 112 | Advanced | 18.5\% | 18.6\% | 18.7\% | 18.8\% | 18.8\% | 18.9\% | 19.0\% | 19.0\% |
| 113 | Moderate | 18.5\% | 18.5\% | 18.5\% | 18.6\% | 18.6\% | 18.6\% | 18.7\% | 18.7\% |
| 114 | Conservative | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.5\% |
| 115 |  |  |  |  |  |  |  |  |  |
| 116 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 117 | Advanced | 1,052 | 1,056 | 1,061 | 1,065 | 1,069 | 1,073 | 1,077 | 1,081 |
| 118 | Moderate | 1,050 | 1,051 | 1,053 | 1,055 | 1,056 | 1,058 | 1,060 | 1,061 |
| 119 | Conservative | 1,048 | 1,048 | 1,048 | 1,048 | 1,048 | 1,048 | 1,048 | 1,048 |
| 120 | Advanced | 1,153 | 1,157 | 1,162 | 1,166 | 1,171 | 1,175 | 1,180 | 1,184 |
| 121 | Moderate | 1,150 | 1,152 | 1,153 | 1,155 | 1,157 | 1,159 | 1,161 | 1,162 |
| 122 | Conservative | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 |
| 123 | Advanced | 1,200 | 1,205 | 1,210 | 1,215 | 1,219 | 1,224 | 1,229 | 1,233 |
| 124 | Moderate | 1,198 | 1,199 | 1,201 | 1,203 | 1,205 | 1,207 | 1,209 | 1,211 |
| 125 | Conservative | 1,196 | 1,196 | 1,196 | 1,196 | 1,196 | 1,196 | 1,196 | 1,196 |
| 126 | Advanced | 1,260 | 1,265 | 1,270 | 1,275 | 1,280 | 1,285 | 1,290 | 1,295 |
| 127 | Moderate | 1,257 | 1,259 | 1,261 | 1,263 | 1,265 | 1,267 | 1,269 | 1,271 |
| 128 | Conservative | 1,255 | 1,255 | 1,255 | 1,255 | 1,255 | 1,255 | 1,255 | 1,255 |
| 129 | Advanced | 1,318 | 1,323 | 1,329 | 1,334 | 1,339 | 1,344 | 1,349 | 1,354 |
| 130 | Moderate | 1,315 | 1,317 | 1,319 | 1,321 | 1,323 | 1,325 | 1,327 | 1,329 |
| 131 | Conservative | 1,313 | 1,313 | 1,313 | 1,313 | 1,313 | 1,313 | 1,313 | 1,313 |
| 132 | Advanced | 1,335 | 1,340 | 1,345 | 1,351 | 1,356 | 1,361 | 1,366 | 1,372 |
| 133 | Moderate | 1,332 | 1,334 | 1,336 | 1,338 | 1,340 | 1,342 | 1,344 | 1,346 |
| 134 | Conservative | 1,330 | 1,330 | 1,330 | 1,330 | 1,330 | 1,330 | 1,330 | 1,330 |
| 135 | Advanced | 1,409 | 1,415 | 1,420 | 1,426 | 1,431 | 1,437 | 1,442 | 1,448 |
| 136 | Moderate | 1,406 | 1,408 | 1,410 | 1,413 | 1,415 | 1,417 | 1,419 | 1,421 |
| 137 | Conservative | 1,404 | 1,404 | 1,404 | 1,404 | 1,404 | 1,404 | 1,404 | 1,404 |
| 138 | Advanced | 1,491 | 1,497 | 1,503 | 1,509 | 1,515 | 1,521 | 1,526 | 1,532 |
| 139 | Moderate | 1,488 | 1,490 | 1,492 | 1,495 | 1,497 | 1,499 | 1,502 | 1,504 |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 | Conservative | 1,486 | 1,486 | 1,486 | 1,486 | 1,486 | 1,486 | 1,486 | 1,486 |
| 141 | Advanced | 1,599 | 1,605 | 1,611 | 1,617 | 1,624 | 1,630 | 1,636 | 1,643 |
| 142 | Moderate | 1,595 | 1,597 | 1,600 | 1,602 | 1,605 | 1,607 | 1,610 | 1,612 |
| 143 | Conservative | 1,592 | 1,592 | 1,592 | 1,592 | 1,592 | 1,592 | 1,592 | 1,592 |
| 144 | Advanced | 1,624 | 1,630 | 1,637 | 1,643 | 1,649 | 1,656 | 1,662 | 1,668 |
| 145 | Moderate | 1,620 | 1,622 | 1,625 | 1,627 | 1,630 | 1,632 | 1,635 | 1,637 |
| 146 | Conservative | 1,617 | 1,617 | 1,617 | 1,617 | 1,617 | 1,617 | 1,617 | 1,617 |
| 147 |  |  |  |  |  |  |  |  |  |
| 148 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 149 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 150 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 151 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 152 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 153 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 154 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 155 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 156 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 157 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 158 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 159 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 160 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 161 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 162 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 163 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 164 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 165 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 166 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 167 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 168 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 169 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 170 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 171 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 172 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 173 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 174 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 176 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 177 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 178 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 179 |  |  |  |  |  |  |  |  |  |
| 180 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 181 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 182 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 183 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 184 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 185 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 186 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 187 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 188 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 189 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 190 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 191 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 192 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 193 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 194 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 195 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 196 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 197 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 198 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 199 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 200 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 201 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 202 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 203 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 204 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 205 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 206 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |
| 207 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 208 | Advanced | \$2,743 | \$2,650 | \$2,443 | \$2,237 | \$2,030 | \$1,824 | \$1,617 | \$1,411 |
| 209 | Moderate | \$2,743 | \$2,650 | \$2,468 | \$2,287 | \$2,105 | \$1,924 | \$1,742 | \$1,561 |


|  | L | M | N | 0 | P | Q | R | S | T |
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| 210 | Conservative | \$2,743 | \$2,650 | \$2,609 | \$2,569 | \$2,528 | \$2,488 | \$2,447 | \$2,407 |
| 211 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 212 |  |  |  |  |  |  |  |  |  |
| 213 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 214 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 215 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 216 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 217 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 218 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 219 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 220 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 221 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 222 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 223 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 224 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 225 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 226 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 227 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 228 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 229 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 230 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 231 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 232 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 233 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 234 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 235 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 236 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 237 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 238 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 239 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 240 | Advanced | \$29 | \$29 | \$27 | \$25 | \$23 | \$21 | \$19 | \$17 |
| 241 | Moderate | \$29 | \$29 | \$27 | \$25 | \$24 | \$22 | \$20 | \$18 |
| 242 | Conservative | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$27 |
| 243 |  |  |  |  |  |  |  |  |  |
| 244 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |



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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 280 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 281 | Advanced | \$0 |  | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 282 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 283 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 284 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 285 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 286 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 287 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 288 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 289 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 290 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 291 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 292 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 293 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 294 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 295 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 296 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 297 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 298 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 299 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 300 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 301 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 302 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 303 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 304 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 305 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 306 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 307 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 308 |  |  |  |  |  |  |  |  |  |
| 309 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 310 | Advanced | \$146 | \$141 | \$130 | \$119 | \$108 | \$97 | \$86 | \$75 |
| 311 | Moderate | \$146 | \$142 | \$132 | \$122 | \$113 | \$103 | \$94 | \$84 |
| 312 | Conservative | \$147 | \$142 | \$140 | \$138 | \$136 | \$134 | \$132 | \$129 |
| 313 | Advanced | \$133 | \$129 | \$119 | \$108 | \$98 | \$88 | \$78 | \$68 |
| 314 | Moderate | \$134 | \$129 | \$121 | \$112 | \$103 | \$94 | \$85 | \$77 |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 315 | Conservative | \$134 | \$130 | \$128 | \$126 | \$124 | \$122 | \$120 | \$118 |
| 316 | Advanced | \$128 | \$124 | \$114 | \$104 | \$94 | \$85 | \$75 | \$66 |
| 317 | Moderate | \$128 | \$124 | \$116 | \$107 | \$99 | \$90 | \$82 | \$74 |
| 318 | Conservative | \$128 | \$125 | \$123 | \$121 | \$119 | \$117 | \$115 | \$114 |
| 319 | Advanced | \$122 | \$118 | \$108 | \$99 | \$90 | \$81 | \$72 | \$63 |
| 320 | Moderate | \$122 | \$118 | \$110 | \$102 | \$94 | \$86 | \$78 | \$70 |
| 321 | Conservative | \$122 | \$119 | \$117 | \$115 | \$113 | \$112 | \$110 | \$108 |
| 322 | Advanced | \$117 | \$113 | \$104 | \$95 | \$86 | \$77 | \$68 | \$60 |
| 323 | Moderate | \$117 | \$113 | \$105 | \$98 | \$90 | \$82 | \$75 | \$67 |
| 324 | Conservative | \$117 | \$114 | \$112 | \$110 | \$108 | \$107 | \$105 | \$103 |
| 325 | Advanced | \$115 | \$111 | \$102 | \$94 | \$85 | \$76 | \$68 | \$59 |
| 326 | Moderate | \$115 | \$112 | \$104 | \$97 | \$89 | \$81 | \$74 | \$66 |
| 327 | Conservative | \$116 | \$112 | \$110 | \$109 | \$107 | \$105 | \$104 | \$102 |
| 328 | Advanced | \$109 | \$105 | \$97 | \$89 | \$80 | \$72 | \$64 | \$56 |
| 329 | Moderate | \$109 | \$106 | \$99 | \$91 | \$84 | \$77 | \$70 | \$63 |
| 330 | Conservative | \$109 | \$106 | \$105 | \$103 | \$101 | \$100 | \$98 | \$97 |
| 331 | Advanced | \$103 | \$100 | \$92 | \$84 | \$76 | \$68 | \$60 | \$53 |
| 332 | Moderate | \$103 | \$100 | \$93 | \$86 | \$80 | \$73 | \$66 | \$59 |
| 333 | Conservative | \$103 | \$100 | \$99 | \$97 | \$96 | \$94 | \$93 | \$91 |
| 334 | Advanced | \$96 | \$93 | \$85 | \$78 | \$71 | \$64 | \$56 | \$49 |
| 335 | Moderate | \$96 | \$93 | \$87 | \$81 | \$74 | \$68 | \$62 | \$55 |
| 336 | Conservative | \$96 | \$94 | \$92 | \$91 | \$89 | \$88 | \$87 | \$85 |
| 337 | Advanced | \$95 | \$91 | \$84 | \$77 | \$70 | \$63 | \$56 | \$49 |
| 338 | Moderate | \$95 | \$92 | \$86 | \$79 | \$73 | \$67 | \$61 | \$55 |
| 339 | Conservative | \$95 | \$92 | \$91 | \$89 | \$88 | \$87 | \$85 | \$84 |
| 340 |  |  |  |  |  |  |  |  |  |
| 341 |  |  |  |  |  |  |  |  |  |
| 342 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 343 | Advanced | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 344 | Moderate | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 345 | Conservative | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 346 | * | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 347 | Advanced | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 348 | Moderate | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 349 | Conservative | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |


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| 350 | Advanced | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 351 | Moderate | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 352 | Conservative | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 353 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 354 |  | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 |
| 355 |  | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 |
| 356 |  | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 |
| 357 |  | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 |
| 358 |  | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 |
| 359 |  | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 |
| 360 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 361 |  | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 |
| 362 |  | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 |
| 363 |  | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 |
| 364 |  | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 |
| 365 |  | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 |
| 366 |  | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 |
| 367 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 368 |  | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 |
| 369 |  | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 |
| 370 |  | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 |
| 371 |  | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 |
| 372 |  | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 |
| 373 |  | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 |
| 374 |  |  |  |  |  |  |  |  |  |
| 375 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 376 | Advanced | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 377 | Moderate | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 378 | Conservative | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 379 |  |  |  |  |  |  |  |  |  |
| 380 | * | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 381 | * | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 382 |  | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 383 | Advanced | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 384 | Advanced | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |


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| 385 | Advanced | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 386 | Moderate | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 387 | Moderate | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 388 | Moderate | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 389 | Conservative | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 390 | Conservative | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 391 | Conservative | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 392 |  |  |  |  |  |  |  |  |  |
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| 400 |  |  | NREL. PVWATT | 5. Represe | of nation | nge of cap | factors. |  |  |
| 401 |  |  | V. Ramasamy, | eldman, J. | and R.M | is. 2021. |  |  |  |
| 402 |  |  | V. Ramasamy, | eldman, J. | and R. M | is. 2021. |  |  |  |
| 403 |  |  | N/A |  |  |  |  |  |  |
| 404 |  |  | N/A |  |  |  |  |  |  |
| 405 |  |  |  |  |  |  |  |  |  |
| 406 |  |  |  |  |  |  |  |  |  |
| 407 |  |  | NREL internal | deling takin | account im | ements in | dation and | eases in | gy yield. |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
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| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 | Inputs |  |  |  |  |  |  |  |  |  |
| 3 | Calculated |  |  |  |  |  |  |  |  |  |
| 4 | Input from |  |  |  |  |  |  |  |  |  |
| 5 | other tab |  |  |  |  |  |  |  |  |  |
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|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
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| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  |  |  |  |
| 42 |  |  |  |  |  |  |  |  |  |  |
| 43 |  |  |  |  |  |  |  |  |  |  |
| 44 |  |  |  |  |  |  |  |  |  |  |
| 45 |  |  |  |  |  |  |  |  |  |  |
| 46 |  |  |  |  |  |  |  |  |  |  |
| 47 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 48 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 49 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 51 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 52 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 53 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 54 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 55 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 56 | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 57 | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 58 | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 59 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 60 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 61 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 62 | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% |
| 63 | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% |
| 64 | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% |
| 65 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 66 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 67 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 68 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 69 | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 71 | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 72 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 73 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 74 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 75 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 76 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 77 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 78 |  |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |  |
| 81 |  |  |  |  |  |  |  |  |  |  |
| 82 |  |  |  |  |  |  |  |  |  |  |
| 83 |  |  |  |  |  |  |  |  |  |  |
| 84 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 85 | 12.4\% | 12.4\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% |
| 86 | 12.1\% | 12.2\% | 12.2\% | 12.2\% | 12.2\% | 12.2\% | 12.2\% | 12.2\% | 12.3\% | 12.3\% |
| 87 | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% | 12.0\% |
| 88 | 13.6\% | 13.6\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% |
| 89 | 13.3\% | 13.3\% | 13.3\% | 13.3\% | 13.4\% | 13.4\% | 13.4\% | 13.4\% | 13.4\% | 13.5\% |
| 90 | 13.1\% | 13.1\% | 13.1\% | 13.1\% | 13.1\% | 13.1\% | 13.2\% | 13.2\% | 13.2\% | 13.2\% |
| 91 | 14.1\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% |
| 92 | 13.8\% | 13.9\% | 13.9\% | 13.9\% | 13.9\% | 13.9\% | 14.0\% | 14.0\% | 14.0\% | 14.0\% |
| 93 | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% |
| 94 | 14.8\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% |
| 95 | 14.5\% | 14.6\% | 14.6\% | 14.6\% | 14.6\% | 14.6\% | 14.6\% | 14.7\% | 14.7\% | 14.7\% |
| 96 | 14.3\% | 14.3\% | 14.3\% | 14.3\% | 14.4\% | 14.4\% | 14.4\% | 14.4\% | 14.4\% | 14.4\% |
| 97 | 15.5\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% |
| 98 | 15.2\% | 15.2\% | 15.2\% | 15.3\% | 15.3\% | 15.3\% | 15.3\% | 15.3\% | 15.4\% | 15.4\% |
| 99 | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.1\% | 15.1\% | 15.1\% |
| 100 | 15.7\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% |
| 101 | 15.4\% | 15.4\% | 15.4\% | 15.5\% | 15.5\% | 15.5\% | 15.5\% | 15.5\% | 15.6\% | 15.6\% |
| 102 | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.3\% | 15.3\% |
| 103 | 16.6\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% |
| 104 | 16.2\% | 16.3\% | 16.3\% | 16.3\% | 16.3\% | 16.4\% | 16.4\% | 16.4\% | 16.4\% | 16.4\% |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 | 16.0\% | 16.0\% | 16.0\% | 16.0\% | 16.1\% | 16.1\% | 16.1\% | 16.1\% | 16.1\% | 16.1\% |
| 106 | 17.6\% | 17.6\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% |
| 107 | 17.2\% | 17.2\% | 17.2\% | 17.3\% | 17.3\% | 17.3\% | 17.3\% | 17.4\% | 17.4\% | 17.4\% |
| 108 | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.0\% | 17.1\% |
| 109 | 18.8\% | 18.9\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% |
| 110 | 18.4\% | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.6\% | 18.6\% | 18.6\% | 18.6\% | 18.7\% |
| 111 | 18.2\% | 18.2\% | 18.2\% | 18.2\% | 18.2\% | 18.2\% | 18.2\% | 18.3\% | 18.3\% | 18.3\% |
| 112 | 19.1\% | 19.2\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% |
| 113 | 18.7\% | 18.7\% | 18.8\% | 18.8\% | 18.8\% | 18.9\% | 18.9\% | 18.9\% | 18.9\% | 18.9\% |
| 114 | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.5\% | 18.6\% | 18.6\% |
| 115 |  |  |  |  |  |  |  |  |  |  |
| 116 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 117 | 1,085 | 1,089 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 |
| 118 | 1,063 | 1,064 | 1,066 | 1,067 | 1,069 | 1,070 | 1,072 | 1,073 | 1,074 | 1,076 |
| 119 | 1,048 | 1,048 | 1,048 | 1,049 | 1,050 | 1,051 | 1,052 | 1,053 | 1,054 | 1,054 |
| 120 | 1,189 | 1,193 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 |
| 121 | 1,164 | 1,166 | 1,168 | 1,169 | 1,171 | 1,172 | 1,174 | 1,175 | 1,177 | 1,178 |
| 122 | 1,148 | 1,148 | 1,148 | 1,149 | 1,150 | 1,151 | 1,152 | 1,153 | 1,154 | 1,155 |
| 123 | 1,238 | 1,243 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 |
| 124 | 1,212 | 1,214 | 1,216 | 1,218 | 1,219 | 1,221 | 1,222 | 1,224 | 1,226 | 1,227 |
| 125 | 1,196 | 1,196 | 1,196 | 1,197 | 1,198 | 1,199 | 1,200 | 1,201 | 1,202 | 1,203 |
| 126 | 1,300 | 1,305 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 |
| 127 | 1,273 | 1,275 | 1,277 | 1,278 | 1,280 | 1,282 | 1,283 | 1,285 | 1,287 | 1,288 |
| 128 | 1,255 | 1,255 | 1,255 | 1,256 | 1,257 | 1,258 | 1,260 | 1,261 | 1,262 | 1,263 |
| 129 | 1,360 | 1,365 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 |
| 130 | 1,331 | 1,333 | 1,336 | 1,337 | 1,339 | 1,341 | 1,342 | 1,344 | 1,346 | 1,348 |
| 131 | 1,313 | 1,313 | 1,313 | 1,314 | 1,315 | 1,317 | 1,318 | 1,319 | 1,320 | 1,321 |
| 132 | 1,377 | 1,382 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 |
| 133 | 1,348 | 1,350 | 1,352 | 1,354 | 1,356 | 1,358 | 1,359 | 1,361 | 1,363 | 1,365 |
| 134 | 1,330 | 1,330 | 1,330 | 1,331 | 1,332 | 1,333 | 1,334 | 1,335 | 1,336 | 1,338 |
| 135 | 1,454 | 1,459 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 |
| 136 | 1,423 | 1,426 | 1,428 | 1,430 | 1,431 | 1,433 | 1,435 | 1,437 | 1,439 | 1,441 |
| 137 | 1,404 | 1,404 | 1,404 | 1,405 | 1,406 | 1,407 | 1,409 | 1,410 | 1,411 | 1,412 |
| 138 | 1,538 | 1,544 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 |
| 139 | 1,506 | 1,509 | 1,511 | 1,513 | 1,515 | 1,517 | 1,519 | 1,521 | 1,523 | 1,525 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 | 1,486 | 1,486 | 1,486 | 1,487 | 1,488 | 1,489 | 1,491 | 1,492 | 1,493 | 1,494 |
| 141 | 1,649 | 1,655 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 |
| 142 | 1,615 | 1,617 | 1,620 | 1,622 | 1,624 | 1,626 | 1,628 | 1,630 | 1,632 | 1,634 |
| 143 | 1,592 | 1,592 | 1,592 | 1,594 | 1,595 | 1,596 | 1,598 | 1,599 | 1,601 | 1,602 |
| 144 | 1,675 | 1,681 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 |
| 145 | 1,640 | 1,642 | 1,645 | 1,647 | 1,649 | 1,651 | 1,653 | 1,656 | 1,658 | 1,660 |
| 146 | 1,617 | 1,617 | 1,617 | 1,619 | 1,620 | 1,622 | 1,623 | 1,624 | 1,626 | 1,627 |
| 147 |  |  |  |  |  |  |  |  |  |  |
| 148 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 149 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 150 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 151 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 152 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 153 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 154 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 155 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 156 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 157 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 158 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 159 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 160 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 161 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 162 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 163 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 164 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 165 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 166 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 167 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 168 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 169 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 170 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 171 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 172 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 173 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 174 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 176 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 177 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 178 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 179 |  |  |  |  |  |  |  |  |  |  |
| 180 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 181 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 182 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 183 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 184 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 185 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 186 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 187 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 188 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 189 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 190 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 191 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 192 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 193 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 194 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 195 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 196 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 197 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 198 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 199 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 200 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 201 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 202 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 203 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 204 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 205 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 206 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |
| 207 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 208 | \$1,204 | \$998 | \$791 | \$779 | \$767 | \$755 | \$743 | \$731 | \$719 | \$707 |
| 209 | \$1,379 | \$1,198 | \$1,016 | \$1,005 | \$994 | \$983 | \$971 | \$960 | \$949 | \$938 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 210 | \$2,366 | \$2,326 | \$2,285 | \$2,222 | \$2,159 | \$2,095 | \$2,032 | \$1,968 | \$1,905 | \$1,841 |
| 211 |  |  |  |  |  |  |  |  |  |  |
| 212 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 213 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 214 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 215 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 216 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 217 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 218 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 219 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 220 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 221 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 222 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 223 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 224 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 225 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 226 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 227 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 228 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 229 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 230 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 231 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 232 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 233 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 234 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 235 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 236 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 237 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 238 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 239 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 240 | \$15 | \$13 | \$11 | \$11 | \$11 | \$11 | \$11 | \$11 | \$10 | \$10 |
| 241 | \$17 | \$15 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 | \$13 |
| 242 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$22 | \$22 | \$21 |
| 243 |  |  |  |  |  |  |  |  |  |  |
| 244 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |



|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 280 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 281 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 282 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 283 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 284 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 285 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 286 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 287 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 288 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 289 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 290 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 291 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 292 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 293 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 294 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 295 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 296 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 297 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 298 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 299 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 300 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 301 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 302 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 303 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 304 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 305 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 306 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 307 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 308 |  |  |  |  |  |  |  |  |  |  |
| 309 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 310 | \$64 | \$54 | \$43 | \$42 | \$42 | \$41 | \$41 | \$40 | \$39 | \$39 |
| 311 | \$75 | \$65 | \$56 | \$55 | \$54 | \$54 | \$53 | \$52 | \$52 | \$51 |
| 312 | \$127 | \$125 | \$123 | \$120 | \$116 | \$113 | \$109 | \$106 | \$103 | \$99 |
| 313 | \$59 | \$49 | \$39 | \$39 | \$38 | \$38 | \$37 | \$36 | \$36 | \$35 |
| 314 | \$68 | \$59 | \$51 | \$50 | \$50 | \$49 | \$48 | \$48 | \$47 | \$47 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 315 | \$116 | \$114 | \$112 | \$109 | \$106 | \$103 | \$100 | \$97 | \$94 | \$91 |
| 316 | \$56 | \$47 | \$38 | \$37 | \$37 | \$36 | \$36 | \$35 | \$34 | \$34 |
| 317 | \$65 | \$57 | \$49 | \$48 | \$48 | \$47 | \$47 | \$46 | \$45 | \$45 |
| 318 | \$112 | \$110 | \$108 | \$105 | \$102 | \$99 | \$96 | \$93 | \$90 | \$87 |
| 319 | \$54 | \$45 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 |
| 320 | \$62 | \$54 | \$46 | \$46 | \$45 | \$45 | \$44 | \$44 | \$43 | \$43 |
| 321 | \$106 | \$105 | \$103 | \$100 | \$97 | \$94 | \$91 | \$89 | \$86 | \$83 |
| 322 | \$51 | \$43 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 |
| 323 | \$60 | \$52 | \$44 | \$44 | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 |
| 324 | \$102 | \$100 | \$98 | \$96 | \$93 | \$90 | \$87 | \$85 | \$82 | \$79 |
| 325 | \$51 | \$42 | \$34 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 | \$31 |
| 326 | \$59 | \$51 | \$44 | \$43 | \$43 | \$42 | \$42 | \$41 | \$41 | \$40 |
| 327 | \$100 | \$99 | \$97 | \$94 | \$92 | \$89 | \$86 | \$84 | \$81 | \$78 |
| 328 | \$48 | \$40 | \$32 | \$32 | \$31 | \$31 | \$30 | \$30 | \$29 | \$29 |
| 329 | \$56 | \$49 | \$42 | \$41 | \$41 | \$40 | \$40 | \$39 | \$39 | \$38 |
| 330 | \$95 | \$94 | \$92 | \$89 | \$87 | \$84 | \$82 | \$79 | \$77 | \$74 |
| 331 | \$45 | \$38 | \$30 | \$30 | \$29 | \$29 | \$29 | \$28 | \$28 | \$27 |
| 332 | \$53 | \$46 | \$39 | \$39 | \$38 | \$38 | \$37 | \$37 | \$37 | \$36 |
| 333 | \$90 | \$88 | \$87 | \$84 | \$82 | \$80 | \$77 | \$75 | \$72 | \$70 |
| 334 | \$42 | \$35 | \$28 | \$28 | \$27 | \$27 | \$27 | \$26 | \$26 | \$25 |
| 335 | \$49 | \$43 | \$37 | \$36 | \$36 | \$35 | \$35 | \$35 | \$34 | \$34 |
| 336 | \$84 | \$82 | \$81 | \$79 | \$77 | \$74 | \$72 | \$70 | \$68 | \$65 |
| 337 | \$42 | \$35 | \$28 | \$27 | \$27 | \$27 | \$26 | \$26 | \$25 | \$25 |
| 338 | \$48 | \$42 | \$36 | \$36 | \$35 | \$35 | \$34 | \$34 | \$34 | \$33 |
| 339 | \$83 | \$81 | \$80 | \$78 | \$75 | \$73 | \$71 | \$69 | \$67 | \$64 |
| 340 |  |  |  |  |  |  |  |  |  |  |
| 341 |  |  |  |  |  |  |  |  |  |  |
| 342 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 343 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 344 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 345 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 346 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 347 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 348 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 349 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 350 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 351 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 352 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 353 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 354 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 |
| 355 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 |
| 356 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 |
| 357 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 |
| 358 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 |
| 359 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 |
| 360 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 361 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 |
| 362 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 |
| 363 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 |
| 364 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 |
| 365 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 |
| 366 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 |
| 367 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 368 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 |
| 369 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 |
| 370 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 |
| 371 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 |
| 372 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 |
| 373 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 |
| 374 |  |  |  |  |  |  |  |  |  |  |
| 375 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 376 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 377 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 378 \| | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 379 |  |  |  |  |  |  |  |  |  |  |
| 380 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 381 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 382 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 383 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 384 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 385 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 386 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 387 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 388 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 389 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 390 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 391 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 392 |  |  |  |  |  |  |  |  |  |  |
| 393 |  |  |  |  |  |  |  |  |  |  |
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| 399 |  |  |  |  |  |  |  |  | Rooftop Solar | ovoltaic 7 |
| 400 |  |  |  |  |  |  |  |  |  |  |
| 401 |  |  |  |  |  |  |  |  | U.S. Solar Pho | Itaic Syst |
| 402 |  |  |  |  |  |  |  |  | U.S. Solar Pho | Itaic Syst |
| 403 |  |  |  |  |  |  |  |  |  |  |
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|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
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| 1 |  |  |  |  |  |  |  |  |  |  |
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|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 |  |  |  |  |  |  |  |  |  |  |
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| 45 |  |  |  |  |  |  |  |  |  |  |
| 46 |  |  |  |  |  |  |  |  |  |  |
| 47 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 48 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 49 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 50 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 51 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 52 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 53 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 54 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 55 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 56 | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 57 | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 58 | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% | 8.8\% |
| 59 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 60 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 61 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 62 | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% |
| 63 | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% |
| 64 | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% | 75.8\% |
| 65 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 66 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 67 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 68 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 69 | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 71 | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% | 1.8\% |
| 72 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 73 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 74 | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% | 6.1\% |
| 75 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 76 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 77 | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% | 4.4\% |
| 78 |  |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |  |
| 81 |  |  |  |  |  |  |  |  |  |  |
| 82 |  |  |  |  |  |  |  |  |  |  |
| 83 |  |  |  |  |  |  |  |  |  |  |
| 84 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 85 | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% | 12.5\% |
| 86 | 12.3\% | 12.3\% | 12.3\% | 12.3\% | 12.4\% | 12.4\% | 12.4\% | 12.4\% | 12.4\% | 12.4\% |
| 87 | 12.0\% | 12.1\% | 12.1\% | 12.1\% | 12.1\% | 12.1\% | 12.1\% | 12.1\% | 12.1\% | 12.1\% |
| 88 | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% | 13.7\% |
| 89 | 13.5\% | 13.5\% | 13.5\% | 13.5\% | 13.5\% | 13.6\% | 13.6\% | 13.6\% | 13.6\% | 13.6\% |
| 90 | 13.2\% | 13.2\% | 13.2\% | 13.2\% | 13.2\% | 13.3\% | 13.3\% | 13.3\% | 13.3\% | 13.3\% |
| 91 | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% | 14.2\% |
| 92 | 14.0\% | 14.0\% | 14.1\% | 14.1\% | 14.1\% | 14.1\% | 14.1\% | 14.2\% | 14.2\% | 14.2\% |
| 93 | 13.7\% | 13.8\% | 13.8\% | 13.8\% | 13.8\% | 13.8\% | 13.8\% | 13.8\% | 13.8\% | 13.8\% |
| 94 | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% | 14.9\% |
| 95 | 14.7\% | 14.7\% | 14.8\% | 14.8\% | 14.8\% | 14.8\% | 14.8\% | 14.9\% | 14.9\% | 14.9\% |
| 96 | 14.4\% | 14.4\% | 14.5\% | 14.5\% | 14.5\% | 14.5\% | 14.5\% | 14.5\% | 14.5\% | 14.5\% |
| 97 | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% | 15.6\% |
| 98 | 15.4\% | 15.4\% | 15.4\% | 15.5\% | 15.5\% | 15.5\% | 15.5\% | 15.5\% | 15.6\% | 15.6\% |
| 99 | 15.1\% | 15.1\% | 15.1\% | 15.1\% | 15.1\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% | 15.2\% |
| 100 | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% | 15.8\% |
| 101 | 15.6\% | 15.6\% | 15.6\% | 15.7\% | 15.7\% | 15.7\% | 15.7\% | 15.7\% | 15.8\% | 15.8\% |
| 102 | 15.3\% | 15.3\% | 15.3\% | 15.3\% | 15.3\% | 15.3\% | 15.4\% | 15.4\% | 15.4\% | 15.4\% |
| 103 | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% | 16.7\% |
| 104 | 16.5\% | 16.5\% | 16.5\% | 16.5\% | 16.6\% | 16.6\% | 16.6\% | 16.6\% | 16.6\% | 16.7\% |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 | 16.1\% | 16.1\% | 16.2\% | 16.2\% | 16.2\% | 16.2\% | 16.2\% | 16.2\% | 16.2\% | 16.3\% |
| 106 | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% | 17.7\% |
| 107 | 17.4\% | 17.4\% | 17.5\% | 17.5\% | 17.5\% | 17.5\% | 17.6\% | 17.6\% | 17.6\% | 17.6\% |
| 108 | 17.1\% | 17.1\% | 17.1\% | 17.1\% | 17.1\% | 17.1\% | 17.2\% | 17.2\% | 17.2\% | 17.2\% |
| 109 | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% |
| 110 | 18.7\% | 18.7\% | 18.7\% | 18.8\% | 18.8\% | 18.8\% | 18.8\% | 18.8\% | 18.9\% | 18.9\% |
| 111 | 18.3\% | 18.3\% | 18.3\% | 18.3\% | 18.4\% | 18.4\% | 18.4\% | 18.4\% | 18.4\% | 18.4\% |
| 112 | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% | 19.3\% |
| 113 | 19.0\% | 19.0\% | 19.0\% | 19.0\% | 19.1\% | 19.1\% | 19.1\% | 19.1\% | 19.2\% | 19.2\% |
| 114 | 18.6\% | 18.6\% | 18.6\% | 18.6\% | 18.7\% | 18.7\% | 18.7\% | 18.7\% | 18.7\% | 18.7\% |
| 115 |  |  |  |  |  |  |  |  |  |  |
| 116 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 117 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 | 1,094 |
| 118 | 1,077 | 1,078 | 1,080 | 1,081 | 1,083 | 1,084 | 1,085 | 1,087 | 1,088 | 1,089 |
| 119 | 1,055 | 1,056 | 1,057 | 1,058 | 1,059 | 1,060 | 1,061 | 1,062 | 1,062 | 1,063 |
| 120 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 | 1,198 |
| 121 | 1,180 | 1,181 | 1,183 | 1,184 | 1,186 | 1,187 | 1,189 | 1,190 | 1,192 | 1,193 |
| 122 | 1,156 | 1,157 | 1,158 | 1,159 | 1,160 | 1,161 | 1,162 | 1,163 | 1,164 | 1,165 |
| 123 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 | 1,248 |
| 124 | 1,229 | 1,230 | 1,232 | 1,233 | 1,235 | 1,237 | 1,238 | 1,240 | 1,241 | 1,243 |
| 125 | 1,204 | 1,205 | 1,206 | 1,207 | 1,208 | 1,209 | 1,210 | 1,211 | 1,212 | 1,213 |
| 126 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 | 1,310 |
| 127 | 1,290 | 1,291 | 1,293 | 1,295 | 1,296 | 1,298 | 1,300 | 1,301 | 1,303 | 1,305 |
| 128 | 1,264 | 1,265 | 1,266 | 1,267 | 1,268 | 1,269 | 1,270 | 1,271 | 1,272 | 1,273 |
| 129 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 | 1,370 |
| 130 | 1,349 | 1,351 | 1,353 | 1,354 | 1,356 | 1,358 | 1,360 | 1,361 | 1,363 | 1,365 |
| 131 | 1,322 | 1,323 | 1,324 | 1,325 | 1,327 | 1,328 | 1,329 | 1,330 | 1,331 | 1,332 |
| 132 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 | 1,387 |
| 133 | 1,366 | 1,368 | 1,370 | 1,371 | 1,373 | 1,375 | 1,377 | 1,378 | 1,380 | 1,382 |
| 134 | 1,339 | 1,340 | 1,341 | 1,342 | 1,343 | 1,344 | 1,345 | 1,347 | 1,348 | 1,349 |
| 135 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 | 1,465 |
| 136 | 1,442 | 1,444 | 1,446 | 1,448 | 1,450 | 1,452 | 1,454 | 1,455 | 1,457 | 1,459 |
| 137 | 1,413 | 1,415 | 1,416 | 1,417 | 1,418 | 1,419 | 1,421 | 1,422 | 1,423 | 1,424 |
| 138 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 | 1,550 |
| 139 | 1,526 | 1,528 | 1,530 | 1,532 | 1,534 | 1,536 | 1,538 | 1,540 | 1,542 | 1,544 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 | 1,496 | 1,497 | 1,498 | 1,499 | 1,501 | 1,502 | 1,503 | 1,505 | 1,506 | 1,507 |
| 141 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 | 1,661 |
| 142 | 1,636 | 1,638 | 1,640 | 1,643 | 1,645 | 1,647 | 1,649 | 1,651 | 1,653 | 1,655 |
| 143 | 1,603 | 1,605 | 1,606 | 1,607 | 1,609 | 1,610 | 1,611 | 1,613 | 1,614 | 1,615 |
| 144 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 | 1,687 |
| 145 | 1,662 | 1,664 | 1,666 | 1,668 | 1,670 | 1,673 | 1,675 | 1,677 | 1,679 | 1,681 |
| 146 | 1,628 | 1,630 | 1,631 | 1,633 | 1,634 | 1,635 | 1,637 | 1,638 | 1,639 | 1,641 |
| 147 |  |  |  |  |  |  |  |  |  |  |
| 148 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 149 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 150 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 151 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 152 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 153 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 154 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 155 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 156 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 157 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 158 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 159 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 160 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 161 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 162 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 163 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 164 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 165 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 166 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 167 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 168 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 169 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 170 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 171 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 172 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 173 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 174 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |


|  | AE | AF | AG | AH | Al | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 176 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 177 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 178 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 179 |  |  |  |  |  |  |  |  |  |  |
| 180 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 181 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 182 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 183 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 184 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 185 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 186 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 187 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 188 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 189 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 190 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 191 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 192 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 193 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 194 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 195 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 196 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 197 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 198 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 199 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 200 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 201 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 202 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 203 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 204 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 205 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 206 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |
| 207 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 208 | \$695 | \$683 | \$671 | \$659 | \$647 | \$635 | \$623 | \$611 | \$599 | \$586 |
| 209 | \$926 | \$915 | \$904 | \$892 | \$881 | \$870 | \$859 | \$847 | \$836 | \$825 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 210 | \$1,778 | \$1,714 | \$1,651 | \$1,587 | \$1,524 | \$1,461 | \$1,397 | \$1,334 | \$1,270 | \$1,207 |
| 211 |  |  |  |  |  |  |  |  |  |  |
| 212 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 213 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 214 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 215 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 216 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 217 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 218 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 219 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 220 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 221 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 222 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 223 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 224 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 225 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 226 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 227 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 228 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 229 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 230 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 231 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 232 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 233 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 234 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 235 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 236 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 237 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 238 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 239 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 240 | \$10 | \$10 | \$10 | \$10 | \$10 | \$10 | \$9 | \$9 | \$9 | \$9 |
| 241 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$12 | \$11 |
| 242 | \$21 | \$20 | \$19 | \$19 | \$18 | \$18 | \$17 | \$16 | \$16 | \$15 |
| 243 |  |  |  |  |  |  |  |  |  |  |
| 244 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |




|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 315 | \$88 | \$84 | \$81 | \$78 | \$75 | \$72 | \$69 | \$66 | \$63 | \$60 |
| 316 | \$33 | \$33 | \$32 | \$32 | \$31 | \$31 | \$30 | \$30 | \$29 | \$29 |
| 317 | \$44 | \$44 | \$43 | \$43 | \$42 | \$41 | \$41 | \$40 | \$40 | \$39 |
| 318 | \$84 | \$81 | \$78 | \$75 | \$72 | \$69 | \$66 | \$63 | \$60 | \$58 |
| 319 | \$32 | \$31 | \$31 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 |
| 320 | \$42 | \$42 | \$41 | \$41 | \$40 | \$40 | \$39 | \$38 | \$38 | \$37 |
| 321 | \$80 | \$77 | \$74 | \$72 | \$69 | \$66 | \$63 | \$60 | \$58 | \$55 |
| 322 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$28 | \$27 | \$27 | \$26 |
| 323 | \$40 | \$40 | \$39 | \$39 | \$38 | \$38 | \$37 | \$37 | \$36 | \$36 |
| 324 | \$77 | \$74 | \$71 | \$68 | \$66 | \$63 | \$60 | \$58 | \$55 | \$52 |
| 325 | \$30 | \$30 | \$29 | \$29 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 |
| 326 | \$40 | \$39 | \$39 | \$38 | \$38 | \$37 | \$37 | \$36 | \$36 | \$35 |
| 327 | \$76 | \$73 | \$70 | \$68 | \$65 | \$62 | \$60 | \$57 | \$54 | \$52 |
| 328 | \$28 | \$28 | \$28 | \$27 | \$27 | \$26 | \$26 | \$25 | \$25 | \$24 |
| 329 | \$38 | \$37 | \$37 | \$36 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 |
| 330 | \$72 | \$69 | \$67 | \$64 | \$62 | \$59 | \$56 | \$54 | \$51 | \$49 |
| 331 | \$27 | \$26 | \$26 | \$26 | \$25 | \$25 | \$24 | \$24 | \$23 | \$23 |
| 332 | \$36 | \$35 | \$35 | \$34 | \$34 | \$33 | \$33 | \$32 | \$32 | \$32 |
| 333 | \$68 | \$65 | \$63 | \$60 | \$58 | \$56 | \$53 | \$51 | \$49 | \$46 |
| 334 | \$25 | \$25 | \$24 | \$24 | \$23 | \$23 | \$23 | \$22 | \$22 | \$21 |
| 335 | \$33 | \$33 | \$32 | \$32 | \$32 | \$31 | \$31 | \$30 | \$30 | \$29 |
| 336 | \$63 | \$61 | \$59 | \$56 | \$54 | \$52 | \$50 | \$48 | \$45 | \$43 |
| 337 | \$25 | \$24 | \$24 | \$24 | \$23 | \$23 | \$22 | \$22 | \$22 | \$21 |
| 338 | \$33 | \$32 | \$32 | \$31 | \$31 | \$31 | \$30 | \$30 | \$29 | \$29 |
| 339 | \$62 | \$60 | \$58 | \$56 | \$53 | \$51 | \$49 | \$47 | \$45 | \$43 |
| 340 |  |  |  |  |  |  |  |  |  |  |
| 341 |  |  |  |  |  |  |  |  |  |  |
| 342 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 343 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 344 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 345 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 346 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 347 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 348 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |
| 349 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 | 0.889 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 350 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 351 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 352 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 | 1.039 |
| 353 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 354 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 |
| 355 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 |
| 356 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 |
| 357 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 |
| 358 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 |
| 359 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 |
| 360 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 361 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 |
| 362 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 |
| 363 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 |
| 364 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 |
| 365 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 |
| 366 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 |
| 367 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 368 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 | 0.9580 |
| 369 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 | 0.9178 |
| 370 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 | 0.8793 |
| 371 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 | 0.8424 |
| 372 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 | 0.8070 |
| 373 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 | 0.7732 |
| 374 |  |  |  |  |  |  |  |  |  |  |
| 375 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 376 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 377 \| | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 378 <br> 379 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 379 |  |  |  |  |  |  |  |  |  |  |
| 380 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 | 1.017 |
| 381 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 382 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 | 1.090 |
| 383 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 384 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 385 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 386 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 387 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 388 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 389 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| 390 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 | 1.166 |
| 391 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 | 1.292 |
| 392 |  |  |  |  |  |  |  |  |  |  |
| 393 |  |  |  |  |  |  |  |  |  |  |
| 394 |  |  |  |  |  |  |  |  |  |  |
| 395 |  |  |  |  |  |  |  |  |  |  |
| 396 |  |  |  |  |  |  |  |  |  |  |
| 397 |  |  |  |  |  |  |  |  |  |  |
| 398 |  |  |  |  |  |  |  |  |  |  |
| 399 | echnical Poten | tial in the United | States: A Det | tailed Assessm | ment. NREL TP- | -6A20-65298 |  |  |  |  |
| 400 |  |  |  |  |  |  |  |  |  |  |
| 401 | em and Energy | Storage Cost | Benchmarks: Q | Q1 2021. Golden | en, CO: National | al Renewable En | Energy Laborato |  |  |  |
| 402 | m and Energy | Storage Cost | Benchmarks: Q | Q1 2021. Golden | n, CO: National | al Renewable En | Energy Laborato |  |  |  |
| 403 |  |  |  |  |  |  |  |  |  |  |
| 404 |  |  |  |  |  |  |  |  |  |  |
| 405 |  |  |  |  |  |  |  |  |  |  |
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|  | AO | AP |  |
| ---: | :--- | :--- | :--- |
| 1 |  |  | $A Q$ |
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|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 35 |  |  |  |
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| 42 |  |  |  |
| 43 |  |  |  |
| 44 |  |  |  |
| 45 |  |  |  |
| 46 |  |  |  |
| 47 | 2048 | 2049 | 2050 |
| 48 | 2.5\% | 2.5\% | 2.5\% |
| 49 | 4.0\% | 4.0\% | 4.0\% |
| 50 | 4.0\% | 4.0\% | 4.0\% |
| 51 | 4.0\% | 4.0\% | 4.0\% |
| 52 | 1.5\% | 1.5\% | 1.5\% |
| 53 | 1.5\% | 1.5\% | 1.5\% |
| 54 | 1.5\% | 1.5\% | 1.5\% |
| 55 | 3.5\% | 3.5\% | 3.5\% |
| 56 | 8.8\% | 8.8\% | 8.8\% |
| 57 | 8.8\% | 8.8\% | 8.8\% |
| 58 | 8.8\% | 8.8\% | 8.8\% |
| 59 | 6.1\% | 6.1\% | 6.1\% |
| 60 | 6.1\% | 6.1\% | 6.1\% |
| 61 | 6.1\% | 6.1\% | 6.1\% |
| 62 | 75.8\% | 75.8\% | 75.8\% |
| 63 | 75.8\% | 75.8\% | 75.8\% |
| 64 | 75.8\% | 75.8\% | 75.8\% |
| 65 | 25.7\% | 25.7\% | 25.7\% |
| 66 | 4.4\% | 4.4\% | 4.4\% |
| 67 | 4.4\% | 4.4\% | 4.4\% |
| 68 | 4.4\% | 4.4\% | 4.4\% |
| 69 | 1.8\% | 1.8\% | 1.8\% |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 70 | 1.8\% | 1.8\% | 1.8\% |
| 71 | 1.8\% | 1.8\% | 1.8\% |
| 72 | 6.1\% | 6.1\% | 6.1\% |
| 73 | 6.1\% | 6.1\% | 6.1\% |
| 74 | 6.1\% | 6.1\% | 6.1\% |
| 75 | 4.4\% | 4.4\% | 4.4\% |
| 76 | 4.4\% | 4.4\% | 4.4\% |
| 77 | 4.4\% | 4.4\% | 4.4\% |
| 78 |  |  |  |
| 79 |  |  |  |
| 80 |  |  |  |
| 81 |  |  |  |
| 82 |  |  |  |
| 83 |  |  |  |
| 84 | 2048 | 2049 | 2050 |
| 85 | 12.5\% | 12.5\% | 12.5\% |
| 86 | 12.5\% | 12.5\% | 12.5\% |
| 87 | 12.1\% | 12.2\% | 12.2\% |
| 88 | 13.7\% | 13.7\% | 13.7\% |
| 89 | 13.6\% | 13.7\% | 13.7\% |
| 90 | 13.3\% | 13.3\% | 13.3\% |
| 91 | 14.2\% | 14.2\% | 14.2\% |
| 92 | 14.2\% | 14.2\% | 14.2\% |
| 93 | 13.9\% | 13.9\% | 13.9\% |
| 94 | 14.9\% | 14.9\% | 14.9\% |
| 95 | 14.9\% | 14.9\% | 14.9\% |
| 96 | 14.5\% | 14.6\% | 14.6\% |
| 97 | 15.6\% | 15.6\% | 15.6\% |
| 98 | 15.6\% | 15.6\% | 15.6\% |
| 99 | 15.2\% | 15.2\% | 15.2\% |
| 100 | 15.8\% | 15.8\% | 15.8\% |
| 101 | 15.8\% | 15.8\% | 15.8\% |
| 102 | 15.4\% | 15.4\% | 15.4\% |
| 103 | 16.7\% | 16.7\% | 16.7\% |
| 104 | 16.7\% | 16.7\% | 16.7\% |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 105 | 16.3\% | 16.3\% | 16.3\% |
| 106 | 17.7\% | 17.7\% | 17.7\% |
| 107 | 17.6\% | 17.7\% | 17.7\% |
| 108 | 17.2\% | 17.2\% | 17.2\% |
| 109 | 19.0\% | 19.0\% | 19.0\% |
| 110 | 18.9\% | 18.9\% | 19.0\% |
| 111 | 18.5\% | 18.5\% | 18.5\% |
| 112 | 19.3\% | 19.3\% | 19.3\% |
| 113 | 19.2\% | 19.2\% | 19.3\% |
| 114 | 18.7\% | 18.8\% | 18.8\% |
| 115 |  |  |  |
| 116 | 2048 | 2049 | 2050 |
| 117 | 1,094 | 1,094 | 1,094 |
| 118 | 1,091 | 1,092 | 1,094 |
| 119 | 1,064 | 1,065 | 1,066 |
| 120 | 1,198 | 1,198 | 1,198 |
| 121 | 1,195 | 1,196 | 1,198 |
| 122 | 1,166 | 1,167 | 1,168 |
| 123 | 1,248 | 1,248 | 1,248 |
| 124 | 1,244 | 1,246 | 1,248 |
| 125 | 1,214 | 1,215 | 1,216 |
| 126 | 1,310 | 1,310 | 1,310 |
| 127 | 1,306 | 1,308 | 1,310 |
| 128 | 1,274 | 1,276 | 1,277 |
| 129 | 1,370 | 1,370 | 1,370 |
| 130 | 1,367 | 1,368 | 1,370 |
| 131 | 1,333 | 1,334 | 1,336 |
| 132 | 1,387 | 1,387 | 1,387 |
| 133 | 1,384 | 1,385 | 1,387 |
| 134 | 1,350 | 1,351 | 1,352 |
| 135 | 1,465 | 1,465 | 1,465 |
| 136 | 1,461 | 1,463 | 1,465 |
| 137 | 1,425 | 1,427 | 1,428 |
| 138 | 1,550 | 1,550 | 1,550 |
| 139 | 1,546 | 1,548 | 1,550 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 140 | 1,508 | 1,510 | 1,511 |
| 141 | 1,661 | 1,661 | 1,661 |
| 142 | 1,657 | 1,659 | 1,661 |
| 143 | 1,617 | 1,618 | 1,620 |
| 144 | 1,687 | 1,687 | 1,687 |
| 145 | 1,683 | 1,685 | 1,687 |
| 146 | 1,642 | 1,644 | 1,645 |
| 147 |  |  |  |
| 148 | 2048 | 2049 | 2050 |
| 149 | \$574 | \$562 | \$550 |
| 150 | \$814 | \$802 | \$791 |
| 151 | \$1,143 | \$1,080 | \$1,016 |
| 152 | \$574 | \$562 | \$550 |
| 153 | \$814 | \$802 | \$791 |
| 154 | \$1,143 | \$1,080 | \$1,016 |
| 155 | \$574 | \$562 | \$550 |
| 156 | \$814 | \$802 | \$791 |
| 157 | \$1,143 | \$1,080 | \$1,016 |
| 158 | \$574 | \$562 | \$550 |
| 159 | \$814 | \$802 | \$791 |
| 160 | \$1,143 | \$1,080 | \$1,016 |
| 161 | \$574 | \$562 | \$550 |
| 162 | \$814 | \$802 | \$791 |
| 163 | \$1,143 | \$1,080 | \$1,016 |
| 164 | \$574 | \$562 | \$550 |
| 165 | \$814 | \$802 | \$791 |
| 166 | \$1,143 | \$1,080 | \$1,016 |
| 167 | \$574 | \$562 | \$550 |
| 168 | \$814 | \$802 | \$791 |
| 169 | \$1,143 | \$1,080 | \$1,016 |
| 170 | \$574 | \$562 | \$550 |
| 171 | \$814 | \$802 | \$791 |
| 172 | \$1,143 | \$1,080 | \$1,016 |
| 173 | \$574 | \$562 | \$550 |
| 174 | \$814 | \$802 | \$791 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 175 | \$1,143 | \$1,080 | \$1,016 |
| 176 | \$574 | \$562 | \$550 |
| 177 | \$814 | \$802 | \$791 |
| 178 | \$1,143 | \$1,080 | \$1,016 |
| 179 |  |  |  |
| 180 | 2048 | 2049 | 2050 |
| 181 | \$574 | \$562 | \$550 |
| 182 | \$814 | \$802 | \$791 |
| 183 | \$1,143 | \$1,080 | \$1,016 |
| 184 | \$574 | \$562 | \$550 |
| 185 | \$814 | \$802 | \$791 |
| 186 | \$1,143 | \$1,080 | \$1,016 |
| 187 | \$574 | \$562 | \$550 |
| 188 | \$814 | \$802 | \$791 |
| 189 | \$1,143 | \$1,080 | \$1,016 |
| 190 | \$574 | \$562 | \$550 |
| 191 | \$814 | \$802 | \$791 |
| 192 | \$1,143 | \$1,080 | \$1,016 |
| 193 | \$574 | \$562 | \$550 |
| 194 | \$814 | \$802 | \$791 |
| 195 | \$1,143 | \$1,080 | \$1,016 |
| 196 | \$574 | \$562 | \$550 |
| 197 | \$814 | \$802 | \$791 |
| 198 | \$1,143 | \$1,080 | \$1,016 |
| 199 | \$574 | \$562 | \$550 |
| 200 | \$814 | \$802 | \$791 |
| 201 | \$1,143 | \$1,080 | \$1,016 |
| 202 | \$574 | \$562 | \$550 |
| 203 | \$814 | \$802 | \$791 |
| 204 | \$1,143 | \$1,080 | \$1,016 |
| 205 | \$574 | \$562 | \$550 |
| 206 | \$814 | \$802 | \$791 |
| 207 | \$1,143 | \$1,080 | \$1,016 |
| 208 | \$574 | \$562 | \$550 |
| 209 | \$814 | \$802 | \$791 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 210 | \$1,143 | \$1,080 | \$1,016 |
| 211 |  |  |  |
| 212 | 2048 | 2049 | 2050 |
| 213 | \$9 | \$9 | \$9 |
| 214 | \$11 | \$11 | \$11 |
| 215 | \$14 | \$14 | \$13 |
| 216 | \$9 | \$9 | \$9 |
| 217 | \$11 | \$11 | \$11 |
| 218 | \$14 | \$14 | \$13 |
| 219 | \$9 | \$9 | \$9 |
| 220 | \$11 | \$11 | \$11 |
| 221 | \$14 | \$14 | \$13 |
| 222 | \$9 | \$9 | \$9 |
| 223 | \$11 | \$11 | \$11 |
| 224 | \$14 | \$14 | \$13 |
| 225 | \$9 | \$9 | \$9 |
| 226 | \$11 | \$11 | \$11 |
| 227 | \$14 | \$14 | \$13 |
| 228 | \$9 | \$9 | \$9 |
| 229 | \$11 | \$11 | \$11 |
| 230 | \$14 | \$14 | \$13 |
| 231 | \$9 | \$9 | \$9 |
| 232 | \$11 | \$11 | \$11 |
| 233 | \$14 | \$14 | \$13 |
| 234 | \$9 | \$9 | \$9 |
| 235 | \$11 | \$11 | \$11 |
| 236 | \$14 | \$14 | \$13 |
| 237 | \$9 | \$9 | \$9 |
| 238 | \$11 | \$11 | \$11 |
| 239 | \$14 | \$14 | \$13 |
| 240 | \$9 | \$9 | \$9 |
| 241 | \$11 | \$11 | \$11 |
| 242 | \$14 | \$14 | \$13 |
| 243 |  |  |  |
| 244 | 2048 | 2049 | 2050 |


|  | AO |  | AP |  | AQ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 245 | \$0 |  | \$0 |  |  | \$0 |
| 246 | \$0 |  | \$0 |  |  | \$0 |
| 247 | \$0 |  | \$0 |  |  | \$0 |
| 248 | \$0 |  |  | \$0 |  | \$0 |
| 249 | \$0 |  |  | \$0 |  | \$0 |
| 250 | \$0 |  |  | \$0 |  | \$0 |
| 251 | \$0 |  |  | \$0 |  | \$0 |
| 252 | \$0 |  |  | \$0 |  | \$0 |
| 253 | \$0 |  |  | \$0 |  | \$0 |
| 254 | \$0 |  |  | \$0 |  | \$0 |
| 255 | \$0 |  |  | \$0 |  | \$0 |
| 256 | \$0 |  |  | \$0 |  | \$0 |
| 257 | \$0 |  |  | \$0 |  | \$0 |
| 258 | \$0 |  |  | \$0 |  | \$0 |
| 259 | \$0 |  |  | \$0 |  | \$0 |
| 260 | \$0 |  |  | \$0 |  | \$0 |
| 261 | \$0 |  |  | \$0 |  | \$0 |
| 262 | \$0 |  |  | \$0 |  | \$0 |
| 263 | \$0 |  |  | \$0 |  | \$0 |
| 264 | \$0 |  |  | \$0 |  | \$0 |
| 265 | \$0 |  |  | \$0 |  | \$0 |
| 266 | \$0 |  |  | \$0 |  | \$0 |
| 267 | \$0 |  |  | \$0 |  | \$0 |
| 268 | \$0 |  |  | \$0 |  | \$0 |
| 269 | \$0 |  |  | \$0 |  | \$0 |
| 270 | \$0 |  |  | \$0 |  | \$0 |
| 271 | \$0 |  |  | \$0 |  | \$0 |
| 272 | \$0 |  |  | \$0 |  | \$0 |
| 273 | \$0 |  |  | \$0 |  | \$0 |
| 274 | \$0 |  | \$0 |  |  | \$0 |
| 275 |  |  |  |  |  |  |
| 276 |  |  |  |  |  |  |
| 277 | 2048 |  | 2049 |  | 2050 |  |
| 278 |  | \$0 |  | \$0 |  | \$0 |
| 279 |  | \$0 |  | \$0 |  | \$0 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 280 | \$0 | \$0 | \$0 |
| 281 | \$0 | \$0 | \$0 |
| 282 | \$0 | \$0 | \$0 |
| 283 | \$0 | \$0 | \$0 |
| 284 | \$0 | \$0 | \$0 |
| 285 | \$0 | \$0 | \$0 |
| 286 | \$0 | \$0 | \$0 |
| 287 | \$0 | \$0 | \$0 |
| 288 | \$0 | \$0 | \$0 |
| 289 | \$0 | \$0 | \$0 |
| 290 | \$0 | \$0 | \$0 |
| 291 | \$0 | \$0 | \$0 |
| 292 | \$0 | \$0 | \$0 |
| 293 | \$0 | \$0 | \$0 |
| 294 | \$0 | \$0 | \$0 |
| 295 | \$0 | \$0 | \$0 |
| 296 | \$0 | \$0 | \$0 |
| 297 | \$0 | \$0 | \$0 |
| 298 | \$0 | \$0 | \$0 |
| 299 | \$0 | \$0 | \$0 |
| 300 | \$0 | \$0 | \$0 |
| 301 | \$0 | \$0 | \$0 |
| 302 | \$0 | \$0 | \$0 |
| 303 | \$0 | \$0 | \$0 |
| 304 | \$0 | \$0 | \$0 |
| 305 | \$0 | \$0 | \$0 |
| 306 | \$0 | \$0 | \$0 |
| 307 | \$0 | \$0 | \$0 |
| 308 |  |  |  |
| 309 | 2048 | 2049 | 2050 |
| 310 | \$32 | \$31 | \$31 |
| 311 | \$44 | \$44 | \$43 |
| 312 | \$62 | \$59 | \$56 |
| 313 | \$29 | \$29 | \$28 |
| 314 | \$40 | \$40 | \$39 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 315 | \$57 | \$54 | \$51 |
| 316 | \$28 | \$28 | \$27 |
| 317 | \$39 | \$38 | \$38 |
| 318 | \$55 | \$52 | \$49 |
| 319 | \$27 | \$26 | \$26 |
| 320 | \$37 | \$36 | \$36 |
| 321 | \$52 | \$49 | \$46 |
| 322 | \$26 | \$25 | \$25 |
| 323 | \$35 | \$35 | \$34 |
| 324 | \$50 | \$47 | \$44 |
| 325 | \$25 | \$25 | \$24 |
| 326 | \$35 | \$34 | \$34 |
| 327 | \$49 | \$46 | \$44 |
| 328 | \$24 | \$23 | \$23 |
| 329 | \$33 | \$33 | \$32 |
| 330 | \$47 | \$44 | \$42 |
| 331 | \$23 | \$22 | \$22 |
| 332 | \$31 | \$31 | \$30 |
| 333 | \$44 | \$42 | \$39 |
| 334 | \$21 | \$21 | \$20 |
| 335 | \$29 | \$29 | \$28 |
| 336 | \$41 | \$39 | \$37 |
| 337 | \$21 | \$20 | \$20 |
| 338 | \$29 | \$28 | \$28 |
| 339 | \$40 | \$38 | \$36 |
| 340 |  |  |  |
| 341 |  |  |  |
| 342 | 2048 | 2049 | 2050 |
| 343 | 11.61\% | 11.61\% | 11.61\% |
| 344 | 11.61\% | 11.61\% | 11.61\% |
| 345 | 11.61\% | 11.61\% | 11.61\% |
| 346 | 0.00\% | 0.00\% | 0.00\% |
| 347 | 0.889 | 0.889 | 0.889 |
| 348 | 0.889 | 0.889 | 0.889 |
| 349 | 0.889 | 0.889 | 0.889 |


|  | AO | AP | AQ |
| :---: | :---: | :---: | :---: |
| 350 | 1.039 | 1.039 | 1.039 |
| 351 | 1.039 | 1.039 | 1.039 |
| 352 | 1.039 | 1.039 | 1.039 |
| 353 | $\mathbf{2 0 4 8}$ | $\mathbf{2 0 4 9}$ | $\mathbf{2 0 5 0}$ |
| 354 | 0.9580 | 0.9580 | 0.9580 |
| 355 | 0.9178 | 0.9178 | 0.9178 |
| 356 | 0.8793 | 0.8793 | 0.8793 |
| 357 | 0.8424 | 0.8424 | 0.8424 |
| 358 | 0.8070 | 0.8070 | 0.8070 |
| 359 | 0.7732 | 0.7732 | 0.7732 |
| 360 | $\mathbf{2 0 4 8}$ | $\mathbf{2 0 4 9}$ | $\mathbf{2 0 5 0}$ |
| 361 | 0.9580 | 0.9580 | 0.9580 |
| 362 | 0.9178 | 0.9178 | 0.9178 |
| 363 | 0.8793 | 0.8793 | 0.8793 |
| 364 | 0.8424 | 0.8424 | 0.8424 |
| 365 | 0.8070 | 0.8070 | 0.8070 |
| 366 | 0.7732 | 0.7732 | 0.7732 |
| 367 | $\mathbf{2 0 4 8}$ | $\mathbf{2 0 4 9}$ | $\mathbf{2 0 5 0}$ |
| 368 | 0.9580 | 0.9580 | 0.9580 |
| 369 | 0.9178 | 0.9178 | 0.9178 |
| 370 | 0.8793 | 0.8793 | 0.8793 |
| 371 | 0.8424 | 0.8424 | 0.8424 |
| 372 | 0.8070 | 0.8070 | 0.8070 |
| 373 | 0.7732 | 0.7732 | 0.7732 |
| 374 |  |  |  |
| 375 | $\mathbf{2 0 4 8}$ | $\mathbf{2 0 4 9}$ | $\mathbf{2 0 5 0}$ |
| 376 | 1.000 |  | 1.000 |
| 377 | 1.000 | 1.000 | 1.000 |
| 378 | 1.000 | 1.000 | 1.000 |
| 379 |  |  | 1.000 |
| 380 | 1.017 |  |  |
| 381 | 1.053 |  | 1.053 |
| 382 | 1.090 | 1.090 | 1.053 |
| 383 | 1.053 | 1.053 | 1.090 |
| 384 | 1.166 |  | 1.166 |
|  |  |  | 1.166 |


|  | AO | AP | AQ |
| ---: | ---: | ---: | ---: |
| 385 | 1.292 | 1.292 | 1.292 |
| 386 | 1.053 | 1.053 | 1.053 |
| 387 | 1.166 | 1.166 | 1.166 |
| 388 | 1.292 | 1.292 | 1.292 |
| 389 | 1.053 | 1.053 | 1.053 |
| 390 | 1.166 | 1.166 | 1.166 |
| 391 | 1.292 | 1.292 | 1.292 |
| 392 |  |  |  |
| 393 |  |  |  |
| 394 |  |  |  |
| 395 |  |  |  |
| 396 |  |  |  |
| 397 |  |  |  |
| 398 |  |  |  |
| 399 |  |  |  |
| 400 |  |  |  |
| 401 |  |  |  |
| 402 |  |  |  |
| 403 |  |  |  |
| 404 |  |  |  |
| 405 |  |  |  |
| 406 |  |  |  |
| 407 |  |  |  |




|  | A | B | CD | E F | FG | H | 1 | J | K | L |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 55 |  |  |  |  |  |  |  |  | Tax Rate (Federal and State) | * |
| 56 |  |  |  |  |  |  |  |  | WACC Nominal | Advanced |
| 57 |  |  |  |  |  |  |  |  | WACC Nominal | Moderate |
| 58 |  |  |  |  |  |  |  |  | WACC Nominal | Conservative |
| 59 |  |  |  |  |  |  |  |  | WACC Real | Advanced |
| 60 |  |  |  |  |  |  |  |  | WACC Real | Moderate |
| 61 |  |  |  |  |  |  |  |  | WACC Real | Conservative |
| 62 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal | Advanced |
| 63 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal | Moderate |
| 64 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal | Conservative |
| 65 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real | Advanced |
| 66 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real | Moderate |
| 67 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real | Conservative |
| 68 |  |  |  |  |  |  |  |  |  |  |
| 69 |  |  | X |  |  |  |  |  |  |  |
| 70 |  |  |  |  |  |  |  |  |  |  |
| 71 |  |  |  |  |  |  |  |  |  |  |
| 72 |  |  |  |  |  |  |  |  | CSP - Class 7 | Advanced |
| 73 |  |  |  |  |  |  |  |  | CSP - Class 7 | Moderate |
| 74 |  |  |  |  |  |  |  |  | CSP - Class 7 | Conservative |
| 75 |  |  |  |  |  |  |  |  | CSP - Class 3 | Advanced |
| 76 |  |  |  |  |  |  |  | (\%) | CSP - Class 3 | Moderate |
| 77 |  |  |  |  |  |  |  |  | CSP - Class 3 | Conservative |
| 78 |  |  |  |  |  |  |  |  | CSP - Class 2 | Advanced |
| 79 |  |  |  |  |  |  |  |  | CSP - Class 2 | Moderate |
| 80 |  |  |  |  |  |  |  |  | CSP - Class 2 | Conservative |
| 81 |  |  |  |  |  |  |  |  |  |  |
| 82 |  |  |  |  |  |  |  |  |  |  |
| 83 |  |  |  |  |  |  |  |  | CSP - Class 7 | Advanced |
| 84 |  |  |  |  |  |  |  |  | CSP - Class 7 | Moderate |
| 85 |  |  |  |  |  |  |  |  | CSP - Class 7 | Conservative |
| 86 |  |  |  |  |  |  |  |  | CSP - Class 3 | Advanced |
| 87 |  |  |  |  |  |  |  |  | CSP - Class 3 | Moderate |
| 88 |  |  |  |  |  |  |  |  | CSP - Class 3 | Conservative |
| 89 |  |  |  |  |  |  |  |  | CSP - Class 2 | Advanced |
| 90 |  |  |  |  |  |  |  |  | CSP - Class 2 | Moderate |
| 91 |  |  |  |  |  |  |  |  | CSP - Class 2 | Conservative |
| 92 |  |  |  |  |  |  |  |  |  |  |



|  | A | B | CD | EF | G | H | I | J |  | K | L |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 131 |  |  |  |  |  |  |  | Maintenance | CSP－Class 3 |  | Moderate |
| 132 |  |  |  |  |  |  |  | Expenses（\＄／kW－yr） | CSP－Class 3 |  | Conservative |
| 133 |  |  |  |  |  |  |  |  | CSP－Class 2 |  | Advanced |
| 134 |  |  |  |  |  |  |  |  | CSP－Class 2 |  | Moderate |
| 135 |  |  |  |  |  |  |  |  | CSP－Class 2 |  | Conservative |
| 136 |  |  |  |  |  |  |  |  |  |  |  |
| 137 |  |  |  |  |  |  |  |  |  |  |  |
| 138 |  |  |  |  |  |  |  |  | CSP－Class 7 |  | Advanced |
| 139 |  |  |  |  |  |  |  |  | CSP－Class 7 |  | Moderate |
| 140 |  |  |  |  |  |  |  |  | CSP－Class 7 |  | Conservative |
| 141 |  |  |  |  |  |  |  | Variable Operation | CSP－Class 3 |  | Advanced |
| 142 |  |  |  |  |  |  |  | and Maintenance | CSP－Class 3 |  | Moderate |
| 143 |  |  |  |  |  |  |  | Expenses（\＄／MWh） | CSP－Class 3 |  | Conservative |
| 144 |  |  |  |  |  |  |  |  | CSP－Class 2 |  | Advanced |
| 145 |  |  |  |  |  |  |  |  | CSP－Class 2 |  | Moderate |
| 146 |  |  |  |  |  |  |  |  | CSP－Class 2 |  | Conservative |
| 147 |  |  |  |  |  |  |  |  |  |  |  |
| 148 |  |  |  |  |  |  |  |  |  |  |  |
| 149 |  |  |  |  |  |  |  |  |  |  |  |
| 150 |  |  |  |  |  | $\stackrel{\square}{0}$ |  |  | CSP－Class 7 |  | Advanced |
| 151 |  |  |  |  |  | O |  |  | CSP－Class 7 |  | Moderate |
| 152 |  |  |  |  |  | － |  |  | CSP－Class 7 |  | Conservative |
| 153 |  |  |  |  |  | 을 |  |  | CSP－Class 3 |  | Advanced |
| 154 |  |  |  |  |  | O |  |  | CSP－Class 3 |  | Moderate |
| 155 |  |  |  |  |  |  |  |  | CSP－Class 3 |  | Conservative |
| 156 |  |  |  |  |  | － |  |  | CSP－Class 2 |  | Advanced |
| 157 |  |  |  |  |  | 은 |  |  | CSP－Class 2 |  | Moderate |
| 158 ｜ |  |  |  |  |  | O |  |  | CSP－Class 2 |  | Conservative |
| 159 |  |  |  |  |  |  |  |  |  |  |  |
| 160 |  |  |  |  |  |  |  | ーーーーーーー |  |  | －－－－ |
| 161 |  |  |  |  |  |  |  |  |  |  |  |
| 162 |  |  |  |  |  | $\begin{aligned} & \text { ய } \\ & 0 \\ & \hline \end{aligned}$ |  | Levelized Cost of Energy（\＄／MWh） | CSP－Class 7 |  | Advanced |
| 163 |  |  |  |  |  |  |  |  | CSP－Class 7 |  | Moderate |
| 164 |  |  |  |  |  |  |  |  | CSP－Class 7 |  | Conservative |
| 165 |  |  |  |  |  |  |  |  | CSP－Class 3 |  | Advanced |
| 166 |  |  |  |  |  |  |  |  | CSP－Class 3 |  | Moderate |
| 167 |  |  |  |  |  |  |  |  | CSP－Class 3 |  | Conservative |
| 168 |  |  |  |  |  |  |  |  | CSP－Class 2 |  | Advanced |




|  | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | https://atb.nrel.gov/electricity/2022/concentrating solar power |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |
| 7 | Assupmptions |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |
| 9 | 2020 |  |  |  |  |  |  |  |
| 10 | ns where source dollar years don't match 2020. |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |
| 12 | ower cycle running at $574{ }^{\circ} \mathrm{C}$ and $41.2 \%$ gross efficiency in 2019. |  |  |  |  |  |  |  |
| 13 | of storage for today's technology. The turbine is 115MW gross. |  |  |  |  |  |  |  |
| 14 |  | SAM Annual | Available | Available |  |  |  |  |
| 15 |  | Generation | Capacity | Generation |  |  |  |  |
| 16 |  | (MWh) | (GW) | (GWh) |  |  |  |  |
| 17 | Value of DNI | 38,066 | 38,066 | 116,146,245 |  |  |  |  |
| 18 | 6.25 | 462,380 |  |  |  |  |  |  |
| 19 | 7.34 | 558,262 |  |  |  |  |  |  |
| 20 | 7.67 | 581,558 |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |


|  | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22 |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |
| 24 | 30 |  |  |  | Financial Case |  | R\&D |  |
| 25 | 5 |  |  |  | Capital Recov | ry Period | 30 |  |
| 26 | 2.0\% |  |  |  |  |  |  |  |
| 27 | 3 |  |  |  |  |  |  |  |
| 28 | Equity During |  |  |  | Turbine CC | Storage CC | Field CC |  |
| 29 | Construction |  |  |  | \$/kWe | \$/kWe | \$/kWe |  |
| 30 | 20\% |  |  | 2020 Base | \$1,910 | \$767 | \$3,566 |  |
| 31 | 20\% |  |  | 2030 Moderate | \$1,275 | \$512 | \$2,380 |  |
| 32 | 20\% |  |  | 2030 Advanced | \$1,016 | \$408 | \$1,897 |  |
| 33 |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  | 2022 (\$/kWe) | \$6,243 |  |
| 35 |  |  |  |  |  |  |  |  |
| 36 | Base Year |  |  |  |  |  |  |  |
| 37 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 38 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 39 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 40 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 41 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 42 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 43 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 44 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 45 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 46 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 47 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 48 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 49 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 50 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 51 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 52 | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% |
| 53 | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% |
| 54 | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% |


|  | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 55 | 25.7\% 25.7\% |  | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 56 | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% |
| 57 | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% |
| 58 | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% |
| 59 | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% |
| 60 | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% |
| 61 | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% |
| 62 | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% |
| 63 | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% |
| 64 | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% |
| 65 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 66 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 67 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 68 |  |  |  |  |  |  |  |  |
| 69 | Future Projections |  |  |  |  |  |  |  |
| 70 | Base Year |  |  |  |  |  |  |  |
| 71 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 72 | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% |
| 73 | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% |
| 74 | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% |
| 75 | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% |
| 76 | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% |
| 77 | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% |
| 78 | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% |
| 79 | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% |
| 80 |  | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% |
| 81 |  |  |  |  |  |  |  |  |
| 82 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 83 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 |
| 84 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 |
| 85 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 |
| 86 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 |
| 87 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 |
| 88 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 |
| 89 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 |
| 90 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 |
| 91 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 |
| 92 |  |  |  |  |  |  |  |  |


|  | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 93 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 94 | \$6,505 | \$6,201 | \$5,896 | \$5,592 | \$5,288 | \$4,983 | \$4,678 | \$4,374 |
| 95 | \$6,505 | \$6,289 | \$6,072 | \$5,856 | \$5,640 | \$5,423 | \$5,207 | \$4,991 |
| 96 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 |
| 97 | \$6,505 | \$6,201 | \$5,896 | \$5,592 | \$5,288 | \$4,983 | \$4,678 | \$4,374 |
| 98 | \$6,505 | \$6,289 | \$6,072 | \$5,856 | \$5,640 | \$5,423 | \$5,207 | \$4,991 |
| 99 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 |
| 100 | \$6,505 | \$6,201 | \$5,896 | \$5,592 | \$5,288 | \$4,983 | \$4,678 | \$4,374 |
| 101 | \$6,505 | \$6,289 | \$6,072 | \$5,856 | \$5,640 | \$5,423 | \$5,207 | \$4,991 |
| 102 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 |
| 103 |  |  |  |  |  |  |  |  |
| 104 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 105 | \$263 | \$251 | \$238 | \$226 | \$214 | \$201 | \$189 | \$177 |
| 106 | \$263 | \$254 | \$245 | \$237 | \$228 | \$219 | \$210 | \$202 |
| 107 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 |
| 108 | \$263 | \$251 | \$238 | \$226 | \$214 | \$201 | \$189 | \$177 |
| 109 | \$263 | \$254 | \$245 | \$237 | \$228 | \$219 | \$210 | \$202 |
| 110 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 |
| 111 | \$263 | \$251 | \$238 | \$226 | \$214 | \$201 | \$189 | \$177 |
| 112 | \$263 | \$254 | \$245 | \$237 | \$228 | \$219 | \$210 | \$202 |
| 113 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 |
| 114 |  |  |  |  |  |  |  |  |
| 115 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 116 | \$6,242 | \$5,950 | \$5,658 | \$5,366 | \$5,074 | \$4,782 | \$4,489 | \$4,197 |
| 117 | \$6,242 | \$6,035 | \$5,827 | \$5,619 | \$5,412 | \$5,204 | \$4,997 | \$4,789 |
| 118 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 |
| 119 | \$6,242 | \$5,950 | \$5,658 | \$5,366 | \$5,074 | \$4,782 | \$4,489 | \$4,197 |
| 120 | \$6,242 | \$6,035 | \$5,827 | \$5,619 | \$5,412 | \$5,204 | \$4,997 | \$4,789 |
| 121 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 |
| 122 | \$6,242 | \$5,950 | \$5,658 | \$5,366 | \$5,074 | \$4,782 | \$4,489 | \$4,197 |
| 123 | \$6,242 | \$6,035 | \$5,827 | \$5,619 | \$5,412 | \$5,204 | \$4,997 | \$4,789 |
| 124 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 |
| 125 |  |  |  |  |  |  |  |  |
| 126 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 127 | \$66.0 | \$63.8 | \$61.5 | \$59.3 | \$57.1 | \$54.9 | \$52.6 | \$50.4 |
| 128 | \$66.0 | \$65.1 | \$64.1 | \$63.2 | \$62.2 | \$61.3 | \$60.4 | \$59.4 |
| 129 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 |
| 130 | \$66.0 | \$63.8 | \$61.5 | \$59.3 | \$57.1 | \$54.9 | \$52.6 | \$50.4 |


|  | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 131 | \$66.0 | \$65.1 | \$64.1 | \$63.2 | \$62.2 | \$61.3 | \$60.4 | \$59.4 |
| 132 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 |
| 133 | \$66.0 | \$63.8 | \$61.5 | \$59.3 | \$57.1 | \$54.9 | \$52.6 | \$50.4 |
| 134 | \$66.0 | \$65.1 | \$64.1 | \$63.2 | \$62.2 | \$61.3 | \$60.4 | \$59.4 |
| 135 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 |
| 136 |  |  |  |  |  |  |  |  |
| 137 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 138 | \$3.5 | \$3.5 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |
| 139 | \$3.5 | \$3.5 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |
| 140 | \$3.5 | \$3.5 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |
| 141 | \$3.5 | \$3.5 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |
| 142 | \$3.5 | \$3.5 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |
| 143 | \$3.5 | \$3.5 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |
| 144 | \$3.5 | \$3.5 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |
| 145 | \$3.5 | \$3.5 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |
| 146 | \$3.5 | \$3.5 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |
| 147 |  |  |  |  |  |  |  |  |
| 148 |  |  |  |  |  |  |  |  |
| 149 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 150 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 151 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 152 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 153 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 154 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 155 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 156 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 157 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 158 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 159 |  |  |  |  |  |  |  |  |
| 160 |  |  |  |  |  |  |  |  |
| 161 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 162 | \$97 | \$92 | \$88 | \$83 | \$79 | \$75 | \$71 | \$67 |
| 163 | \$97 | \$94 | \$90 | \$88 | \$85 | \$82 | \$79 | \$76 |
| 164 | \$97 | \$97 | \$96 | \$96 | \$96 | \$96 | \$96 | \$96 |
| 165 | \$80 | \$76 | \$72 | \$69 | \$65 | \$62 | \$59 | \$55 |
| 166 | \$80 | \$77 | \$74 | \$72 | \$70 | \$68 | \$65 | \$63 |
| 167 | \$80 | \$80 | \$79 | \$79 | \$79 | \$79 | \$79 | \$79 |
| 168 | \$76 | \$73 | \$69 | \$66 | \$63 | \$60 | \$56 | \$53 |


|  | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 169 | \$76 |  | \$74 | \$71 | \$69 | \$67 | \$65 | \$63 \$60 |
| 170 | \$76 |  | \$76 |  | \$76 | \$76 | \$76 | \$76 \$7 |
| 171 |  |  |  |  |  |  |  |  |
| 172 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 173 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 174 <br> 175 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 175 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 176 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 177 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 |
| 178 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 |
| 179 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 |
| 180 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 |
| 181 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 |
| 182 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 |
| 183 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 184 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 |
| 185 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 |
| 186 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 |
| 187 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 |
| 188 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 |
| 189 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 |
| 190 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 191 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 |
| 192 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 |
| 193 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 |
| 194 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 |
| 195 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 |
| 196 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 |
| 197 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 198 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 |
| 199 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 |
| 200 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 |
| 201 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 |
| 202 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 |
| 203 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 |



|  | U | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |
| 2 | Inputs |  |  |  |  |  |  |  |  |
| 3 | Calculated |  |  |  |  |  |  |  |  |
| 4 | Input from other |  |  |  |  |  |  |  |  |
| 5 | tab |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  | Turbine CC | Storage CC | Field CC |  |  |  |
| 11 |  |  |  | \$/kWe | \$/kWe at 10 hrs of storage | \$/kWe |  |  |  |
| 12 |  | CSP - 10hrs TES Class 7 | \$6,242 | \$1,910 | \$767 | \$3,566 |  | Name plate capacity (Mwe) | Gross Turbine capacity (MW) |
| 13 |  | CSP - 10hrs TES Class 3 | \$6,242 | \$1,910 | \$767 | \$3,566 |  | 104 | 115 |
| 14 |  | $\begin{aligned} & \text { CSP - 10hrs TES } \\ & \text { Class } 2 \end{aligned}$ | \$6,242 | \$1,910 | \$767 | \$3,566 |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |
| 17 |  | Power Cycle Cost total (\$) | Balance of Plant (BOP) total (\$) | Power Cycle Cost (\$/kWe) | BOP cost (\$/kWe) | Duratation (hr) | TES cost (\$/kWhth) | TES Capacity (MWhth) | TES Cost (\$) |
| 18 |  | \$119,600,000 | \$33,350,000 | \$1,156 | \$322 | 10 | 22 | 2,791 | \$61,407,768 |
| 19 |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |


|  | U | V | W | X | Y | Z | AA | AB | AC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22 |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |
| 28 | OCC=(turbine cap | rbine cost+s | ge capacity | ge cost+fi | capacity*fi | cost)/turbin | pacity |  |  |
| 29 | storage capacity = | e capacity*T |  |  |  |  |  |  |  |
| 30 | field capacity = tur | apacity * sola | tiple |  |  |  |  |  |  |
| 31 | solar multiple of 2 | 0 hrs TES |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |
| 37 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| 38 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 39 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 40 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 41 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 42 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 43 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 44 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 45 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 46 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 47 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 48 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 49 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 50 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 51 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 52 | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% |
| 53 | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% |
| 54 | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% |







|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |
| 7 |  | SAM |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |
| 12 | Gross to net conversion |  | SAM Power Cycle Cost (\$/kWgross) | Balance of SAM Plant (BOP) total (\$/kWgross) | TES Cost (\$/kWe @ 10 hrs of storage) | TES Cost (\$/kWhe) | Reference SAM cost (\$/kWe) | $\begin{array}{\|c} \hline \text { Fixed Cost by } \\ \text { Capacity } \\ \text { (\$/kWe/yr) } \end{array}$ | by Generation (\$/MWh) |
| 13 | 0.90 |  | \$1,040 | \$290 | \$593.31 | \$59.33 | \$6,507 | \$66.00 | \$3.50 |
| 14 |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |
| 17 | Heliostat field cost (\$/m2) | Site Improvement Cost (\$/m2) | $\begin{array}{\|c\|} \text { Reflective area } \\ (\mathrm{m} 2) \end{array}$ | Heliostat field fixed Cost (\$) | $\left\lvert\, \begin{gathered} \text { Tower Cost Fixed } \\ (\$) \end{gathered}\right.$ | Receiver Cost (\$) | Direct Contingencies (\%) | Indirects (\%) | Field cost without adders (\$/kWe) |
| 18 | 127 | 16.0 | 1,297,352 | \$185,521,336 | \$23,013,370 | \$77,016,680 | 7\% | 21\% | \$2,758.95 |
| 19 |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22 |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |
| 31 |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |
| 37 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 38 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 39 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 40 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 41 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 42 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 43 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 44 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 45 | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% | 3.5\% |
| 46 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 47 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 48 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 49 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 50 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 51 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 52 | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% |
| 53 | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% |
| 54 | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% | 66.4\% |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 55 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 56 | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% |
| 57 | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% |
| 58 | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% |
| 59 | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% |
| 60 | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% |
| 61 | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% |
| 62 | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% |
| 63 | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% |
| 64 | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% |
| 65 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 66 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 67 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 68 |  |  |  |  |  |  |  |  |  |
| 69 |  |  |  |  |  |  |  |  |  |
| 70 |  |  |  |  |  |  |  |  |  |
| 71 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 72 | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% |
| 73 | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% |
| 74 | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% |
| 75 | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% |
| 76 | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% |
| 77 | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% |
| 78 | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% |
| 79 | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% |
| 80 | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% |
| 81 |  |  |  |  |  |  |  |  |  |
| 82 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 83 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 |
| 84 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 |
| 85 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 |
| 86 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 |
| 87 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 |
| 88 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 |
| 89 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 |
| 90 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 |
| 91 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 |
| 92 |  |  |  |  |  |  |  |  |  |


|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 93 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 94 | \$3,219 | \$3,185 | \$3,150 | \$3,116 | \$3,082 | \$3,047 | \$3,013 | \$2,977 | \$2,943 |
| 95 | \$4,185 | \$4,162 | \$4,140 | \$4,117 | \$4,095 | \$4,074 | \$4,051 | \$4,029 | \$4,006 |
| 96 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 |
| 97 | \$3,219 | \$3,185 | \$3,150 | \$3,116 | \$3,082 | \$3,047 | \$3,013 | \$2,977 | \$2,943 |
| 98 | \$4,185 | \$4,162 | \$4,140 | \$4,117 | \$4,095 | \$4,074 | \$4,051 | \$4,029 | \$4,006 |
| 99 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 |
| 100 | \$3,219 | \$3,185 | \$3,150 | \$3,116 | \$3,082 | \$3,047 | \$3,013 | \$2,977 | \$2,943 |
| 101 | \$4,185 | \$4,162 | \$4,140 | \$4,117 | \$4,095 | \$4,074 | \$4,051 | \$4,029 | \$4,006 |
| 102 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 |
| 103 |  |  |  |  |  |  |  |  |  |
| 104 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 105 | \$130 | \$129 | \$127 | \$126 | \$125 | \$123 | \$122 | \$120 | \$119 |
| 106 | \$169 | \$168 | \$167 | \$166 | \$165 | \$165 | \$164 | \$163 | \$162 |
| 107 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 |
| 108 | \$130 | \$129 | \$127 | \$126 | \$125 | \$123 | \$122 | \$120 | \$119 |
| 109 | \$169 | \$168 | \$167 | \$166 | \$165 | \$165 | \$164 | \$163 | \$162 |
| 110 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 |
| 111 | \$130 | \$129 | \$127 | \$126 | \$125 | \$123 | \$122 | \$120 | \$119 |
| 112 | \$169 | \$168 | \$167 | \$166 | \$165 | \$165 | \$164 | \$163 | \$162 |
| 113 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 | \$263 |
| 114 |  |  |  |  |  |  |  |  |  |
| 115 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 116 | \$3,089 | \$3,056 | \$3,023 | \$2,990 | \$2,957 | \$2,924 | \$2,891 | \$2,857 | \$2,824 |
| 117 | \$4,016 | \$3,994 | \$3,973 | \$3,951 | \$3,930 | \$3,909 | \$3,887 | \$3,866 | \$3,844 |
| 118 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 |
| 119 | \$3,089 | \$3,056 | \$3,023 | \$2,990 | \$2,957 | \$2,924 | \$2,891 | \$2,857 | \$2,824 |
| 120 | \$4,016 | \$3,994 | \$3,973 | \$3,951 | \$3,930 | \$3,909 | \$3,887 | \$3,866 | \$3,844 |
| 121 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 |
| 122 | \$3,089 | \$3,056 | \$3,023 | \$2,990 | \$2,957 | \$2,924 | \$2,891 | \$2,857 | \$2,824 |
| 123 | \$4,016 | \$3,994 | \$3,973 | \$3,951 | \$3,930 | \$3,909 | \$3,887 | \$3,866 | \$3,844 |
| 124 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 |
| 125 |  |  |  |  |  |  |  |  |  |
| 126 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 127 | \$43.6 | \$43.6 | \$43.5 | \$43.5 | \$43.5 | \$43.5 | \$43.5 | \$43.4 | \$43.4 |
| 128 | \$56.4 | \$56.4 | \$56.4 | \$56.3 | \$56.3 | \$56.3 | \$56.3 | \$56.2 | \$56.2 |
| 129 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 |
| 130 | \$43.6 | \$43.6 | \$43.5 | \$43.5 | \$43.5 | \$43.5 | \$43.5 | \$43.4 | \$43.4 |



|  | AD | AE | AF | AG | AH | AI | AJ | AK | AL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 169 | \$52 |  | \$52 |  | \$52 |  | \$51 |  | \$51 \$51 |
| 170 | \$76 |  | \$76 |  | \$76 | \$51 |  | \$76 | \$76 \$76 |
| 171 |  |  |  |  |  |  |  |  |  |
| 172 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 173 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 174 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 175 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 176 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 177 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 |
| 178 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 |
| 179 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 | 0.867 |
| 180 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 |
| 181 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 |
| 182 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 |
| 183 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 184 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 |
| 185 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 |
| 186 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 |
| 187 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 |
| 188 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 |
| 189 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 |
| 190 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 191 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 |
| 192 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 |
| 193 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 |
| 194 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 |
| 195 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 |
| 196 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 |
| 197 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 |
| 198 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 | 0.9494 |
| 199 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 | 0.9013 |
| 200 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 | 0.8557 |
| 201 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 | 0.8124 |
| 202 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 | 0.7712 |
| 203 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 | 0.7322 |



|  | AM | AN | AO | AP | AQ | AR | AS | AT | AU | AV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |  |
| 17 | SAM 2020 total reference cost (\$) |  |  |  |  |  |  |  |  |  |
| 18 | \$673,465,536 |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |  |



|  | AM | AN | AO | AP | AQ | AR | AS | AT | AU | AV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 55 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |  |  |  |  |  |
| 56 | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% |  |  |  |  |  |
| 57 | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% |  |  |  |  |  |
| 58 | 5.3\% | 5.3\% | 5.3\% | 5.3\% | 5.3\% |  |  |  |  |  |
| 59 | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% |  |  |  |  |  |
| 60 | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% |  |  |  |  |  |
| 61 | 2.8\% | 2.8\% | 2.8\% | 2.8\% | 2.8\% |  |  |  |  |  |
| 62 | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% |  |  |  |  |  |
| 63 | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% |  |  |  |  |  |
| 64 | 6.8\% | 6.8\% | 6.8\% | 6.8\% | 6.8\% |  |  |  |  |  |
| 65 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |  |  |  |  |  |
| 66 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |  |  |  |  |  |
| 67 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |  |  |  |  |  |
| 68 |  |  |  |  |  |  |  |  |  |  |
| 69 |  |  |  |  |  |  |  |  |  |  |
| 70 |  |  |  |  |  |  |  |  |  |  |
| 71 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |  |
| 72 | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% |  |  |  |  |  |
| 73 | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% |  |  |  |  |  |
| 74 | 49.4\% | 49.4\% | 49.4\% | 49.4\% | 49.4\% |  |  |  |  |  |
| 75 | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% |  |  |  |  |  |
| 76 | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% |  |  |  |  |  |
| 77 | 60.4\% | 60.4\% | 60.4\% | 60.4\% | 60.4\% |  |  |  |  |  |
| 78 | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% |  |  |  |  |  |
| 79 | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% |  |  |  |  |  |
| 80 | 63.0\% | 63.0\% | 63.0\% | 63.0\% | 63.0\% |  |  |  |  |  |
| 81 |  |  |  |  |  |  |  |  |  |  |
| 82 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |  |
| 83 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 |  |  |  |  |  |
| 84 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 |  |  |  |  |  |
| 85 | 4,327 | 4,327 | 4,327 | 4,327 | 4,327 |  |  |  |  |  |
| 86 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 |  |  |  |  |  |
| 87 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 |  |  |  |  |  |
| 88 | 5,291 | 5,291 | 5,291 | 5,291 | 5,291 |  |  |  |  |  |
| 89 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 |  |  |  |  |  |
| 90 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 |  |  |  |  |  |
| 91 | 5,519 | 5,519 | 5,519 | 5,519 | 5,519 |  |  |  |  |  |
| 92 |  |  |  |  |  |  |  |  |  |  |


|  | AM | AN | AO | AP | AQ | AR | AS | AT | AU | AV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 93 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |  |
| 94 | \$2,909 | \$2,874 | \$2,840 | \$2,805 | \$2,771 |  |  |  |  |  |
| 95 | \$3,984 | \$3,961 | \$3,939 | \$3,916 | \$3,894 |  |  |  |  |  |
| 96 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 |  |  |  |  |  |
| 97 | \$2,909 | \$2,874 | \$2,840 | \$2,805 | \$2,771 |  |  |  |  |  |
| 98 | \$3,984 | \$3,961 | \$3,939 | \$3,916 | \$3,894 |  |  |  |  |  |
| 99 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 |  |  |  |  |  |
| 100 | \$2,909 | \$2,874 | \$2,840 | \$2,805 | \$2,771 |  |  |  |  |  |
| 101 | \$3,984 | \$3,961 | \$3,939 | \$3,916 | \$3,894 |  |  |  |  |  |
| 102 | \$6,505 | \$6,505 | \$6,505 | \$6,505 | \$6,505 |  |  |  |  |  |
| 103 |  |  |  |  |  |  |  |  |  |  |
| 104 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |  |
| 105 | \$118 | \$116 | \$115 | \$113 | \$112 |  |  |  |  |  |
| 106 | \$161 | \$160 | \$159 | \$158 | \$157 |  |  |  |  |  |
| 107 | \$263 | \$263 | \$263 | \$263 | \$263 |  |  |  |  |  |
| 108 | \$118 | \$116 | \$115 | \$113 | \$112 |  |  |  |  |  |
| 109 | \$161 | \$160 | \$159 | \$158 | \$157 |  |  |  |  |  |
| 110 | \$263 | \$263 | \$263 | \$263 | \$263 |  |  |  |  |  |
| 111 | \$118 | \$116 | \$115 | \$113 | \$112 |  |  |  |  |  |
| 112 | \$161 | \$160 | \$159 | \$158 | \$157 |  |  |  |  |  |
| 113 | \$263 | \$263 | \$263 | \$263 | \$263 |  |  |  |  |  |
| 114 |  |  |  |  |  |  |  |  |  |  |
| 115 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |  |
| 116 | \$2,791 | \$2,758 | \$2,725 | \$2,692 | \$2,659 |  |  |  |  |  |
| 117 | \$3,823 | \$3,801 | \$3,780 | \$3,758 | \$3,737 |  |  |  |  |  |
| 118 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 |  |  |  |  |  |
| 119 | \$2,791 | \$2,758 | \$2,725 | \$2,692 | \$2,659 |  |  |  |  |  |
| 120 | \$3,823 | \$3,801 | \$3,780 | \$3,758 | \$3,737 |  |  |  |  |  |
| 121 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 |  |  |  |  |  |
| 122 | \$2,791 | \$2,758 | \$2,725 | \$2,692 | \$2,659 |  |  |  |  |  |
| 123 | \$3,823 | \$3,801 | \$3,780 | \$3,758 | \$3,737 |  |  |  |  |  |
| 124 | \$6,242 | \$6,242 | \$6,242 | \$6,242 | \$6,242 |  |  |  |  |  |
| 125 |  |  |  |  |  |  |  |  |  |  |
| 126 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |  |
| 127 | \$43.4 | \$43.4 | \$43.4 | \$43.3 | \$43.3 |  |  |  |  |  |
| 128 | \$56.2 | \$56.1 | \$56.1 | \$56.1 | \$56.1 |  |  |  |  |  |
| 129 | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 |  |  |  |  |  |
| 130 | \$43.4 | \$43.4 | \$43.4 | \$43.3 | \$43.3 |  |  |  |  |  |


|  | AM |  | AN | AO | AP | AQ | AR | AS | AT | AU | AV |
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| 131 |  | \$56.2 | \$56.1 | \$56.1 | \$56.1 | \$56.1 |  |  |  |  |  |
| 132 |  | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 |  |  |  |  |  |
| 133 |  | \$43.4 | \$43.4 | \$43.4 | \$43.3 | \$43.3 |  |  |  |  |  |
| 134 |  | \$56.2 | \$56.1 | \$56.1 | \$56.1 | \$56.1 |  |  |  |  |  |
| 135 |  | \$66.0 | \$66.0 | \$66.0 | \$66.0 | \$66.0 |  |  |  |  |  |
| 136 |  |  |  |  |  |  |  |  |  |  |  |
| 137 | 2046 |  | 2047 | 2048 | 2049 | 2050 |  |  |  |  |  |
| 138 |  | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |  |  |  |  |  |
| 139 |  | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |  |  |  |  |  |
| 140 |  | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |  |  |  |  |  |
| 141 |  | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |  |  |  |  |  |
| 142 |  | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |  |  |  |  |  |
| 143 |  | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |  |  |  |  |  |
| 144 |  | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |  |  |  |  |  |
| 145 |  | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |  |  |  |  |  |
| 146 |  | \$2.9 | \$2.9 | \$2.9 | \$2.9 | \$2.9 |  |  |  |  |  |
| 147 |  |  |  |  |  |  |  |  |  |  |  |
| 148 |  |  |  |  |  |  |  |  |  |  |  |
| 149 | 2046 |  | 2047 | 2048 | 2049 | 2050 |  |  |  |  |  |
| 150 |  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |  |
| 151 |  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |  |
| 152 |  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |  |
| 153 |  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |  |
| 154 |  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |  |
| 155 |  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |  |
| 156 |  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |  |
| 157 |  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |  |
| 158 |  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |  |
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| 161 | 2046 |  | 2047 | 2048 | 2049 | 2050 |  |  |  |  |  |
| 162 |  | \$48 | \$47 | \$47 | \$46 | \$46 |  |  |  |  |  |
| 163 |  | \$64 | \$63 | \$63 | \$63 | \$62 |  |  |  |  |  |
| 164 |  | \$96 | \$96 | \$96 | \$96 | \$96 |  |  |  |  |  |
| 165 |  | \$40 | \$39 | \$39 | \$39 | \$38 |  |  |  |  |  |
| 166 |  | \$52 | \$52 | \$52 | \$52 | \$52 |  |  |  |  |  |
| 167 |  | \$79 | \$79 | \$79 | \$79 | \$79 |  |  |  |  |  |
| 168 |  | \$38 | \$38 | \$37 | \$37 | \$37 |  |  |  |  |  |




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|  | A |  | CD | EF | FG | H | I | J | K |
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| 175 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Flash |
| 176 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Flash |
| 177 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Flash |
| 178 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Binary |
| 179 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Binary |
| 180 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Binary |
| 181 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Flash |
| 182 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Flash |
| 183 |  |  |  |  |  |  |  | Overnight Capital | Geothermal - NF EGS / Flash |
| 184 |  |  |  |  |  |  |  | Cost (\$/kW) | Geothermal - NF EGS / Binary |
| 185 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Binary |
| 186 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Binary |
| 187 |  |  |  |  |  |  |  |  | Geothermal - Deep EGS / Flash |
| 188 |  |  |  |  |  |  |  |  | Geothermal - Deep EGS / Flash |
| 189 |  |  |  |  |  |  |  |  | Geothermal - Deep EGS / Flash |
| 190 |  |  |  |  |  |  |  |  | Geothermal - Deep EGS / Binary |
| 191 |  |  |  |  |  |  |  |  | Geothermal - Deep EGS / Binary |
| 192 |  |  |  |  |  |  |  |  | Geothermal - Deep EGS / Binary |
| 193 |  |  |  |  |  |  |  |  |  |
| 194 |  |  |  |  |  |  |  |  |  |
| 195 |  |  |  |  |  |  |  | Fixed Operation and Maintenance Expenses (\$/kW-yr) | Geothermal - Hydro / Flash |
| 196 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Flash |
| 197 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Flash |
| 198 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Binary |
| 199 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Binary |
| 200 |  |  |  |  |  |  |  |  | Geothermal - Hydro / Binary |
| 201 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Flash |
| 202 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Flash |
| 203 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Flash |
| 204 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Binary |
| 205 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Binary |
| 206 |  |  |  |  |  |  |  |  | Geothermal - NF EGS / Binary |
| 207 |  |  |  |  |  |  |  |  | Geothermal - Deep EGS / Flash |
| 208 |  |  |  |  |  |  |  |  | Geothermal - Deep EGS / Flash |
| 209 |  |  |  |  |  |  |  |  | Geothermal - Deep EGS / Flash |




|  | A | B |  | EF | G | H | 1 | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 280 |  |  |  |  |  |  |  |  | ITC Schedule |
| 281 |  |  |  |  |  | ¢ |  |  | PTC Schedule |
| 282 |  |  |  |  |  | N |  |  | PTC |
| 283 |  |  |  |  |  | $\underline{\square}$ |  |  | PTC |
| 284 |  |  |  |  |  | $\stackrel{\widetilde{0}}{0}$ |  |  | PTC |
| 285 |  |  |  |  |  | 蕓 |  |  | PVD |
| 286 |  |  |  |  |  | $\frac{0}{0}$ |  |  | PVD |
| 287 |  |  |  |  |  |  |  |  | PVD |
| 288 |  |  |  |  |  |  |  |  | PFF |
| 289 |  |  |  |  |  |  |  |  | PFF |
| 290 |  |  |  |  |  |  |  |  | PFF |
| 291 |  |  |  |  |  |  | MACRS |  | Year (Advanced) |
| 292 |  |  |  |  |  |  | 0.2 |  | 1 |
| 293 |  |  |  |  |  |  | 0.32 |  | 2 |
| 294 |  |  |  |  |  |  | 0.192 |  | 3 |
| 295 |  |  |  |  |  |  | 0.1152 |  | 4 |
| 296 |  |  |  |  |  |  | 0.1152 |  | 5 |
| 297 |  |  |  |  |  |  | 0.0576 |  | 6 |
| 298 |  |  |  |  |  |  |  |  | Year (Moderate) |
| 299 |  |  |  |  |  |  |  |  | 1 |
| 300 |  |  |  |  |  |  |  |  | 2 |
| 301 |  |  |  |  |  |  |  | Depreciation Factor | 3 |
| 302 |  |  |  |  |  |  |  | Depreciation ractor | 4 |
| 303 |  |  |  |  |  |  |  |  | 5 |
| 304 |  |  |  |  |  |  |  |  | 6 |
| 305 |  |  |  |  |  |  |  |  | Year (Conservative) |
| 306 |  |  |  |  |  |  |  |  | 1 |
| 307 |  |  |  |  |  |  |  |  | 2 |
| 308 |  |  |  |  |  |  |  |  | 3 |
| 309 |  |  |  |  |  |  |  |  | 4 |
| 310 |  |  |  |  |  |  |  |  | 5 |
| 311 |  |  |  |  |  |  |  |  | 6 |
| 312 |  |  |  |  |  |  |  |  |  |
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|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 | 41,002 | 111,998 |  |  |  |  |  |  |  |
| 36 | 13,966 | 32,255 |  |  |  |  |  |  |  |
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| 39 |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  | 30 |  | Financial Case |  | R\&D |  |
| 41 |  |  |  | 5 |  | Capital Recover | Period | 30 |  |
| 42 |  |  |  |  |  |  |  |  |  |
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| 53 |  |  |  |  |  |  |  |  |  |
| 54 |  |  |  |  |  |  |  |  |  |
| 55 |  |  |  |  |  |  |  |  |  |
| 56 |  |  |  |  |  |  |  |  |  |
| 57 |  | Base Year |  |  |  |  |  |  |  |
| 58 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 59 | * | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 60 | Advanced | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 61 | Moderate | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 62 | Conservative | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 63 | Advanced | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 64 | Moderate | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 65 | Conservative | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 66 | * | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 67 | Advanced | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 68 | Moderate | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 69 | Conservative | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 | Advanced | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 71 | Moderate | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 72 | Conservative | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 73 | Advanced | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% |
| 74 | Moderate | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% |
| 75 | Conservative | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% |
| 76 | * | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 77 | Advanced | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% |
| 78 | Moderate | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% |
| 79 | Conservative | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% |
| 80 | Advanced | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% |
| 81 | Moderate | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% |
| 82 | Conservative | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% |
| 83 | Advanced | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% |
| 84 | Moderate | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% |
| 85 | Conservative | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% |
| 86 | Advanced | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% |
| 87 | Moderate | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% |
| 88 | Conservative | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% |
| 89 |  |  |  |  |  |  |  |  |  |
| 90 |  |  |  |  |  |  |  |  |  |
| 91 |  |  |  |  |  |  |  |  |  |
| 92 | Future Projections |  |  |  |  |  |  |  |  |
| 93 |  | Base Year |  |  |  |  |  |  |  |
| 94 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 95 | Advanced | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 96 | Moderate | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 97 | Conservative | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 98 | Advanced | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 99 | Moderate | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 100 | Conservative | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 101 | Advanced | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 102 | Moderate | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 103 | Conservative | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 104 | Advanced | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 | Moderate | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 106 | Conservative | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 107 | Advanced | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 108 | Moderate | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 109 | Conservative | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 110 | Advanced | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 111 | Moderate | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 112 | Conservative | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 113 |  |  |  |  |  |  |  |  |  |
| 114 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 115 | Advanced | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 116 | Moderate | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 117 | Conservative | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 118 | Advanced | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 119 | Moderate | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 120 | Conservative | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 121 | Advanced | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 122 | Moderate | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 123 | Conservative | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 124 | Advanced | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 125 | Moderate | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 126 | Conservative | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 127 | Advanced | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 128 | Moderate | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 129 | Conservative | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 130 | Advanced | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 131 | Moderate | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 132 | Conservative | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 133 |  |  |  |  |  |  |  |  |  |
| 134 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 135 | Advanced | \$6,753 | \$6,535 | \$6,319 | \$6,106 | \$5,897 | \$5,691 | \$5,487 | \$5,287 |
| 136 | Moderate | \$6,753 | \$6,637 | \$6,521 | \$6,406 | \$6,292 | \$6,178 | \$6,064 | \$5,951 |
| 137 | Conservative | \$6,753 | \$6,720 | \$6,686 | \$6,653 | \$6,619 | \$6,586 | \$6,553 | \$6,520 |
| 138 | Advanced | \$8,612 | \$8,365 | \$8,121 | \$7,880 | \$7,643 | \$7,409 | \$7,178 | \$6,951 |
| 139 | Moderate | \$8,612 | \$8,496 | \$8,380 | \$8,264 | \$8,149 | \$8,035 | \$7,921 | \$7,807 |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 | Conservative | \$8,612 | \$8,569 | \$8,526 | \$8,484 | \$8,441 | \$8,399 | \$8,357 | \$8,315 |
| 141 | Advanced | \$20,015 | \$18,266 | \$16,545 | \$14,854 | \$13,192 | \$11,560 | \$9,956 | \$8,382 |
| 142 | Moderate | \$20,015 | \$19,155 | \$18,303 | \$17,459 | \$16,622 | \$15,794 | \$14,974 | \$14,162 |
| 143 | Conservative | \$20,015 | \$19,915 | \$19,815 | \$19,716 | \$19,618 | \$19,520 | \$19,422 | \$19,325 |
| 144 | Advanced | \$46,223 | \$41,967 | \$37,781 | \$33,667 | \$29,625 | \$25,654 | \$21,754 | \$17,925 |
| 145 | Moderate | \$46,223 | \$44,698 | \$43,186 | \$41,687 | \$40,202 | \$38,731 | \$37,273 | \$35,829 |
| 146 | Conservative | \$46,223 | \$45,992 | \$45,762 | \$45,533 | \$45,306 | \$45,079 | \$44,854 | \$44,629 |
| 147 | Advanced | \$20,015 | \$18,266 | \$16,545 | \$14,854 | \$13,192 | \$11,560 | \$9,956 | \$8,382 |
| 148 | Moderate | \$20,015 | \$19,155 | \$18,303 | \$17,459 | \$16,622 | \$15,794 | \$14,974 | \$14,162 |
| 149 | Conservative | \$20,015 | \$19,915 | \$19,815 | \$19,716 | \$19,618 | \$19,520 | \$19,422 | \$19,325 |
| 150 | Advanced | \$46,223 | \$41,967 | \$37,781 | \$33,667 | \$29,625 | \$25,654 | \$21,754 | \$17,925 |
| 151 | Moderate | \$46,223 | \$44,698 | \$43,186 | \$41,687 | \$40,202 | \$38,731 | \$37,273 | \$35,829 |
| 152 | Conservative | \$46,223 | \$45,992 | \$45,762 | \$45,533 | \$45,306 | \$45,079 | \$44,854 | \$44,629 |
| 153 |  |  |  |  |  |  |  |  |  |
| 154 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 155 | Advanced | \$2,194 | \$2,077 | \$1,963 | \$1,853 | \$1,745 | \$1,640 | \$1,539 | \$1,441 |
| 156 | Moderate | \$2,194 | \$2,144 | \$2,094 | \$2,044 | \$1,995 | \$1,947 | \$1,899 | \$1,852 |
| 157 | Conservative | \$2,194 | \$2,183 | \$2,172 | \$2,161 | \$2,150 | \$2,140 | \$2,129 | \$2,118 |
| 158 | Advanced | \$2,798 | \$2,659 | \$2,523 | \$2,391 | \$2,262 | \$2,136 | \$2,013 | \$1,894 |
| 159 | Moderate | \$2,798 | \$2,744 | \$2,690 | \$2,637 | \$2,584 | \$2,532 | \$2,481 | \$2,429 |
| 160 | Conservative | \$2,798 | \$2,784 | \$2,770 | \$2,756 | \$2,742 | \$2,729 | \$2,715 | \$2,702 |
| 161 | Advanced | \$6,049 | \$5,401 | \$4,783 | \$4,194 | \$3,634 | \$3,103 | \$2,602 | \$2,129 |
| 162 | Moderate | \$6,049 | \$5,718 | \$5,395 | \$5,081 | \$4,774 | \$4,475 | \$4,184 | \$3,902 |
| 163 | Conservative | \$6,049 | \$6,018 | \$5,988 | \$5,958 | \$5,928 | \$5,899 | \$5,869 | \$5,840 |
| 164 | Advanced | \$13,969 | \$12,410 | \$10,922 | \$9,505 | \$8,160 | \$6,887 | \$5,684 | \$4,553 |
| 165 | Moderate | \$13,969 | \$13,343 | \$12,730 | \$12,131 | \$11,546 | \$10,974 | \$10,416 | \$9,871 |
| 166 | Conservative | \$13,969 | \$13,899 | \$13,829 | \$13,760 | \$13,691 | \$13,623 | \$13,555 | \$13,487 |
| 167 | Advanced | \$6,049 | \$5,401 | \$4,783 | \$4,194 | \$3,634 | \$3,103 | \$2,602 | \$2,129 |
| 168 | Moderate | \$6,049 | \$5,718 | \$5,395 | \$5,081 | \$4,774 | \$4,475 | \$4,184 | \$3,902 |
| 169 | Conservative | \$6,049 | \$6,018 | \$5,988 | \$5,958 | \$5,928 | \$5,899 | \$5,869 | \$5,840 |
| 170 | Advanced | \$13,969 | \$12,410 | \$10,922 | \$9,505 | \$8,160 | \$6,887 | \$5,684 | \$4,553 |
| 171 | Moderate | \$13,969 | \$13,343 | \$12,730 | \$12,131 | \$11,546 | \$10,974 | \$10,416 | \$9,871 |
| 172 | Conservative | \$13,969 | \$13,899 | \$13,829 | \$13,760 | \$13,691 | \$13,623 | \$13,555 | \$13,487 |
| 173 |  |  |  |  |  |  |  |  |  |
| 174 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 | Advanced | \$4,559 | \$4,457 | \$4,356 | \$4,254 | \$4,152 | \$4,050 | \$3,948 | \$3,847 |
| 176 | Moderate | \$4,559 | \$4,494 | \$4,428 | \$4,362 | \$4,297 | \$4,231 | \$4,165 | \$4,100 |
| 177 | Conservative | \$4,559 | \$4,536 | \$4,514 | \$4,491 | \$4,469 | \$4,446 | \$4,424 | \$4,402 |
| 178 | Advanced | \$5,814 | \$5,706 | \$5,598 | \$5,490 | \$5,382 | \$5,273 | \$5,165 | \$5,057 |
| 179 | Moderate | \$5,814 | \$5,752 | \$5,690 | \$5,627 | \$5,565 | \$5,503 | \$5,440 | \$5,378 |
| 180 | Conservative | \$5,814 | \$5,785 | \$5,756 | \$5,728 | \$5,699 | \$5,670 | \$5,642 | \$5,614 |
| 181 | Advanced | \$13,966 | \$12,864 | \$11,762 | \$10,660 | \$9,558 | \$8,456 | \$7,355 | \$6,253 |
| 182 | Moderate | \$13,966 | \$13,437 | \$12,908 | \$12,378 | \$11,849 | \$11,319 | \$10,790 | \$10,260 |
| 183 | Conservative | \$13,966 | \$13,897 | \$13,827 | \$13,758 | \$13,689 | \$13,621 | \$13,553 | \$13,485 |
| 184 | Advanced | \$32,255 | \$29,557 | \$26,860 | \$24,162 | \$21,464 | \$18,767 | \$16,069 | \$13,372 |
| 185 | Moderate | \$32,255 | \$31,355 | \$30,456 | \$29,556 | \$28,656 | \$27,757 | \$26,857 | \$25,958 |
| 186 | Conservative | \$32,255 | \$32,093 | \$31,933 | \$31,773 | \$31,614 | \$31,456 | \$31,299 | \$31,142 |
| 187 | Advanced | \$13,966 | \$12,864 | \$11,762 | \$10,660 | \$9,558 | \$8,456 | \$7,355 | \$6,253 |
| 188 | Moderate | \$13,966 | \$13,437 | \$12,908 | \$12,378 | \$11,849 | \$11,319 | \$10,790 | \$10,260 |
| 189 | Conservative | \$13,966 | \$13,897 | \$13,827 | \$13,758 | \$13,689 | \$13,621 | \$13,553 | \$13,485 |
| 190 | Advanced | \$32,255 | \$29,557 | \$26,860 | \$24,162 | \$21,464 | \$18,767 | \$16,069 | \$13,372 |
| 191 | Moderate | \$32,255 | \$31,355 | \$30,456 | \$29,556 | \$28,656 | \$27,757 | \$26,857 | \$25,958 |
| 192 | Conservative | \$32,255 | \$32,093 | \$31,933 | \$31,773 | \$31,614 | \$31,456 | \$31,299 | \$31,142 |
| 193 |  |  |  |  |  |  |  |  |  |
| 194 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 195 | Advanced | \$107 | \$106 | \$106 | \$105 | \$104 | \$103 | \$102 | \$101 |
| 196 | Moderate | \$107 | \$107 | \$106 | \$105 | \$104 | \$103 | \$103 | \$102 |
| 197 | Conservative | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 |
| 198 | Advanced | \$141 | \$140 | \$139 | \$138 | \$137 | \$136 | \$135 | \$134 |
| 199 | Moderate | \$141 | \$140 | \$139 | \$138 | \$138 | \$137 | \$136 | \$135 |
| 200 | Conservative | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 |
| 201 | Advanced | \$208 | \$196 | \$184 | \$173 | \$161 | \$149 | \$138 | \$126 |
| 202 | Moderate | \$208 | \$203 | \$199 | \$194 | \$190 | \$186 | \$181 | \$177 |
| 203 | Conservative | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 |
| 204 | Advanced | \$536 | \$495 | \$455 | \$414 | \$374 | \$333 | \$292 | \$252 |
| 205 | Moderate | \$536 | \$528 | \$520 | \$512 | \$504 | \$496 | \$488 | \$480 |
| 206 | Conservative | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 |
| 207 | Advanced | \$208 | \$196 | \$184 | \$173 | \$161 | \$149 | \$138 | \$126 |
| 208 | Moderate | \$208 | \$203 | \$199 | \$194 | \$190 | \$186 | \$181 | \$177 |
| 209 | Conservative | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 |


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| 210 | Advanced | \$536 | \$495 | \$455 | \$414 | \$374 | \$333 | \$292 | \$252 |
| 211 | Moderate | \$536 | \$528 | \$520 | \$512 | \$504 | \$496 | \$488 | \$480 |
| 212 | Conservative | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 |
| 213 |  |  |  |  |  |  |  |  |  |
| 214 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 215 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 216 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 217 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 218 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 219 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 220 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 221 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 222 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 223 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 224 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 225 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 226 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 227 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 228 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 229 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 230 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 231 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 232 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 233 |  |  |  |  |  |  |  |  |  |
| 234 |  |  |  |  |  |  |  |  |  |
| 235 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 236 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 237 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 238 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 239 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 240 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 241 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 242 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 243 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 244 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |


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| 245 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 246 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 247 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 248 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 249 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 250 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 251 | Advanced | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 252 | Moderate | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 253 | Conservative | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 254 |  |  |  |  |  |  |  |  |  |
| 255 |  |  |  |  |  |  |  |  |  |
| 256 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 257 | Advanced | \$55 | \$53 | \$52 | \$51 | \$49 | \$48 | \$46 | \$45 |
| 258 | Moderate | \$55 | \$54 | \$53 | \$53 | \$52 | \$51 | \$50 | \$49 |
| 259 | Conservative | \$55 | \$55 | \$55 | \$54 | \$54 | \$54 | \$54 | \$54 |
| 260 | Advanced | \$79 | \$78 | \$76 | \$74 | \$72 | \$70 | \$69 | \$67 |
| 261 | Moderate | \$79 | \$79 | \$78 | \$77 | \$76 | \$75 | \$74 | \$73 |
| 262 | Conservative | \$79 | \$79 | \$79 | \$79 | \$78 | \$78 | \$78 | \$77 |
| 263 | Advanced | \$149 | \$137 | \$125 | \$113 | \$101 | \$90 | \$78 | \$67 |
| 264 | Moderate | \$149 | \$143 | \$137 | \$131 | \$126 | \$120 | \$115 | \$109 |
| 265 | Conservative | \$149 | \$148 | \$148 | \$147 | \$146 | \$146 | \$145 | \$145 |
| 266 | Advanced | \$395 | \$359 | \$325 | \$291 | \$257 | \$224 | \$191 | \$159 |
| 267 | Moderate | \$395 | \$383 | \$371 | \$360 | \$349 | \$337 | \$326 | \$315 |
| 268 | Conservative | \$395 | \$393 | \$391 | \$390 | \$388 | \$387 | \$385 | \$384 |
| 269 | Advanced | \$149 | \$137 | \$125 | \$113 | \$101 | \$90 | \$78 | \$67 |
| 270 | Moderate | \$149 | \$143 | \$137 | \$131 | \$126 | \$120 | \$115 | \$109 |
| 271 | Conservative | \$149 | \$148 | \$148 | \$147 | \$146 | \$146 | \$145 | \$145 |
| 272 | Advanced | \$395 | \$359 | \$325 | \$291 | \$257 | \$224 | \$191 | \$159 |
| 273 | Moderate | \$395 | \$383 | \$371 | \$360 | \$349 | \$337 | \$326 | \$315 |
| 274 | Conservative | \$395 | \$393 | \$391 | \$390 | \$388 | \$387 | \$385 | \$384 |
| 275 |  |  |  |  |  |  |  |  |  |
| 276 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 277 | Advanced | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 278 | Moderate | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 279 | Conservative | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |


|  | L | M | N | O | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 280 | * | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 281 | * | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 282 | Advanced | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ - |
| 283 | Moderate | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ - |
| 284 | Conservative | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 285 | Advanced | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 |
| 286 | Moderate | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 |
| 287 | Conservative | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 |
| 288 | Advanced | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 |
| 289 | Moderate | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 |
| 290 | Conservative | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 |
| 291 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 292 |  | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 |
| 293 |  | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 |
| 294 |  | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 |
| 295 |  | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 |
| 296 |  | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 |
| 297 |  | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 |
| 298 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 299 |  | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 |
| 300 |  | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 |
| 301 |  | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 |
| 302 |  | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 |
| 303 |  | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 |
| 304 |  | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 |
| 305 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| 306 |  | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 |
| 307 |  | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 |
| 308 |  | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 |
| 309 |  | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 |
| 310 |  | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 |
| 311 |  | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 |
| 312 |  |  |  |  |  |  |  |  |  |
| 313 |  |  |  |  |  |  |  |  |  |
| 314 |  | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |


|  | L | M | N | 0 | P | Q | R | S | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 315 | Advanced | 1.481 | 1.466 | 1.451 | 1.435 | 1.420 | 1.405 | 1.390 | 1.375 |
| 316 | Moderate | 1.481 | 1.477 | 1.473 | 1.469 | 1.464 | 1.460 | 1.456 | 1.452 |
| 317 | Conservative | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 |
| 318 | Advanced | 1.433 | 1.420 | 1.407 | 1.393 | 1.380 | 1.367 | 1.354 | 1.341 |
| 319 | Moderate | 1.433 | 1.426 | 1.418 | 1.410 | 1.403 | 1.395 | 1.388 | 1.380 |
| 320 | Conservative | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 |
| 321 |  |  |  |  |  |  |  |  |  |
| 322 |  |  |  |  |  |  |  |  |  |
| 323 |  |  |  |  |  |  |  |  |  |
| 324 |  |  | Data | es for De | Inputs |  |  |  |  |
| 325 |  |  |  |  |  |  |  |  |  |
| 326 |  |  |  |  |  |  |  |  |  |
| 327 |  | C. Augustine, | N. Blair | eovision | ysis Supp | Task Forc | ort |  |  |
| 328 |  | Pacificorp, Au | 010. "Po | eneratio | thermal | urce Study | al Repor | ared by | and Vea |
| 329 |  | DOE (2019). G | ion: Har | the He | eath Our | (Washingt | C.: U.S. D | ment of |  |
| 330 |  | DOE (2019). G | ion: Har | the Hea | eath Our | (Washingt | C.: U.S. D | ment of |  |
| 331 |  | N/A |  |  |  |  |  |  |  |
| 332 |  | N/A |  |  |  |  |  |  |  |
| 333 |  |  |  |  |  |  |  |  |  |
| 334 |  |  |  |  |  |  |  |  |  |
| 335 |  | Pacificorp, Au | 010. "Po | eneratio | thermal | urce Study | al Repor | ared by | and Vea |
| 336 |  | DOE (2019). G | ion: Har | the Hear | eath Our | (Washingt | C.: U.S. D | ment of |  |
| 337 |  | DOE (2019). G | ion: Har | the Hear | eath Our | (Washingt | C.: U.S. D | ment of |  |
| 338 |  | N/A |  |  |  |  |  |  |  |
| 339 |  | N/A |  |  |  |  |  |  |  |



|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 | Construction Finance Factor Changes over time |  |  |  |  |  |  |  |  |  |
| 40 |  | Cost of equity during construction (post-drilling) |  |  |  | 10\% Cost of equity during construction (pre-drilling) |  |  |  |  |
| 41 | Construction Length: (Years) | 2020 |  | 2030 (Moderate) |  | 2030 (Advanced) |  |  |  |  |
| 42 |  | 8 | 10 | 7 | 7 | 5 | 5 | Accumulated <br> Interest <br> $(2020)$ | Accumulated Interest (2030) |  |
| 43 |  | Capital | Capital | Capital | Capital | Capital | Capital |  |  | $\qquad$ |
| 44 | Year | Fraction | Fraction | Fraction | Fraction | Fraction | Fraction |  |  |  |
| 45 | Index | (Hydro) | (EGS) | (Hydro) | (EGS) | (Hydro) | (EGS) |  |  |  |
| 46 | 0 | 30\% | 16\% | 35\% | 19\% | 31\% | 20\% | 1.020 | 1.020 | 75\% |
| 47 | 1 | 22\% | 28\% | 8\% | 32\% | 19\% | 34\% | 1.061 | 1.061 | 0\% |
| 48 | 2 | 26\% | 12\% | 34\% | 9\% | 25\% | 10\% | 1.103 | 1.103 | 0\% |
| 49 | 3 | 0\% | 35\% | 0\% | 31\% | 10\% | 28\% | 1.147 | 1.147 | 0\% |
| 50 | 4 | 0\% | 0\% | 10\% | 0\% | 16\% | 9\% | 1.193 | 1.193 | 0\% |
| 51 | 5 | 10\% | 0\% | 3\% | 5\% |  |  | 1.241 | 1.241 | 0\% |
| 52 | 6 | 2\% | 6\% | 11\% | 4\% |  |  | 1.290 | 1.290 | 0\% |
| 53 | 7 | 10\% | 0\% |  |  |  |  | 1.342 | 1.342 | 0\% |
| 54 | 8 |  | 1\% |  |  |  |  | 1.396 | 1.396 | 0\% |
| 55 | 9 |  | 2\% |  |  |  |  | 1.451 | 1.451 | 0\% |
| 56 |  |  |  |  |  |  |  |  |  |  |
| 57 |  |  |  |  |  |  |  |  |  |  |
| 58 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 59 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 60 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 61 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 62 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 63 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 64 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 65 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 66 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 67 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 68 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 69 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 71 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 72 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 73 | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% |
| 74 | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% |
| 75 | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% |
| 76 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 77 | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% |
| 78 | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% |
| 79 | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% |
| 80 | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% |
| 81 | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% |
| 82 | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% |
| 83 | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% |
| 84 | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% |
| 85 | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% |
| 86 | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% |
| 87 | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% |
| 88 | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% |
| 89 |  |  |  |  |  |  |  |  |  |  |
| 90 |  |  |  |  |  |  |  |  |  |  |
| 91 |  |  |  |  |  |  |  |  |  |  |
| 92 |  |  |  |  |  |  |  |  |  |  |
| 93 |  |  |  |  |  |  |  |  |  |  |
| 94 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 95 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 96 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 97 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 98 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 99 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 100 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 101 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 102 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 103 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 104 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 106 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 107 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 108 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 109 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 110 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 111 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 112 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 113 |  |  |  |  |  |  |  |  |  |  |
| 114 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 115 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 116 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 117 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 118 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 119 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 120 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 121 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 122 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 123 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 124 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 125 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 126 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 127 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 128 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 129 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 130 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 131 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 132 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 133 |  |  |  |  |  |  |  |  |  |  |
| 134 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 135 | \$5,090 | \$4,896 | \$4,706 | \$4,682 | \$4,659 | \$4,635 | \$4,612 | \$4,589 | \$4,566 | \$4,543 |
| 136 | \$5,839 | \$5,727 | \$5,616 | \$5,588 | \$5,560 | \$5,532 | \$5,505 | \$5,477 | \$5,450 | \$5,423 |
| 137 | \$6,488 | \$6,455 | \$6,423 | \$6,391 | \$6,359 | \$6,327 | \$6,296 | \$6,264 | \$6,233 | \$6,202 |
| 138 1 | \$6,727 | \$6,506 | \$6,288 | \$6,257 | \$6,226 | \$6,195 | \$6,164 | \$6,133 | \$6,102 | \$6,072 |
| 139 | \$7,695 | \$7,582 | \$7,470 | \$7,433 | \$7,396 | \$7,359 | \$7,322 | \$7,285 | \$7,249 | \$7,213 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
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| 140 | \$8,274 | \$8,232 | \$8,191 | \$8,150 | \$8,110 | \$8,069 | \$8,029 | \$7,989 | \$7,949 | \$7,909 |
| 141 | \$6,836 | \$5,320 | \$3,833 | \$3,814 | \$3,795 | \$3,776 | \$3,757 | \$3,738 | \$3,719 | \$3,701 |
| 142 | \$13,358 | \$12,562 | \$11,773 | \$11,715 | \$11,656 | \$11,598 | \$11,540 | \$11,482 | \$11,425 | \$11,367 |
| 143 | \$19,228 | \$19,132 | \$19,036 | \$18,941 | \$18,847 | \$18,752 | \$18,659 | \$18,565 | \$18,472 | \$18,380 |
| 144 | \$14,168 | \$10,482 | \$6,868 | \$6,833 | \$6,799 | \$6,765 | \$6,731 | \$6,698 | \$6,664 | \$6,631 |
| 145 | \$34,398 | \$32,981 | \$31,578 | \$31,420 | \$31,263 | \$31,107 | \$30,951 | \$30,796 | \$30,642 | \$30,489 |
| 146 | \$44,406 | \$44,184 | \$43,963 | \$43,744 | \$43,525 | \$43,307 | \$43,091 | \$42,875 | \$42,661 | \$42,447 |
| 147 | \$6,836 | \$5,320 | \$3,833 | \$3,814 | \$3,795 | \$3,776 | \$3,757 | \$3,738 | \$3,719 | \$3,701 |
| 148 | \$13,358 | \$12,562 | \$11,773 | \$11,715 | \$11,656 | \$11,598 | \$11,540 | \$11,482 | \$11,425 | \$11,367 |
| 149 | \$19,228 | \$19,132 | \$19,036 | \$18,941 | \$18,847 | \$18,752 | \$18,659 | \$18,565 | \$18,472 | \$18,380 |
| 150 | \$14,168 | \$10,482 | \$6,868 | \$6,833 | \$6,799 | \$6,765 | \$6,731 | \$6,698 | \$6,664 | \$6,631 |
| 151 | \$34,398 | \$32,981 | \$31,578 | \$31,420 | \$31,263 | \$31,107 | \$30,951 | \$30,796 | \$30,642 | \$30,489 |
| 152 | \$44,406 | \$44,184 | \$43,963 | \$43,744 | \$43,525 | \$43,307 | \$43,091 | \$42,875 | \$42,661 | \$42,447 |
| 153 |  |  |  |  |  |  |  |  |  |  |
| 154 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 155 | \$1,345 | \$1,253 | \$1,164 | \$1,158 | \$1,153 | \$1,147 | \$1,141 | \$1,135 | \$1,130 | \$1,124 |
| 156 | \$1,805 | \$1,759 | \$1,714 | \$1,705 | \$1,697 | \$1,688 | \$1,680 | \$1,671 | \$1,663 | \$1,655 |
| 157 | \$2,108 | \$2,097 | \$2,087 | \$2,076 | \$2,066 | \$2,056 | \$2,045 | \$2,035 | \$2,025 | \$2,015 |
| 158 | \$1,778 | \$1,665 | \$1,556 | \$1,548 | \$1,540 | \$1,533 | \$1,525 | \$1,517 | \$1,510 | \$1,502 |
| 159 | \$2,379 | \$2,329 | \$2,279 | \$2,268 | \$2,257 | \$2,245 | \$2,234 | \$2,223 | \$2,212 | \$2,201 |
| 160 | \$2,688 | \$2,675 | \$2,661 | \$2,648 | \$2,635 | \$2,621 | \$2,608 | \$2,595 | \$2,582 | \$2,569 |
| 161 | \$1,686 | \$1,272 | \$886 | \$882 | \$878 | \$873 | \$869 | \$865 | \$860 | \$856 |
| 162 | \$3,627 | \$3,360 | \$3,102 | \$3,086 | \$3,071 | \$3,055 | \$3,040 | \$3,025 | \$3,010 | \$2,995 |
| 163 | \$5,811 | \$5,782 | \$5,753 | \$5,724 | \$5,695 | \$5,667 | \$5,639 | \$5,610 | \$5,582 | \$5,554 |
| 164 | \$3,494 | \$2,505 | \$1,588 | \$1,580 | \$1,572 | \$1,565 | \$1,557 | \$1,549 | \$1,541 | \$1,533 |
| 165 | \$9,340 | \$8,823 | \$8,319 | \$8,277 | \$8,236 | \$8,195 | \$8,154 | \$8,113 | \$8,072 | \$8,032 |
| 166 | \$13,420 | \$13,352 | \$13,286 | \$13,219 | \$13,153 | \$13,087 | \$13,022 | \$12,957 | \$12,892 | \$12,828 |
| 167 | \$1,686 | \$1,272 | \$886 | \$882 | \$878 | \$873 | \$869 | \$865 | \$860 | \$856 |
| 168 | \$3,627 | \$3,360 | \$3,102 | \$3,086 | \$3,071 | \$3,055 | \$3,040 | \$3,025 | \$3,010 | \$2,995 |
| 169 | \$5,811 | \$5,782 | \$5,753 | \$5,724 | \$5,695 | \$5,667 | \$5,639 | \$5,610 | \$5,582 | \$5,554 |
| 170 | \$3,494 | \$2,505 | \$1,588 | \$1,580 | \$1,572 | \$1,565 | \$1,557 | \$1,549 | \$1,541 | \$1,533 |
| 171 | \$9,340 | \$8,823 | \$8,319 | \$8,277 | \$8,236 | \$8,195 | \$8,154 | \$8,113 | \$8,072 | \$8,032 |
| 172 | \$13,420 | \$13,352 | \$13,286 | \$13,219 | \$13,153 | \$13,087 | \$13,022 | \$12,957 | \$12,892 | \$12,828 |
| 173 |  |  |  |  |  |  |  |  |  |  |
| 174 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 | \$3,745 | \$3,643 | \$3,541 | \$3,524 | \$3,506 | \$3,488 | \$3,471 | \$3,454 | \$3,436 | \$3,419 |
| 176 | \$4,034 | \$3,968 | \$3,903 | \$3,883 | \$3,864 | \$3,844 | \$3,825 | \$3,806 | \$3,787 | \$3,768 |
| 177 | \$4,380 | \$4,358 | \$4,336 | \$4,315 | \$4,293 | \$4,272 | \$4,250 | \$4,229 | \$4,208 | \$4,187 |
| 178 | \$4,949 | \$4,841 | \$4,732 | \$4,709 | \$4,685 | \$4,662 | \$4,638 | \$4,615 | \$4,592 | \$4,569 |
| 179 | \$5,316 | \$5,253 | \$5,191 | \$5,165 | \$5,139 | \$5,114 | \$5,088 | \$5,062 | \$5,037 | \$5,012 |
| 180 | \$5,586 | \$5,558 | \$5,530 | \$5,502 | \$5,475 | \$5,448 | \$5,420 | \$5,393 | \$5,366 | \$5,339 |
| 181 | \$5,151 | \$4,049 | \$2,947 | \$2,932 | \$2,917 | \$2,903 | \$2,888 | \$2,874 | \$2,859 | \$2,845 |
| 182 | \$9,731 | \$9,201 | \$8,672 | \$8,629 | \$8,585 | \$8,542 | \$8,500 | \$8,457 | \$8,415 | \$8,373 |
| 183 | \$13,417 | \$13,350 | \$13,284 | \$13,217 | \$13,151 | \$13,085 | \$13,020 | \$12,955 | \$12,890 | \$12,826 |
| 184 | \$10,674 | \$7,977 | \$5,279 | \$5,253 | \$5,227 | \$5,201 | \$5,175 | \$5,149 | \$5,123 | \$5,097 |
| 185 | \$25,058 | \$24,159 | \$23,259 | \$23,143 | \$23,027 | \$22,912 | \$22,798 | \$22,684 | \$22,570 | \$22,457 |
| 186 | \$30,987 | \$30,832 | \$30,678 | \$30,524 | \$30,372 | \$30,220 | \$30,069 | \$29,918 | \$29,769 | \$29,620 |
| 187 | \$5,151 | \$4,049 | \$2,947 | \$2,932 | \$2,917 | \$2,903 | \$2,888 | \$2,874 | \$2,859 | \$2,845 |
| 188 | \$9,731 | \$9,201 | \$8,672 | \$8,629 | \$8,585 | \$8,542 | \$8,500 | \$8,457 | \$8,415 | \$8,373 |
| 189 | \$13,417 | \$13,350 | \$13,284 | \$13,217 | \$13,151 | \$13,085 | \$13,020 | \$12,955 | \$12,890 | \$12,826 |
| 190 | \$10,674 | \$7,977 | \$5,279 | \$5,253 | \$5,227 | \$5,201 | \$5,175 | \$5,149 | \$5,123 | \$5,097 |
| 191 | \$25,058 | \$24,159 | \$23,259 | \$23,143 | \$23,027 | \$22,912 | \$22,798 | \$22,684 | \$22,570 | \$22,457 |
| 192 | \$30,987 | \$30,832 | \$30,678 | \$30,524 | \$30,372 | \$30,220 | \$30,069 | \$29,918 | \$29,769 | \$29,620 |
| 193 |  |  |  |  |  |  |  |  |  |  |
| 194 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 195 | \$100 | \$99 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 |
| 196 | \$101 | \$100 | \$99 | \$99 | \$99 | \$99 | \$99 | \$99 | \$99 | \$99 |
| 197 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 |
| 198 | \$133 | \$132 | \$131 | \$131 | \$131 | \$131 | \$131 | \$131 | \$131 | \$131 |
| 199 | \$134 | \$133 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 |
| 200 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 |
| 201 | \$114 | \$103 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 202 | \$172 | \$168 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 |
| 203 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 |
| 204 | \$211 | \$171 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 |
| 205 | \$472 | \$464 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 |
| 206 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 |
| 207 | \$114 | \$103 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 208 | \$172 | \$168 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 |
| 209 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 210 | \$211 | \$171 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 |
| 211 | \$472 | \$464 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 |
| 212 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 |
| 213 |  |  |  |  |  |  |  |  |  |  |
| 214 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 215 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 216 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 217 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 218 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 219 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 220 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 221 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 222 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 223 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 224 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 225 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 226 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 227 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 228 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 229 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 230 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 231 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 232 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 233 |  |  |  |  |  |  |  |  |  |  |
| 234 |  |  |  |  |  |  |  |  |  |  |
| 235 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 236 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 237 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 238 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 239 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 240 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 241 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 242 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 243 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 244 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 245 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 246 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 247 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 248 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 249 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 250 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 251 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 252 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 253 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 254 |  |  |  |  |  |  |  |  |  |  |
| 255 |  |  |  |  |  |  |  |  |  |  |
| 256 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 257 | \$44 | \$43 | \$41 | \$41 | \$41 | \$41 | \$41 | \$41 | \$40 | \$40 |
| 258 | \$49 | \$48 | \$47 | \$47 | \$47 | \$46 | \$46 | \$46 | \$46 | \$46 |
| 259 | \$53 | \$53 | \$53 | \$53 | \$53 | \$52 | \$52 | \$52 | \$52 | \$52 |
| 260 | \$65 | \$64 | \$62 | \$62 | \$62 | \$61 | \$61 | \$61 | \$61 | \$61 |
| 261 | \$72 | \$71 | \$70 | \$70 | \$70 | \$69 | \$69 | \$69 | \$69 | \$68 |
| 262 | \$77 | \$77 | \$77 | \$76 | \$76 | \$76 | \$75 | \$75 | \$75 | \$75 |
| 263 | \$56 | \$46 | \$35 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 |
| 264 | \$104 | \$98 | \$93 | \$92 | \$92 | \$92 | \$91 | \$91 | \$91 | \$90 |
| 265 | \$144 | \$143 | \$143 | \$142 | \$142 | \$141 | \$140 | \$140 | \$139 | \$139 |
| 266 | \$128 | \$97 | \$66 | \$66 | \$65 | \$65 | \$65 | \$65 | \$64 | \$64 |
| 267 | \$304 | \$293 | \$282 | \$281 | \$280 | \$279 | \$278 | \$277 | \$276 | \$275 |
| 268 | \$382 | \$380 | \$379 | \$377 | \$376 | \$374 | \$373 | \$371 | \$370 | \$369 |
| 269 | \$56 | \$46 | \$35 | \$35 | \$35 | \$35 | \$35 | \$34 | \$34 | \$34 |
| 270 | \$104 | \$98 | \$93 | \$92 | \$92 | \$92 | \$91 | \$91 | \$91 | \$90 |
| 271 | \$144 | \$143 | \$143 | \$142 | \$142 | \$141 | \$140 | \$140 | \$139 | \$139 |
| 272 | \$128 | \$97 | \$66 | \$66 | \$65 | \$65 | \$65 | \$65 | \$64 | \$64 |
| 273 | \$304 | \$293 | \$282 | \$281 | \$280 | \$279 | \$278 | \$277 | \$276 | \$275 |
| 274 | \$382 | \$380 | \$379 | \$377 | \$376 | \$374 | \$373 | \$371 | \$370 | \$369 |
| 275 |  |  |  |  |  |  |  |  |  |  |
| 276 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 277 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 278 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 279 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 280 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 281 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 282 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 283 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 284 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 285 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 |
| 286 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 |
| 287 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 |
| 288 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 |
| 289 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 |
| 290 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 |
| 291 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 292 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 |
| 293 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 |
| 294 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 |
| 295 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 |
| 296 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 |
| 297 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 |
| 298 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 299 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 |
| 300 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 |
| 301 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 |
| 302 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 |
| 303 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 |
| 304 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 |
| 305 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |
| 306 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 |
| 307 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 |
| 308 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 |
| 309 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 |
| 310 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 |
| 311 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 |
| 312 |  |  |  |  |  |  |  |  |  |  |
| 313 |  |  |  |  |  |  |  |  |  |  |
| 314 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 |


|  | U | V | W | X | Y | Z | AA | AB | AC | AD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 315 | 1.359 | 1.344 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 |
| 316 | 1.448 | 1.443 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 |
| 317 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 |
| 318 | 1.327 | 1.314 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 |
| 319 | 1.373 | 1.365 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 |
| 320 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 |
| 321 |  |  |  |  |  |  |  |  |  |  |
| 322 |  |  |  |  |  |  |  |  |  |  |
| 323 |  |  |  |  |  |  |  |  |  |  |
| 324 |  |  |  |  |  |  |  |  |  |  |
| 325 |  |  |  |  |  |  |  |  |  |  |
| 326 |  |  |  |  |  |  |  |  |  |  |
| 327 |  |  |  |  |  |  |  |  |  |  |
| 328 | 7-3) |  |  |  |  |  |  |  |  |  |
| 329 |  |  |  |  |  |  |  |  |  |  |
| 330 |  |  |  |  |  |  |  |  |  |  |
| 331 |  |  |  |  |  |  |  |  |  |  |
| 332 |  |  |  |  |  |  |  |  |  |  |
| 333 |  |  |  |  |  |  |  |  |  |  |
| 334 |  |  |  |  |  |  |  |  |  |  |
| 335 | 7-3) |  |  |  |  |  |  |  |  |  |
| 336 |  |  |  |  |  |  |  |  |  |  |
| 337 |  |  |  |  |  |  |  |  |  |  |
| 338 |  |  |  |  |  |  |  |  |  |  |
| 339 |  |  |  |  |  |  |  |  |  |  |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |  |  |  |
| 23 |  |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  |  |  |  |  |  |  |  |
| 29 |  |  |  |  |  |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |  |  |  |
| 31 |  |  |  |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |  |  |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 |  |  |  |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 | 15\% |  |  |  |  |  |  |  |  |  |
| 41 | 202 |  |  |  | 2030 (M | oderate) |  |  | 2030 (Ad | dvanced) |
| 42 | 8 |  | 10 | 7 | 7 |  | 7 |  | 5 |  |
| 43 <br> 44 <br> 45 | Percent of Equity During Construction | Leverage During Construction | Percent of Equity During Construction | Leverage During Construction | Percent of Equity During Construction | Leverage During Construction | Percent of Equity During Construction | Leverage During Construction | Percent of Equity During Construction | Leverage During Construction |
| 46 | 25\% | 75\% | 25\% | 75\% | 25\% | 75\% | 25\% | 75\% | 25\% | 75\% |
| 47 | 100\% | 75\% | 25\% | 75\% | 25\% | 75\% | 25\% | 75\% | 25\% | 75\% |
| 48 | 100\% | 75\% | 25\% | 0\% | 100\% | 75\% | 25\% | 0\% | 100\% | 75\% |
| 49 | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% |
| 50 | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% |
| 51 | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% |
| 52 | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% |
| 53 | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% |
| 54 | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% |
| 55 | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% | 100\% | 0\% |
| 56 |  |  |  |  |  |  |  |  |  |  |
| 57 |  |  |  |  |  |  |  |  |  |  |
| 58 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 59 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 60 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 61 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 62 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 63 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 64 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 65 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 66 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 67 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 68 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 69 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 71 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 72 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 73 | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% |
| 74 | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% |
| 75 | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% | 73.7\% |
| 76 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 77 | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% |
| 78 | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% |
| 79 | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% | 4.8\% |
| 80 | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% |
| 81 | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% |
| 82 | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% | 2.3\% |
| 83 | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% |
| 84 | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% |
| 85 | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% | 6.4\% |
| 86 | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% |
| 87 | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% |
| 88 | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% | 4.6\% |
| 89 |  |  |  |  |  |  |  |  |  |  |
| 90 |  |  |  |  |  |  |  |  |  |  |
| 91 |  |  |  |  |  |  |  |  |  |  |
| 92 |  |  |  |  |  |  |  |  |  |  |
| 93 |  |  |  |  |  |  |  |  |  |  |
| 94 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 95 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 96 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 97 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 98 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 99 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 100 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 101 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 102 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 103 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 104 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 105 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 106 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 107 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 108 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 109 | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% | 90\% |
| 110 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 111 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 112 | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% | 80\% |
| 113 |  |  |  |  |  |  |  |  |  |  |
| 114 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 115 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 116 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 117 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 118 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 119 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 120 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 121 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 122 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 123 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 124 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 125 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 126 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 127 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 128 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 129 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 | 7,884 |
| 130 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 131 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 132 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 | 7,008 |
| 133 |  |  |  |  |  |  |  |  |  |  |
| 134 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 135 | \$4,521 | \$4,498 | \$4,475 | \$4,453 | \$4,431 | \$4,409 | \$4,387 | \$4,365 | \$4,343 | \$4,321 |
| 136 | \$5,395 | \$5,368 | \$5,342 | \$5,315 | \$5,288 | \$5,262 | \$5,236 | \$5,209 | \$5,183 | \$5,157 |
| 137 | \$6,171 | \$6,140 | \$6,109 | \$6,079 | \$6,048 | \$6,018 | \$5,988 | \$5,958 | \$5,928 | \$5,898 |
| 138 | \$6,041 | \$6,011 | \$5,981 | \$5,951 | \$5,921 | \$5,892 | \$5,862 | \$5,833 | \$5,804 | \$5,775 |
| 139 | \$7,177 | \$7,141 | \$7,105 | \$7,070 | \$7,034 | \$6,999 | \$6,964 | \$6,929 | \$6,895 | \$6,860 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 | \$7,869 | \$7,830 | \$7,791 | \$7,752 | \$7,713 | \$7,675 | \$7,636 | \$7,598 | \$7,560 | \$7,522 |
| 141 | \$3,682 | \$3,664 | \$3,646 | \$3,627 | \$3,609 | \$3,591 | \$3,573 | \$3,555 | \$3,538 | \$3,520 |
| 142 | \$11,311 | \$11,254 | \$11,198 | \$11,142 | \$11,086 | \$11,031 | \$10,976 | \$10,921 | \$10,866 | \$10,812 |
| 143 | \$18,288 | \$18,197 | \$18,106 | \$18,015 | \$17,925 | \$17,836 | \$17,746 | \$17,658 | \$17,569 | \$17,481 |
| 144 | \$6,598 | \$6,565 | \$6,532 | \$6,499 | \$6,467 | \$6,434 | \$6,402 | \$6,370 | \$6,338 | \$6,307 |
| 145 | \$30,337 | \$30,185 | \$30,034 | \$29,884 | \$29,735 | \$29,586 | \$29,438 | \$29,291 | \$29,144 | \$28,999 |
| 146 | \$42,235 | \$42,024 | \$41,814 | \$41,605 | \$41,397 | \$41,190 | \$40,984 | \$40,779 | \$40,575 | \$40,372 |
| 147 | \$3,682 | \$3,664 | \$3,646 | \$3,627 | \$3,609 | \$3,591 | \$3,573 | \$3,555 | \$3,538 | \$3,520 |
| 148 | \$11,311 | \$11,254 | \$11,198 | \$11,142 | \$11,086 | \$11,031 | \$10,976 | \$10,921 | \$10,866 | \$10,812 |
| 149 | \$18,288 | \$18,197 | \$18,106 | \$18,015 | \$17,925 | \$17,836 | \$17,746 | \$17,658 | \$17,569 | \$17,481 |
| 150 | \$6,598 | \$6,565 | \$6,532 | \$6,499 | \$6,467 | \$6,434 | \$6,402 | \$6,370 | \$6,338 | \$6,307 |
| 151 | \$30,337 | \$30,185 | \$30,034 | \$29,884 | \$29,735 | \$29,586 | \$29,438 | \$29,291 | \$29,144 | \$28,999 |
| 152 | \$42,235 | \$42,024 | \$41,814 | \$41,605 | \$41,397 | \$41,190 | \$40,984 | \$40,779 | \$40,575 | \$40,372 |
| 153 |  |  |  |  |  |  |  |  |  |  |
| 154 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 155 | \$1,119 | \$1,113 | \$1,107 | \$1,102 | \$1,096 | \$1,091 | \$1,085 | \$1,080 | \$1,075 | \$1,069 |
| 156 | \$1,646 | \$1,638 | \$1,630 | \$1,622 | \$1,614 | \$1,606 | \$1,597 | \$1,590 | \$1,582 | \$1,574 |
| 157 | \$2,005 | \$1,995 | \$1,985 | \$1,975 | \$1,965 | \$1,955 | \$1,945 | \$1,936 | \$1,926 | \$1,916 |
| 158 | \$1,495 | \$1,487 | \$1,480 | \$1,472 | \$1,465 | \$1,458 | \$1,450 | \$1,443 | \$1,436 | \$1,429 |
| 159 | \$2,190 | \$2,179 | \$2,168 | \$2,157 | \$2,146 | \$2,136 | \$2,125 | \$2,114 | \$2,104 | \$2,093 |
| 160 | \$2,557 | \$2,544 | \$2,531 | \$2,518 | \$2,506 | \$2,493 | \$2,481 | \$2,468 | \$2,456 | \$2,444 |
| 161 | \$852 | \$847 | \$843 | \$839 | \$835 | \$831 | \$826 | \$822 | \$818 | \$814 |
| 162 | \$2,980 | \$2,965 | \$2,950 | \$2,935 | \$2,920 | \$2,906 | \$2,891 | \$2,877 | \$2,862 | \$2,848 |
| 163 | \$5,527 | \$5,499 | \$5,472 | \$5,444 | \$5,417 | \$5,390 | \$5,363 | \$5,336 | \$5,309 | \$5,283 |
| 164 | \$1,526 | \$1,518 | \$1,511 | \$1,503 | \$1,496 | \$1,488 | \$1,481 | \$1,473 | \$1,466 | \$1,459 |
| 165 | \$7,992 | \$7,952 | \$7,912 | \$7,872 | \$7,833 | \$7,794 | \$7,755 | \$7,716 | \$7,678 | \$7,639 |
| 166 | \$12,763 | \$12,700 | \$12,636 | \$12,573 | \$12,510 | \$12,448 | \$12,385 | \$12,323 | \$12,262 | \$12,200 |
| 167 | \$852 | \$847 | \$843 | \$839 | \$835 | \$831 | \$826 | \$822 | \$818 | \$814 |
| 168 | \$2,980 | \$2,965 | \$2,950 | \$2,935 | \$2,920 | \$2,906 | \$2,891 | \$2,877 | \$2,862 | \$2,848 |
| 169 | \$5,527 | \$5,499 | \$5,472 | \$5,444 | \$5,417 | \$5,390 | \$5,363 | \$5,336 | \$5,309 | \$5,283 |
| 170 | \$1,526 | \$1,518 | \$1,511 | \$1,503 | \$1,496 | \$1,488 | \$1,481 | \$1,473 | \$1,466 | \$1,459 |
| 171 | \$7,992 | \$7,952 | \$7,912 | \$7,872 | \$7,833 | \$7,794 | \$7,755 | \$7,716 | \$7,678 | \$7,639 |
| 172 | \$12,763 | \$12,700 | \$12,636 | \$12,573 | \$12,510 | \$12,448 | \$12,385 | \$12,323 | \$12,262 | \$12,200 |
| 173 |  |  |  |  |  |  |  |  |  |  |
| 174 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 175 | \$3,402 | \$3,385 | \$3,368 | \$3,351 | \$3,335 | \$3,318 | \$3,301 | \$3,285 | \$3,268 | \$3,252 |
| 176 | \$3,749 | \$3,730 | \$3,712 | \$3,693 | \$3,675 | \$3,656 | \$3,638 | \$3,620 | \$3,602 | \$3,584 |
| 177 | \$4,166 | \$4,145 | \$4,124 | \$4,104 | \$4,083 | \$4,063 | \$4,043 | \$4,022 | \$4,002 | \$3,982 |
| 178 | \$4,546 | \$4,524 | \$4,501 | \$4,479 | \$4,456 | \$4,434 | \$4,412 | \$4,390 | \$4,368 | \$4,346 |
| 179 | \$4,987 | \$4,962 | \$4,937 | \$4,913 | \$4,888 | \$4,864 | \$4,839 | \$4,815 | \$4,791 | \$4,767 |
| 180 | \$5,313 | \$5,286 | \$5,260 | \$5,233 | \$5,207 | \$5,181 | \$5,155 | \$5,130 | \$5,104 | \$5,078 |
| 181 | \$2,831 | \$2,817 | \$2,802 | \$2,788 | \$2,775 | \$2,761 | \$2,747 | \$2,733 | \$2,719 | \$2,706 |
| 182 | \$8,331 | \$8,289 | \$8,248 | \$8,207 | \$8,166 | \$8,125 | \$8,084 | \$8,044 | \$8,004 | \$7,964 |
| 183 | \$12,761 | \$12,698 | \$12,634 | \$12,571 | \$12,508 | \$12,446 | \$12,383 | \$12,321 | \$12,260 | \$12,199 |
| 184 | \$5,072 | \$5,046 | \$5,021 | \$4,996 | \$4,971 | \$4,946 | \$4,922 | \$4,897 | \$4,872 | \$4,848 |
| 185 | \$22,345 | \$22,233 | \$22,122 | \$22,012 | \$21,901 | \$21,792 | \$21,683 | \$21,575 | \$21,467 | \$21,359 |
| 186 | \$29,472 | \$29,324 | \$29,178 | \$29,032 | \$28,887 | \$28,742 | \$28,599 | \$28,456 | \$28,313 | \$28,172 |
| 187 | \$2,831 | \$2,817 | \$2,802 | \$2,788 | \$2,775 | \$2,761 | \$2,747 | \$2,733 | \$2,719 | \$2,706 |
| 188 | \$8,331 | \$8,289 | \$8,248 | \$8,207 | \$8,166 | \$8,125 | \$8,084 | \$8,044 | \$8,004 | \$7,964 |
| 189 | \$12,761 | \$12,698 | \$12,634 | \$12,571 | \$12,508 | \$12,446 | \$12,383 | \$12,321 | \$12,260 | \$12,199 |
| 190 | \$5,072 | \$5,046 | \$5,021 | \$4,996 | \$4,971 | \$4,946 | \$4,922 | \$4,897 | \$4,872 | \$4,848 |
| 191 | \$22,345 | \$22,233 | \$22,122 | \$22,012 | \$21,901 | \$21,792 | \$21,683 | \$21,575 | \$21,467 | \$21,359 |
| 192 | \$29,472 | \$29,324 | \$29,178 | \$29,032 | \$28,887 | \$28,742 | \$28,599 | \$28,456 | \$28,313 | \$28,172 |
| 193 |  |  |  |  |  |  |  |  |  |  |
| 194 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 195 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 |
| 196 | \$99 | \$99 | \$99 | \$99 | \$99 | \$99 | \$99 | \$99 | \$99 | \$99 |
| 197 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 |
| 198 | \$131 | \$131 | \$131 | \$131 | \$131 | \$131 | \$131 | \$131 | \$131 | \$131 |
| 199 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 |
| 200 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 | \$141 |
| 201 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 202 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 |
| 203 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 |
| 204 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 |
| 205 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 |
| 206 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 |
| 207 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 208 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 | \$163 |
| 209 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 | \$208 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 210 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 |
| 211 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 | \$456 |
| 212 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 | \$536 |
| 213 |  |  |  |  |  |  |  |  |  |  |
| 214 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 215 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 216 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 217 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 218 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 219 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 220 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 221 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 222 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 223 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 224 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 225 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 226 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 227 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 228 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 229 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 230 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 231 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 232 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 233 |  |  |  |  |  |  |  |  |  |  |
| 234 |  |  |  |  |  |  |  |  |  |  |
| 235 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 236 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 237 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 238 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 239 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 240 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 241 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 242 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 243 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 244 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
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| 245 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 246 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 247 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 248 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 249 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 250 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 251 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 252 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 253 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 254 |  |  |  |  |  |  |  |  |  |  |
| 255 |  |  |  |  |  |  |  |  |  |  |
| 256 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 257 | \$40 | \$40 | \$40 | \$40 | \$40 | \$39 | \$39 | \$39 | \$39 | \$39 |
| 258 | \$46 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$44 | \$44 | \$44 |
| 259 | \$51 | \$51 | \$51 | \$51 | \$51 | \$50 | \$50 | \$50 | \$50 | \$50 |
| 260 | \$60 | \$60 | \$60 | \$60 | \$59 | \$59 | \$59 | \$59 | \$59 | \$58 |
| 261 | \$68 | \$68 | \$68 | \$67 | \$67 | \$67 | \$67 | \$66 | \$66 | \$66 |
| 262 | \$74 | \$74 | \$74 | \$74 | \$73 | \$73 | \$73 | \$72 | \$72 | \$72 |
| 263 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$33 | \$33 | \$33 | \$33 |
| 264 | \$90 | \$90 | \$89 | \$89 | \$89 | \$88 | \$88 | \$88 | \$87 | \$87 |
| 265 | \$138 | \$138 | \$137 | \$137 | \$136 | \$135 | \$135 | \$134 | \$134 | \$133 |
| 266 | \$64 | \$64 | \$64 | \$63 | \$63 | \$63 | \$63 | \$62 | \$62 | \$62 |
| 267 | \$274 | \$273 | \$272 | \$271 | \$270 | \$269 | \$268 | \$267 | \$266 | \$265 |
| 268 | \$367 | \$366 | \$364 | \$363 | \$361 | \$360 | \$358 | \$357 | \$356 | \$354 |
| 269 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$33 | \$33 | \$33 | \$33 |
| 270 | \$90 | \$90 | \$89 | \$89 | \$89 | \$88 | \$88 | \$88 | \$87 | \$87 |
| 271 | \$138 | \$138 | \$137 | \$137 | \$136 | \$135 | \$135 | \$134 | \$134 | \$133 |
| 272 | \$64 | \$64 | \$64 | \$63 | \$63 | \$63 | \$63 | \$62 | \$62 | \$62 |
| 273 | \$274 | \$273 | \$272 | \$271 | \$270 | \$269 | \$268 | \$267 | \$266 | \$265 |
| 274 | \$367 | \$366 | \$364 | \$363 | \$361 | \$360 | \$358 | \$357 | \$356 | \$354 |
| 275 |  |  |  |  |  |  |  |  |  |  |
| 276 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 277 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 278 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 279 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 280 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 281 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 282 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ - | \$ |
| 283 | \$ | \$ | \$ - | \$ | \$ | \$ | \$ - | \$ | \$ - | \$ |
| 284 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 285 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 |
| 286 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 |
| 287 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 | 0.879 |
| 288 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 |
| 289 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 |
| 290 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 | 1.042 |
| 291 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 292 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 |
| 293 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 |
| 294 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 |
| 295 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 |
| 296 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 |
| 297 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 |
| 298 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 299 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 |
| 300 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 |
| 301 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 |
| 302 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 |
| 303 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 |
| 304 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 |
| 305 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
| 306 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 | 0.9540 |
| 307 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 | 0.9102 |
| 308 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 | 0.8683 |
| 309 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 | 0.8284 |
| 310 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 | 0.7903 |
| 311 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 | 0.7540 |
| 312 |  |  |  |  |  |  |  |  |  |  |
| 313 |  |  |  |  |  |  |  |  |  |  |
| 314 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |


|  | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 315 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 | 1.329 |
| 316 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 | 1.439 |
| 317 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 | 1.481 |
| 318 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 | 1.301 |
| 319 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 | 1.358 |
| 320 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 | 1.433 |
| 321 |  |  |  |  |  |  |  |  |  |  |
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|  | AO | AP |  | AQ |
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|  | AO | AP | AQ | AR |
| :---: | :---: | :---: | :---: | :---: |
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| 39 |  |  |  |  |
| 40 |  |  |  |  |
| 41 |  | Accumula | Equity |  |
| 42 |  |  |  |  |
| 43 | Percent of | Hydro | EGS |  |
| 44 | Equity During |  |  |  |
| 45 | Construction |  |  |  |
| 46 | 25\% | 1.049 | 1.049 |  |
| 47 | 25\% | 1.154 | 1.154 |  |
| 48 | 25\% | 1.418 | 1.269 |  |
| 49 | 100\% | 1.631 | 1.631 |  |
| 50 | 100\% | 1.876 | 1.876 |  |
| 51 | 100\% | 2.157 | 2.157 |  |
| 52 | 100\% | 2.480 | 2.480 |  |
| 53 | 100\% | 2.853 | 2.853 |  |
| 54 | 100\% | 3.280 | 3.280 |  |
| 55 | 100\% | 3.773 | 3.773 |  |
| 56 |  |  |  |  |
| 57 |  |  |  |  |
| 58 | 2048 | 2049 | 2050 |  |
| 59 | 2.5\% | 2.5\% | 2.5\% |  |
| 60 | 4.0\% | 4.0\% | 4.0\% |  |
| 61 | 4.0\% | 4.0\% | 4.0\% |  |
| 62 | 4.0\% | 4.0\% | 4.0\% |  |
| 63 | 1.5\% | 1.5\% | 1.5\% |  |
| 64 | 1.5\% | 1.5\% | 1.5\% |  |
| 65 | 1.5\% | 1.5\% | 1.5\% |  |
| 66 | 4.0\% | 4.0\% | 4.0\% |  |
| 67 | 10.0\% | 10.0\% | 10.0\% |  |
| 68 | 10.0\% | 10.0\% | 10.0\% |  |
| 69 | 10.0\% | 10.0\% | 10.0\% |  |


|  | AO | AP | AQ | AR |
| :---: | :---: | :---: | :---: | :---: |
| 70 | 7.3\% | 7.3\% | 7.3\% |  |
| 71 | 7.3\% | 7.3\% | 7.3\% |  |
| 72 | 7.3\% | 7.3\% | 7.3\% |  |
| 73 | 73.7\% | 73.7\% | 73.7\% |  |
| 74 | 73.7\% | 73.7\% | 73.7\% |  |
| 75 | 73.7\% | 73.7\% | 73.7\% |  |
| 76 | 25.7\% | 25.7\% | 25.7\% |  |
| 77 | 4.8\% | 4.8\% | 4.8\% |  |
| 78 | 4.8\% | 4.8\% | 4.8\% |  |
| 79 | 4.8\% | 4.8\% | 4.8\% |  |
| 80 | 2.3\% | 2.3\% | 2.3\% |  |
| 81 | 2.3\% | 2.3\% | 2.3\% |  |
| 82 | 2.3\% | 2.3\% | 2.3\% |  |
| 83 | 6.4\% | 6.4\% | 6.4\% |  |
| 84 | 6.4\% | 6.4\% | 6.4\% |  |
| 85 | 6.4\% | 6.4\% | 6.4\% |  |
| 86 | 4.6\% | 4.6\% | 4.6\% |  |
| 87 | 4.6\% | 4.6\% | 4.6\% |  |
| 88 | 4.6\% | 4.6\% | 4.6\% |  |
| 89 |  |  |  |  |
| 90 |  |  |  |  |
| 91 |  |  |  |  |
| 92 |  |  |  |  |
| 93 |  |  |  |  |
| 94 | 2048 | 2049 | 2050 |  |
| 95 | 90\% | 90\% | 90\% |  |
| 96 | 90\% | 90\% | 90\% |  |
| 97 | 90\% | 90\% | 90\% |  |
| 98 | 80\% | 80\% | 80\% |  |
| 99 | 80\% | 80\% | 80\% |  |
| 100 | 80\% | 80\% | 80\% |  |
| 101 | 90\% | 90\% | 90\% |  |
| 102 | 90\% | 90\% | 90\% |  |
| 103 | 90\% | 90\% | 90\% |  |
| 104 | 80\% | 80\% | 80\% |  |


|  | AO | AP | AQ | AR |
| :---: | :---: | :---: | :---: | :---: |
| 105 | 80\% | 80\% | 80\% |  |
| 106 | 80\% | 80\% | 80\% |  |
| 107 | 90\% | 90\% | 90\% |  |
| 108 | 90\% | 90\% | 90\% |  |
| 109 | 90\% | 90\% | 90\% |  |
| 110 | 80\% | 80\% | 80\% |  |
| 111 | 80\% | 80\% | 80\% |  |
| 112 | 80\% | 80\% | 80\% |  |
| 113 |  |  |  |  |
| 114 | 2048 | 2049 | 2050 |  |
| 115 | 7,884 | 7,884 | 7,884 |  |
| 116 | 7,884 | 7,884 | 7,884 |  |
| 117 | 7,884 | 7,884 | 7,884 |  |
| 118 | 7,008 | 7,008 | 7,008 |  |
| 119 | 7,008 | 7,008 | 7,008 |  |
| 120 | 7,008 | 7,008 | 7,008 |  |
| 121 | 7,884 | 7,884 | 7,884 |  |
| 122 | 7,884 | 7,884 | 7,884 |  |
| 123 | 7,884 | 7,884 | 7,884 |  |
| 124 | 7,008 | 7,008 | 7,008 |  |
| 125 | 7,008 | 7,008 | 7,008 |  |
| 126 | 7,008 | 7,008 | 7,008 |  |
| 127 | 7,884 | 7,884 | 7,884 |  |
| 128 | 7,884 | 7,884 | 7,884 |  |
| 129 | 7,884 | 7,884 | 7,884 |  |
| 130 | 7,008 | 7,008 | 7,008 |  |
| 131 | 7,008 | 7,008 | 7,008 |  |
| 132 | 7,008 | 7,008 | 7,008 |  |
| 133 |  |  |  |  |
| 134 | 2048 | 2049 | 2050 |  |
| 135 | \$4,300 | \$4,278 | \$4,257 |  |
| 136 | \$5,132 | \$5,106 | \$5,080 |  |
| 137 | \$5,869 | \$5,840 | \$5,810 |  |
| 138 | \$5,746 | \$5,717 | \$5,689 |  |
| 139 | \$6,826 | \$6,792 | \$6,758 |  |


|  | AO | AP | AQ | AR |
| :---: | :---: | :---: | :---: | :---: |
| 140 | \$7,485 | \$7,447 | \$7,410 |  |
| 141 | \$3,502 | \$3,485 | \$3,467 |  |
| 142 | \$10,758 | \$10,704 | \$10,650 |  |
| 143 | \$17,394 | \$17,307 | \$17,221 |  |
| 144 | \$6,275 | \$6,244 | \$6,213 |  |
| 145 | \$28,854 | \$28,709 | \$28,566 |  |
| 146 | \$40,170 | \$39,970 | \$39,770 |  |
| 147 | \$3,502 | \$3,485 | \$3,467 |  |
| 148 | \$10,758 | \$10,704 | \$10,650 |  |
| 149 | \$17,394 | \$17,307 | \$17,221 |  |
| 150 | \$6,275 | \$6,244 | \$6,213 |  |
| 151 | \$28,854 | \$28,709 | \$28,566 |  |
| 152 | \$40,170 | \$39,970 | \$39,770 |  |
| 153 |  |  |  |  |
| 154 | 2048 | 2049 | 2050 |  |
| 155 | \$1,064 | \$1,059 | \$1,053 |  |
| 156 | \$1,566 | \$1,558 | \$1,550 |  |
| 157 | \$1,907 | \$1,897 | \$1,888 |  |
| 158 | \$1,422 | \$1,415 | \$1,408 |  |
| 159 | \$2,083 | \$2,072 | \$2,062 |  |
| 160 | \$2,432 | \$2,419 | \$2,407 |  |
| 161 | \$810 | \$806 | \$802 |  |
| 162 | \$2,834 | \$2,820 | \$2,806 |  |
| 163 | \$5,256 | \$5,230 | \$5,204 |  |
| 164 | \$1,451 | \$1,444 | \$1,437 |  |
| 165 | \$7,601 | \$7,563 | \$7,525 |  |
| 166 | \$12,139 | \$12,079 | \$12,018 |  |
| 167 | \$810 | \$806 | \$802 |  |
| 168 | \$2,834 | \$2,820 | \$2,806 |  |
| 169 | \$5,256 | \$5,230 | \$5,204 |  |
| 170 | \$1,451 | \$1,444 | \$1,437 |  |
| 171 | \$7,601 | \$7,563 | \$7,525 |  |
| 172 | \$12,139 | \$12,079 | \$12,018 |  |
| 173 |  |  |  |  |
| 174 | 2048 | 2049 | 2050 |  |


|  | AO | AP | AQ | AR |
| :---: | :---: | :---: | :---: | :---: |
| 175 | \$3,236 | \$3,220 | \$3,203 |  |
| 176 | \$3,566 | \$3,548 | \$3,530 |  |
| 177 | \$3,962 | \$3,942 | \$3,923 |  |
| 178 | \$4,324 | \$4,303 | \$4,281 |  |
| 179 | \$4,743 | \$4,719 | \$4,696 |  |
| 180 | \$5,053 | \$5,028 | \$5,003 |  |
| 181 | \$2,692 | \$2,679 | \$2,665 |  |
| 182 | \$7,924 | \$7,884 | \$7,845 |  |
| 183 | \$12,138 | \$12,077 | \$12,017 |  |
| 184 | \$4,824 | \$4,800 | \$4,776 |  |
| 185 | \$21,253 | \$21,146 | \$21,041 |  |
| 186 | \$28,031 | \$27,891 | \$27,751 |  |
| 187 | \$2,692 | \$2,679 | \$2,665 |  |
| 188 | \$7,924 | \$7,884 | \$7,845 |  |
| 189 | \$12,138 | \$12,077 | \$12,017 |  |
| 190 | \$4,824 | \$4,800 | \$4,776 |  |
| 191 | \$21,253 | \$21,146 | \$21,041 |  |
| 192 | \$28,031 | \$27,891 | \$27,751 |  |
| 193 |  |  |  |  |
| 194 | 2048 | 2049 | 2050 |  |
| 195 | \$98 | \$98 | \$98 |  |
| 196 | \$99 | \$99 | \$99 |  |
| 197 | \$107 | \$107 | \$107 |  |
| 198 | \$131 | \$131 | \$131 |  |
| 199 | \$132 | \$132 | \$132 |  |
| 200 | \$141 | \$141 | \$141 |  |
| 201 | \$91 | \$91 | \$91 |  |
| 202 | \$163 | \$163 | \$163 |  |
| 203 | \$208 | \$208 | \$208 |  |
| 204 | \$130 | \$130 | \$130 |  |
| 205 | \$456 | \$456 | \$456 |  |
| 206 | \$536 | \$536 | \$536 |  |
| 207 | \$91 | \$91 | \$91 |  |
| 208 | \$163 | \$163 | \$163 |  |
| 209 | \$208 | \$208 | \$208 |  |


|  | AO | AP | AQ | AR |
| :---: | :---: | :---: | :---: | :---: |
| 210 | \$130 | \$130 | \$130 |  |
| 211 | \$456 | \$456 | \$456 |  |
| 212 | \$536 | \$536 | \$536 |  |
| 213 |  |  |  |  |
| 214 | 2048 | 2049 | 2050 |  |
| 215 | \$0 | \$0 | \$0 |  |
| 216 | \$0 | \$0 | \$0 |  |
| 217 | \$0 | \$0 | \$0 |  |
| 218 | \$0 | \$0 | \$0 |  |
| 219 | \$0 | \$0 | \$0 |  |
| 220 | \$0 | \$0 | \$0 |  |
| 221 | \$0 | \$0 | \$0 |  |
| 222 | \$0 | \$0 | \$0 |  |
| 223 | \$0 | \$0 | \$0 |  |
| 224 | \$0 | \$0 | \$0 |  |
| 225 | \$0 | \$0 | \$0 |  |
| 226 | \$0 | \$0 | \$0 |  |
| 227 | \$0 | \$0 | \$0 |  |
| 228 | \$0 | \$0 | \$0 |  |
| 229 | \$0 | \$0 | \$0 |  |
| 230 | \$0 | \$0 | \$0 |  |
| 231 | \$0 | \$0 | \$0 |  |
| 232 | \$0 | \$0 | \$0 |  |
| 233 |  |  |  |  |
| 234 |  |  |  |  |
| 235 | 2048 | 2049 | 2050 |  |
| 236 | \$0 | \$0 | \$0 |  |
| 237 | \$0 | \$0 | \$0 |  |
| 238 | \$0 | \$0 | \$0 |  |
| 239 | \$0 | \$0 | \$0 |  |
| 240 | \$0 | \$0 | \$0 |  |
| 241 | \$0 | \$0 | \$0 |  |
| 242 | \$0 | \$0 | \$0 |  |
| 243 | \$0 | \$0 | \$0 |  |
| 244 | \$0 | \$0 | \$0 |  |


|  | AO | AP | AQ | AR |
| :---: | :---: | :---: | :---: | :---: |
| 245 | \$0 | \$0 | \$0 |  |
| 246 | \$0 | \$0 | \$0 |  |
| 247 | \$0 | \$0 | \$0 |  |
| 248 | \$0 | \$0 | \$0 |  |
| 249 | \$0 | \$0 | \$0 |  |
| 250 | \$0 | \$0 | \$0 |  |
| 251 | \$0 | \$0 | \$0 |  |
| 252 | \$0 | \$0 | \$0 |  |
| 253 | \$0 | \$0 | \$0 |  |
| 254 |  |  |  |  |
| 255 |  |  |  |  |
| 256 | 2048 | 2049 | 2050 |  |
| 257 | \$39 | \$39 | \$38 |  |
| 258 | \$44 | \$44 | \$44 |  |
| 259 | \$50 | \$49 | \$49 |  |
| 260 | \$58 | \$58 | \$58 |  |
| 261 | \$66 | \$66 | \$65 |  |
| 262 | \$72 | \$71 | \$71 |  |
| 263 | \$33 | \$33 | \$33 |  |
| 264 | \$87 | \$86 | \$86 |  |
| 265 | \$133 | \$132 | \$132 |  |
| 266 | \$62 | \$62 | \$61 |  |
| 267 | \$264 | \$263 | \$262 |  |
| 268 | \$353 | \$351 | \$350 |  |
| 269 | \$33 | \$33 | \$33 |  |
| 270 | \$87 | \$86 | \$86 |  |
| 271 | \$133 | \$132 | \$132 |  |
| 272 | \$62 | \$62 | \$61 |  |
| 273 | \$264 | \$263 | \$262 |  |
| 274 | \$353 | \$351 | \$350 |  |
| 275 |  |  |  |  |
| 276 | 2048 | 2049 | 2050 |  |
| 277 | 11.61\% | 11.61\% | 11.61\% |  |
| 278 | 11.61\% | 11.61\% | 11.61\% |  |
| 279 | 11.61\% | 11.61\% | 11.61\% |  |


|  | AO | AP | AQ | AR |
| :---: | :---: | :---: | :---: | :---: |
| 280 | 0.00\% | 0.00\% | 0.00\% |  |
| 281 | 0.00\% | 0.00\% | 0.00\% |  |
| 282 | \$ | \$ | \$ |  |
| 283 | \$ - | \$ | \$ |  |
| 284 | \$ - | \$ | \$ |  |
| 285 | 0.879 | 0.879 | 0.879 |  |
| 286 | 0.879 | 0.879 | 0.879 |  |
| 287 | 0.879 | 0.879 | 0.879 |  |
| 288 | 1.042 | 1.042 | 1.042 |  |
| 289 | 1.042 | 1.042 | 1.042 |  |
| 290 | 1.042 | 1.042 | 1.042 |  |
| 291 | 2048 | 2049 | 2050 |  |
| 292 | 0.9540 | 0.9540 | 0.9540 |  |
| 293 | 0.9102 | 0.9102 | 0.9102 |  |
| 294 | 0.8683 | 0.8683 | 0.8683 |  |
| 295 | 0.8284 | 0.8284 | 0.8284 |  |
| 296 | 0.7903 | 0.7903 | 0.7903 |  |
| 297 | 0.7540 | 0.7540 | 0.7540 |  |
| 298 | 2048 | 2049 | 2050 |  |
| 299 | 0.9540 | 0.9540 | 0.9540 |  |
| 300 | 0.9102 | 0.9102 | 0.9102 |  |
| 301 | 0.8683 | 0.8683 | 0.8683 |  |
| 302 | 0.8284 | 0.8284 | 0.8284 |  |
| 303 | 0.7903 | 0.7903 | 0.7903 |  |
| 304 | 0.7540 | 0.7540 | 0.7540 |  |
| 305 | 2048 | 2049 | 2050 |  |
| 306 | 0.9540 | 0.9540 | 0.9540 |  |
| 307 | 0.9102 | 0.9102 | 0.9102 |  |
| 308 | 0.8683 | 0.8683 | 0.8683 |  |
| 309 | 0.8284 | 0.8284 | 0.8284 |  |
| 310 | 0.7903 | 0.7903 | 0.7903 |  |
| 311 | 0.7540 | 0.7540 | 0.7540 |  |
| 312 |  |  |  |  |
| 313 |  |  |  |  |
| 314 | 2048 | 2049 | 2050 |  |


|  | AO | AP | AQ | AR |
| ---: | ---: | ---: | ---: | ---: |
| 315 | 1.329 | 1.329 | 1.329 |  |
| 316 | 1.439 | 1.439 | 1.439 |  |
| 317 | 1.481 | 1.481 | 1.481 |  |
| 318 | 1.301 | 1.301 | 1.301 |  |
| 319 | 1.358 | 1.358 | 1.358 |  |
| 320 | 1.433 | 1.433 | 1.433 |  |
| 321 |  |  |  |  |
| 322 |  |  |  |  |
| 323 |  |  |  |  |
| 324 |  |  |  |  |
| 325 |  |  |  |  |
| 326 |  |  |  |  |
| 327 |  |  |  |  |
| 328 |  |  |  |  |
| 329 |  |  |  |  |
| 330 |  |  |  |  |
| 331 |  |  |  |  |
| 332 |  |  |  |  |
| 333 |  |  |  |  |
| 334 |  |  |  |  |
| 335 |  |  |  |  |
| 336 |  |  |  |  |
| 337 |  |  |  |  |
| 338 |  |  |  |  |
| 339 |  |  |  |  |



|  | A | B | CD |  | FG | H | I | J | K | L |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 |  |  |  |  |  |  |  | Equity Premium Dur | Construction |  |
| 37 |  |  |  |  |  |  |  | Construction Dura | yrs |  |
| 38 |  |  |  |  |  |  |  | Year | Capital | Leverage During |
| 39 |  |  |  |  |  |  |  | Index | Fraction | Construction |
| 40 |  |  |  |  |  |  |  | 0 |  | 80\% |
| 41 |  |  |  |  |  |  |  | 1 |  | 80\% |
| 42 |  |  |  |  |  |  |  | 2 |  | 80\% |
| 43 |  |  |  |  |  |  |  |  |  |  |
| 44 |  |  |  |  |  |  |  |  |  |  |
| 45 |  |  |  |  |  |  |  |  | Inflation Rate |  |
| 46 |  |  |  |  |  |  |  |  | Interest Rate Nominal | Advanced |
| 47 |  |  |  |  |  |  |  |  | Interest Rate Nominal | Moderate |
| 48 |  |  |  |  |  |  |  |  | Interest Rate Nominal | Conservative |
| 49 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real | Advanced |
| 50 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real | Moderate |
| 51 |  |  |  |  |  |  |  |  | Calculated Interest Rate Real | Conservative |
| 52 |  |  |  |  |  |  |  |  | Interest During Construction - Nominal | * |
| 53 |  |  |  |  |  | ¢ |  |  | Rate of Return on Equity Nominal | Advanced |
| 54 |  |  |  |  |  | $\stackrel{\square}{\square}$ |  |  | Rate of Return on Equity Nominal | Moderate |
| 55 |  |  |  |  |  |  |  |  | Rate of Return on Equity Nominal | Conservative |
| 56 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real | Advanced |
| 57 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real | Moderate |
| 58 |  |  |  |  |  |  |  |  | Calculated Rate of Return on Equity Real | Conservative |
| 59 |  |  |  |  |  |  |  | Assumptions | Debt Fraction | Advanced |
| 60 |  |  |  |  |  |  |  | Assumptions | Debt Fraction | Moderate |
| 61 |  |  |  |  |  |  |  |  | Debt Fraction | Conservative |
| 62 |  |  |  |  |  |  |  |  | Tax Rate (Federal and State) | * |
| 63 |  |  |  |  |  |  |  |  | WACC Nominal | Advanced |
| 64 |  |  |  |  |  |  |  |  | WACC Nominal | Moderate |
| 65 |  |  |  |  |  |  |  |  | WACC Nominal | Conservative |
| 66 |  |  |  |  |  |  |  |  | WACC Real | Advanced |
| 67 |  |  |  |  |  |  |  |  | WACC Real | Moderate |
| 68 |  |  |  |  |  |  |  |  | WACC Real | Conservative |
| 69 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal | Advanced |
| 70 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal | Moderate |


|  | A |  | CD | E F |  | H | I | J | K | L |
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| 71 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Nominal | Conservative |
| 72 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real | Advanced |
| 73 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real | Moderate |
| 74 |  |  |  |  |  |  |  |  | Capital Recovery Factor (CRF) Real | Conservative |
| 75 |  |  |  |  |  |  |  |  |  |  |
| 76 |  |  |  |  |  |  |  |  |  |  |
| 77 |  |  |  |  |  |  |  |  |  |  |
| 78 |  |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |  |
| 81 |  |  |  |  |  |  |  |  |  |  |
| 82 |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Advanced |
| 83 |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Moderate |
| 84 |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Conservative |
| 85 |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Advanced |
| 86 |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Moderate |
| 87 |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Conservative |
| 88 |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Advanced |
| 89 |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Moderate |
| 90 |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Conservative |
| 91 |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Advanced |
| 92 |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Moderate |
| 93 |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Conservative |
| 94 |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Advanced |
| 95 |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Moderate |
| 96 |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Conservative |
| 97 |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Advanced |
| 98 |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Moderate |
| 99 |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Conservative |
| 100 |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Advanced |
| 101 |  |  |  |  |  |  |  | Net Capacity Factor (\%) | Hydropower - NPD 7 | Moderate |
| 102 |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Conservative |
| 103 |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Advanced |
| 104 |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Moderate |
| 105 |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Conservative |



|  | A | B | CD |  | FG | H | I | J | K |  | L |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 141 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Advanced |
| 142 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Moderate |
| 143 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Conservative |
| 144 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Advanced |
| 145 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Moderate |
| 146 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Conservative |
| 147 |  |  |  |  |  |  |  |  |  |  |  |
| 148 |  |  |  |  |  |  |  |  |  |  |  |
| 149 |  |  |  |  |  |  |  |  |  |  |  |
| 150 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Advanced |
| 151 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Moderate |
| 152 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Conservative |
| 153 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Advanced |
| 154 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Moderate |
| 155 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Conservative |
| 156 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Advanced |
| 157 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Moderate |
| 158 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Conservative |
| 159 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Advanced |
| 160 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Moderate |
| 161 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Conservative |
| 162 |  |  |  |  |  |  |  |  |  |  |  |
| 163 |  |  |  |  |  |  |  |  |  |  |  |
| 164 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Advanced |
| 165 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Moderate |
| 166 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Conservative |
| 167 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Advanced |
| 168 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Moderate |
| 169 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Conservative |
| 170 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Advanced |
| 171 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Moderate |
| 172 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Conservative |
| 173 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Advanced |
| 174 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Moderate |
| 175 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Conservative |



|  | A | B |  |  | FG | H | I | J | K |  | L |
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| 211 |  |  |  |  |  | Techno-Economic Cost and Performance Parameters |  | Construction Financing Cost (\$/kW) |  | Hydropower - NPD 3 | Advanced |
| 212 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Moderate |
| 213 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Conservative |
| 214 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Advanced |
| 215 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Moderate |
| 216 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Conservative |
| 217 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Advanced |
| 218 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Moderate |
| 219 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Conservative |
| 220 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Advanced |
| 221 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Moderate |
| 222 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Conservative |
| 223 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Advanced |
| 224 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Moderate |
| 225 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Conservative |
| 226 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Advanced |
| 227 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Moderate |
| 228 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Conservative |
| 229 |  |  |  |  |  |  |  |  |  |  |  |
| 230 |  |  |  |  |  |  |  |  |  |  |  |
| 231 |  |  |  |  |  |  |  |  |  |  |  |
| 232 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Advanced |
| 233 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Moderate |
| 234 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Conservative |
| 235 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Advanced |
| 236 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Moderate |
| 237 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Conservative |
| 238 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Advanced |
| 239 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Moderate |
| 240 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Conservative |
| 241 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Advanced |
| 242 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Moderate |
| 243 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Conservative |
| 244 |  |  |  |  |  |  |  |  |  |  |  |
| 245 |  |  |  |  |  |  |  |  |  |  |  |


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| 246 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Advanced |
| 247 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Moderate |
| 248 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Conservative |
| 249 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Advanced |
| 250 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Moderate |
| 251 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Conservative |
| 252 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Advanced |
| 253 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Moderate |
| 254 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Conservative |
| 255 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Advanced |
| 256 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Moderate |
| 257 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Conservative |
| 258 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Advanced |
| 259 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Moderate |
| 260 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Conservative |
| 261 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Advanced |
| 262 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Moderate |
| 263 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Conservative |
| 264 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Advanced |
| 265 |  |  |  |  |  |  |  | Cost (\$/kW) |  | Hydropower - NPD 7 | Moderate |
| 266 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 7 | Conservative |
| 267 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Advanced |
| 268 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Moderate |
| 269 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Conservative |
| 270 |  |  |  |  |  |  |  |  |  |  |  |
| 271 |  |  |  |  |  |  |  |  |  |  |  |
| 272 |  |  |  |  |  |  |  |  |  |  |  |
| 273 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Advanced |
| 274 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Moderate |
| 275 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Conservative |
| 276 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Advanced |
| 277 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Moderate |
| 278 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Conservative |
| 279 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Advanced |
| 280 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Moderate |


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| 281 |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Conservative |
| 282 |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Advanced |
| 283 |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Moderate |
| 284 |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Conservative |
| 285 |  |  |  |  |  |  |  |  |  |  |
| 286 |  |  |  |  |  |  |  |  |  |  |
| 287 |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Advanced |
| 288 |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Moderate |
| 289 |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Conservative |
| 290 |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Advanced |
| 291 |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Moderate |
| 292 |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Conservative |
| 293 |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Advanced |
| 294 |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Moderate |
| 295 |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Conservative |
| 296 |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Advanced |
| 297 |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Moderate |
| 298 |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Conservative |
| 299 |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Advanced |
| 300 |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Moderate |
| 301 |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Conservative |
| 302 |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Advanced |
| 303 |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Moderate |
| 304 |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Conservative |
| 305 |  |  |  |  |  |  |  | Fixed Operation and | Hydropower - NPD 7 | Advanced |
| 306 |  |  |  |  |  |  |  | Maintenance | Hydropower - NPD 7 | Moderate |
| 307 |  |  |  |  |  |  |  | Expenses (\$/kW-yr) | Hydropower - NPD 7 | Conservative |
| 308 |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Advanced |
| 309 |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Moderate |
| 310 |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Conservative |
| 311 |  |  |  |  |  |  |  |  |  |  |
| 312 |  |  |  |  |  |  |  |  |  |  |
| 313 |  |  |  |  |  |  |  |  |  |  |
| 314 |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Advanced |
| 315 |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Moderate |


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| 316 |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Conservative |
| 317 |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Advanced |
| 318 |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Moderate |
| 319 |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Conservative |
| 320 |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Advanced |
| 321 |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Moderate |
| 322 |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Conservative |
| 323 |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Advanced |
| 324 |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Moderate |
| 325 |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Conservative |
| 326 |  |  |  |  |  |  |  |  |  |  |
| 327 |  |  |  |  |  |  |  |  |  |  |
| 328 |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Advanced |
| 329 |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Moderate |
| 330 |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Conservative |
| 331 |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Advanced |
| 332 |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Moderate |
| 333 |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Conservative |
| 334 |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Advanced |
| 335 |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Moderate |
| 336 |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Conservative |
| 337 |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Advanced |
| 338 |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Moderate |
| 339 |  |  |  |  |  |  |  |  | Hydropower - NPD 4 | Conservative |
| 340 |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Advanced |
| 341 |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Moderate |
| 342 |  |  |  |  |  |  |  |  | Hydropower - NPD 5 | Conservative |
| 343 |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Advanced |
| 344 |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Moderate |
| 345 |  |  |  |  |  |  |  |  | Hydropower - NPD 6 | Conservative |
| 346 |  |  |  |  |  |  |  | Variable Operation | Hydropower - NPD 7 | Advanced |
| 347 |  |  |  |  |  |  |  | and Maintenance | Hydropower - NPD 7 | Moderate |
| 348 |  |  |  |  |  |  |  | Expenses (\$/MWh) | Hydropower - NPD 7 | Conservative |
| 349 |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Advanced |
| 350 |  |  |  |  |  |  |  |  | Hydropower - NPD 8 | Moderate |



|  | A | B |  |  | FG | H | I | J | K |  | L |
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| 386 |  |  |  |  |  | ¢ |  |  |  | Hydropower - NPD 6 | Moderate |
| 387 |  |  |  |  |  | O |  |  |  | Hydropower - NPD 6 | Conservative |
| 388 |  |  |  |  |  | $\stackrel{\text { 들 }}{ }$ |  |  |  | Hydropower - NPD 7 | Advanced |
| 389 |  |  |  |  |  | U |  |  |  | Hydropower - NPD 7 | Moderate |
| 390 |  |  |  |  |  | ${ }^{\text {E }}$ |  |  |  | Hydropower - NPD 7 | Conservative |
| 391 |  |  |  |  |  | O |  |  |  | Hydropower - NPD 8 | Advanced |
| 332 |  |  |  |  |  | 은 |  |  |  | Hydropower - NPD 8 | Moderate |
| 393 |  |  |  |  |  | $\bigcirc$ |  |  |  | Hydropower - NPD 8 | Conservative |
| 3394 |  |  |  |  |  |  |  |  |  |  |  |
| 335 |  |  |  |  |  |  |  |  |  |  |  |
| 396 |  |  |  |  |  |  |  |  |  |  |  |
| 397 <br> 398 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Advanced |
| 398 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Moderate |
| 399 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 1 | Conservative |
| 400 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Advanced |
| 401 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Moderate |
| 402 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 2 | Conservative |
| 403 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Advanced |
| 404 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Moderate |
| 405 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 3 | Conservative |
| 406 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Advanced |
| 407 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Moderate |
| 408 |  |  |  |  |  |  |  |  |  | Hydropower - NSD 4 | Conservative |
| 409 |  |  |  |  |  |  |  |  |  |  |  |
| 410 |  |  |  |  |  |  |  |  |  |  |  |
| 411 |  |  |  |  |  |  |  |  |  |  |  |
| 412 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Advanced |
| 413 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Moderate |
| 414 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 1 | Conservative |
| 415 <br> 1 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Advanced |
| 416 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Moderate |
| 417 ¢ |  |  |  |  |  |  |  |  |  | Hydropower - NPD 2 | Conservative |
| 418 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Advanced |
| 419 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Moderate |
| 420 |  |  |  |  |  |  |  |  |  | Hydropower - NPD 3 | Conservative |




|  | A |  | CDEFG |  | H | I | J | K | L |
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| 491 |  |  |  |  |  |  | uoulvir rimatic | CFF | Moderate |
| 492 |  |  |  |  |  |  |  | CFF | Conservative |
| 493 |  |  |  |  |  |  |  |  |  |
| 494 |  |  |  |  |  |  |  | Accumulated Interest - Year 1 | * |
| 495 |  |  |  |  |  |  |  | Accumulated Interest - Year 2 | * |
| 496 |  |  |  |  |  |  |  | Accumulated Interest - Year 3 | * |
| 497 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 | Advanced |
| 498 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 | Advanced |
| 499 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 | Advanced |
| 500 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 | Moderate |
| 501 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 | Moderate |
| 502 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 | Moderate |
| 503 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 1 | Conservative |
| 504 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 2 | Conservative |
| 505 |  |  |  |  |  |  |  | Accumulated Equity Cost - Year 3 | Conservative |
| 506 |  |  |  |  |  |  |  |  |  |
| 507 |  |  |  |  |  |  |  |  |  |
| 508 |  |  |  |  |  |  |  |  |  |
| 509 |  |  |  |  |  |  |  |  |  |
| 510 |  |  |  |  | urre |  |  |  |  |
| 511 |  |  |  |  | vailab | Ca | city (GW) |  |  |
| 512 |  |  |  |  | et C |  | Factor (\%) |  |  |
| 513 |  |  |  |  | vern | t | tal Cost (\$/kW) |  |  |
| 514 |  |  |  |  | xed |  | Expenses (\$/kW-yr) |  |  |
| 515 |  |  |  |  | ariab | Op | ting Expenses (\$/MWh) |  |  |
| 516 |  |  |  |  | pur |  | (\$/kW) |  |  |
| 517 |  |  |  |  |  |  |  |  |  |
| 518 |  |  |  |  | utur | roj | tions Costs: |  |  |
| 519 |  |  |  |  | et C | acit | actor (\%) |  |  |
| 520 |  |  |  |  | vern | C | tal Cost (\$/kW) |  |  |
| 521 |  |  |  |  | xed | pera | Expenses (\$/kW-yr) |  |  |



|  | M | N | O | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 |  |  | 2.0\% |  |  |  |  |
| 37 |  |  | 3 |  |  |  |  |
| 38 | During |  |  |  |  |  |  |
| 39 | Construction |  |  |  |  |  |  |
| 40 | 20\% |  |  |  |  |  |  |
| 41 | 20\% |  |  |  |  |  |  |
| 42 | 20\% |  |  |  |  |  |  |
| 43 |  |  |  |  |  |  |  |
| 44 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 45 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 46 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 47 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 48 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 49 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 50 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 51 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 52 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 53 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 54 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 55 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 56 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 57 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 58 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 59 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |
| 60 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |
| 61 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |
| 62 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 63 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 64 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 65 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 66 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 67 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 68 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 69 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 70 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |


|  | M | N | O | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 72 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 73 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 74 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 75 |  |  |  |  |  |  |  |
| 76 |  |  |  |  |  |  |  |
| 77 |  |  |  |  |  |  |  |
| 78 |  |  |  |  |  |  |  |
| 79 |  | re Projectio |  |  |  |  |  |
| 80 | Base Year |  |  |  |  |  |  |
| 81 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 82 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |
| 83 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |
| 84 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |
| 85 | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% |
| 86 | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% |
| 87 | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% |
| 88 | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% |
| 89 | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% |
| 90 | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% |
| 91 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 92 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 93 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 94 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 95 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 96 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 97 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 98 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 99 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 100 | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% |
| 101 | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% |
| 102 | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% |
| 103 | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |
| 104 | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |
| 105 | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |


|  | M | N | 0 | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 106 |  |  |  |  |  |  |  |
| 107 |  |  |  |  |  |  |  |
| 108 |  |  |  |  |  |  |  |
| 109 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 110 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 111 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |
| 112 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 113 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 114 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 115 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 116 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 117 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |
| 118 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 119 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 120 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |
| 121 |  |  |  |  |  |  |  |
| 122 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 123 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 |
| 124 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 |
| 125 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 |
| 126 | 3,628 | 3,628 | 3,628 | 3,628 | 3,628 | 3,628 | 3,628 |
| 127 | 3,628 | 3,628 | 3,628 | $3,628$ | 3,628 | 3,628 | 3,628 |
| 128 | 3,628 |  |  |  | 3,628 | 3,628 | 3,628 |
| 129 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 |
| 130 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 |
| 131 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 |
| 132 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 |
| 133 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 |
| 134 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 |
| 135 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |
| 136 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |
| 137 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |
| 138 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |
| 139 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |
| 140 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |


|  | M | N | 0 | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 141 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 |
| 142 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 |
| 143 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 |
| 144 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 |
| 145 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 |
| 146 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 |
| 147 |  |  |  |  |  |  |  |
| 148 |  |  |  |  |  |  |  |
| 149 |  |  |  |  |  |  |  |
| 150 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |
| 151 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |
| 152 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |
| 153 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |
| 154 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |
| 155 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |
| 156 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |
| 157 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |
| 158 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |
| 159 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |
| 160 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |
| 161 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |
| 162 |  |  |  |  |  |  |  |
| 163 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 164 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,548 |
| 165 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 |
| 166 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 |
| 167 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$4,965 |
| 168 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,254 |
| 169 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 |
| 170 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$4,969 |
| 171 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,235 |
| 172 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 |
| 173 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$11,368 |
| 174 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | $\$ 11,909$$\$ 12,372$ |
| 175 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 |  |


|  | M | N | 0 | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 176 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,288 |
| 177 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,276 |
| 178 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 |
| 179 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,992 |
| 180 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,972 |
| 181 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 |
| 182 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,489 |
| 183 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,741 |
| 184 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 |
| 185 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,046 |
| 186 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,244 |
| 187 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 |
| 188 |  |  |  |  |  |  |  |
| 189 |  |  |  |  |  |  |  |
| 190 |  |  |  |  |  |  |  |
| 191 | \$7,766 | \$7,766 | \$7,766 | \$7,766 | \$7,766 | \$7,766 | \$7,766 |
| 192 | \$7,965 | \$7,965 | \$7,965 | \$7,965 | \$7,965 | \$7,965 | \$7,965 |
| 193 | \$8,006 | \$8,006 | \$8,006 | \$8,006 | \$8,006 | \$8,006 | \$8,006 |
| 194 | \$6,933 | \$6,933 | \$6,933 | \$6,933 | \$6,933 | \$6,933 | \$6,933 |
| 195 | \$7,111 | \$7,111 | \$7,111 | \$7,111 | \$7,111 | \$7,111 | \$7,111 |
| 196 | \$7,148 | \$7,148 | \$7,148 | \$7,148 | \$7,148 | \$7,148 | \$7,148 |
| 197 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 |
| 198 | \$6,965 | \$6,965 | \$6,965 | \$6,965 | \$6,965 | \$6,965 | \$6,965 |
| 199 | \$7,001 | \$7,001 | \$7,001 | \$7,001 | \$7,001 | \$7,001 | \$7,001 |
| 200 | \$6,113 | \$6,113 | \$6,113 | \$6,113 | \$6,113 | \$6,113 | \$6,113 |
| 201 | \$6,270 | \$6,270 | \$6,270 | \$6,270 | \$6,270 | \$6,270 | \$6,270 |
| 202 | \$6,302 | \$6,302 | \$6,302 | \$6,302 | \$6,302 | \$6,302 | \$6,302 |
| 203 |  |  |  |  |  |  |  |
| 204 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 205 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 | \$111 |
| 206 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 |
| 207 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 |
| 208 | \$239 | \$239 | \$239 | \$239 | \$239 | \$239 | \$215 |
| 209 | \$239 | \$239 | \$239 | \$239 | \$239 | \$239 | \$228 |
| 210 | \$239 | \$239 | \$239 | \$239 | \$239 | \$239 | \$239 |


|  | M |  | N |  | 0 |  | P |  | Q |  | R |  | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 211 | \$237 |  | \$237 |  | \$237 |  | \$237 |  | \$237 |  | \$237 |  | \$216 |
| 212 | \$237 |  | \$237 |  | \$237 |  | \$237 |  | \$237 |  | \$237 |  | \$227 |
| 213 | \$237 |  | \$237 |  | \$237 |  | \$237 |  | \$237 |  | \$237 |  | \$237 |
| 214 | \$537 |  | \$537 |  | \$537 |  | \$537 |  | \$537 |  | \$537 |  | \$493 |
| 215 | \$537 |  | \$537 |  | \$537 |  | \$537 |  | \$537 |  | \$537 |  | \$517 |
| 216 | \$537 |  | \$537 |  | \$537 |  | \$537 |  | \$537 |  | \$537 |  | \$537 |
| 217 | \$183 |  | \$183 |  | \$183 |  | \$183 |  | \$183 |  | \$183 |  | \$186 |
| 218 | \$183 |  | \$183 |  | \$183 |  | \$183 |  | \$183 |  | \$183 |  | \$186 |
| 219 | \$183 |  | \$183 |  | \$183 |  | \$183 |  | \$183 |  | \$183 |  | \$183 |
| 220 | \$298 |  | \$298 |  | \$298 |  | \$298 |  | \$298 |  | \$298 |  | \$303 |
| 221 | \$298 |  | \$298 |  | \$298 |  | \$298 |  | \$298 |  | \$298 |  | \$302 |
| 222 | \$298 |  | \$298 |  | \$298 |  | \$298 |  | \$298 |  | \$298 |  |  |
| 223 | \$516 |  | \$516 |  | \$516 |  | \$516 |  | \$516 |  | \$516 |  | \$298 |
| 224 | \$516 |  | \$516 |  | \$516 |  | \$516 |  | \$516 |  | \$516 |  | \$509 |
| 225 | \$516 |  | \$516 |  | \$516 |  | \$516 |  | \$516 |  | \$516 |  | \$516 |
| 226 | \$706 |  | \$706 |  | \$706 |  | \$706 |  | \$706 |  | \$706 |  | \$696 |
| 227 | \$706 |  | \$706 |  | \$706 |  | \$706 |  | \$706 |  | \$706 |  | \$696$\$ 705$$\$ 706$ |
| 228 | \$706 |  | \$706 |  | \$706 |  | \$706 |  | \$706 |  | \$706 |  |  |
| 22 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l} 23 \\ 23 \\ \hline \end{array}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 232 | \$337 |  | \$337 |  | \$337 |  | \$337 |  | \$337 |  | \$337 |  | \$337 |
| 233 | \$346 |  |  | \$346 |  | \$346 |  | $\$ 346$ | \$346$\$ 347$ |  | \$346 |  | \$346 |
| 234 | \$347 |  | $\$ 346$ |  |  | \$347 | $\$ 347$ |  |  |  | \$347 |  | \$347 |
| 235 | \$301 |  | $\$ 301$ |  |  | \$301 |  | \$301 | \$347 |  | \$301 |  | \$3471 |
| 236 | \$308 |  | \$308$\$ 310$ |  |  | \$308 |  | \$308 | \$308 |  | \$308 |  | \$308$\$ 310$ |
| 237 | \$310 |  |  |  |  | \$310 |  | \$310 |  | \$310 | \$310 |  |  |
| 238 | \$295 |  | \$295 |  |  | \$295 |  | \$295 | \$295 |  | \$295 |  | \$295 |
| 239 | \$302 |  | $\begin{aligned} & \$ 302 \\ & \$ 304 \end{aligned}$ |  |  | \$302 |  | \$302 |  | \$302 | \$302$\$ 304$ |  | \$302$\$ 304$ |
| 240 | \$304 |  |  |  |  | \$304 |  | \$304 |  | \$304 |  |  |  |
| 241 | \$265 |  | \$265$\$ 272$ |  |  | \$265 |  | \$265 |  | \$265 |  | \$265 | \$265 |
| 242 | \$272 |  |  |  |  | \$272 |  | \$272 |  | \$272 |  | \$272 | \$272 |
| 243 | \$273 |  | \$273 |  |  | \$273 |  | \$273 |  | \$273 |  | \$273 | \$273 |
| 244 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 245 | 2020 |  | 2021 |  | 2022 |  | 2023 |  | 2024 |  | 2025 |  | 2026 |


|  | M | N | 0 | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 246 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,438 |
| 247 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 |
| 248 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 |
| 249 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$4,749 |
| 250 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,026 |
| 251 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 |
| 252 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$4,754 |
| 253 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,008 |
| 254 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 |
| 255 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$10,875 |
| 256 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,392 |
| 257 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 |
| 258 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,102 |
| 259 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,091 |
| 260 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 |
| 261 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,689 |
| 262 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,670 |
| 263 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 |
| 264 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$10,990 |
| 265 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,231 |
| 266 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 |
| 267 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,350 |
| 268 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,539 |
| 269 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 |
| 270 |  |  |  |  |  |  |  |
| 271 |  |  |  |  |  |  |  |
| 272 |  |  |  |  |  |  |  |
| 273 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 |
| 274 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 |
| 275 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 |
| 276 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 |
| 277 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 |
| 278 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 |
| 279 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 |
| 280 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 |


|  | M | N | 0 | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 281 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 |
| 282 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 |
| 283 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 |
| 284 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 |
| 285 |  |  |  |  |  |  |  |
| 286 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 287 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 |
| 288 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 |
| 289 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 |
| 290 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 |
| 291 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 |
| 292 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 |
| 293 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 294 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 295 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 296 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 |
| 297 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 |
| 298 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 |
| 299 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 |
| 300 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 |
| 301 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 |
| 302 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 303 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 304 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 305 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 |
| 306 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 |
| 307 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 |
| 308 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 |
| 309 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 |
| 310 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 |
| 311 |  |  |  |  |  |  |  |
| 312 |  |  |  |  |  |  |  |
| 313 |  |  |  |  |  |  |  |
| 314 | \$119 | \$115 | \$111 | \$107 | \$104 | \$100 | \$97 |
| 315 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 |


|  | M | N | 0 | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 316 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 |
| 317 | \$39 | \$38 | \$36 | \$35 | \$34 | \$33 | \$32 |
| 318 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 |
| 319 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 |
| 320 | \$112 | \$108 | \$105 | \$101 | \$98 | \$94 | \$91 |
| 321 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 |
| 322 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 |
| 323 | \$28 | \$27 | \$26 | \$25 | \$24 | \$23 | \$22 |
| 324 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 325 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 326 |  |  |  |  |  |  |  |
| 327 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 328 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 329 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 330 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 331 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 332 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 333 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 334 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 335 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 336 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 337 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 338 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 339 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 340 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 341 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 342 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 343 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 344 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 345 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 346 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 347 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 348 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 349 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 350 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |


|  | M |  | N |  | 0 |  | P |  | Q |  | R |  | S |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 351 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |
| 352 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 353 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 354 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 355 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 356 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 357 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 358 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 359 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 360 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 361 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 362 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 363 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 364 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 365 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 366 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |
| 367 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 368 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 369 | 2020 |  | 2021 |  | 2022 |  | 2023 |  | 2024 |  | 2025 |  | 2026 |  |
| 370 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |
| 371 |  | \$0 |  | \$0 |  |  |  | \$0 |  | \$0 |  | \$0 | $\$ 0$$\$ 0$ |  |
| 372 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |  |
| 373 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |  |
| 374 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |  |
| 375 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |
| 376 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |  |
| 377 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 | \$0 |  |
| 378 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |
| 379 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  | $\$ 0$$\$ 0$$\$ 0$$\$ 0$ |  |
| 380 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |
| 381 | \$0 |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |
| 382 | \$0 |  |  | \$0 |  | $\begin{aligned} & \$ 0 \\ & \$ 0 \end{aligned}$ |  | \$0 |  | \$0 |  | \$0 | 0 \$0 |  |
| 383 | \$0 |  |  | \$0 |  |  |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 384 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |
| 385 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |


|  | M | N | 0 | P | Q |  | R |  | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 386 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 387 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 388 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 389 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  |  |
| 390 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 391 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 392 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 393 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 394 |  |  |  |  |  |  |  |  |  |
| 395 |  |  |  |  |  |  |  |  |  |
| 396 |  |  |  |  |  |  |  |  |  |  |
| 397 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 398 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 399 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 400 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 401 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 402 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 403 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 404 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 405 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 406 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 407 | \$0 | \$0 | \$0 | \$0 | \$0 |  | \$0 |  |  |
| 408 | \$0 |  | \$0 | \$0 | \$0 |  | \$0 |  | \$0 |
| 409 |  | \$0 |  |  |  |  |  |  |
| 410 |  |  |  |  |  |  |  |  |  |  |  |
| 411 | 2020 | 2021 | 2022 | 2023 | 2024 |  | 2025 |  | 2026 |
| 412 | \$67 | \$67 | \$67 | \$67 | \$67 |  | \$67 |  | \$66 |
| 413 | \$67 | \$67 | \$67 | \$67 | \$67 |  | \$67 |  | \$67 |
| 414 | \$67 | \$67 | \$67 | \$67 | \$67 |  | \$67 |  |  |
| 415 | \$102 | \$102 | \$102 | \$102 | \$102 |  | \$102 |  | \$94 |
| 416 | \$102 | \$102 | \$102 | \$102 |  | \$102 |  | \$102 | \$98 |
| 417 | \$102 | \$102 | \$102 | \$102 |  | \$102 |  | \$102 | \$102 |
| 418 | \$132 | \$132 | \$132 | \$132 |  | \$132 |  | \$132 | \$123 |
| 419 | \$132 | \$132 | \$132 | \$132 |  | \$132 |  | \$132 | \$127 |
| 420 | \$132 | \$132 | \$132 | \$132 |  | \$132 |  | \$132 | \$132 |


|  | M | N | 0 | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 421 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 | \$229 |
| 422 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 | \$238 |
| 423 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 |
| 424 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 | \$66 |
| 425 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 | \$66 |
| 426 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 |
| 427 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 | \$104 |
| 428 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 | \$104 |
| 429 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 |
| 430 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 | \$124 |
| 431 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 | \$126 |
| 432 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 |
| 433 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 | \$362 |
| 434 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 |
| 435 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 |
| 436 |  |  |  |  |  |  |  |
| 437 |  |  |  |  |  |  |  |
| 438 |  |  |  |  |  |  |  |
| 439 | \$92 | \$92 | \$91 | \$90 | \$90 | \$89 | \$88 |
| 440 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 |
| 441 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 |
| 442 | \$70 | \$70 | \$70 | \$69 | \$69 | \$69 | \$69 |
| 443 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 |
| 444 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 |
| 445 | \$86 | \$86 | \$85 | \$84 | \$84 | \$83 | \$83 |
| 446 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 447 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 448 | \$60 | \$60 | \$60 | \$60 | \$60 | \$60 | \$59 |
| 449 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 |
| 450 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 |
| 451 |  |  |  |  |  |  |  |
| 452 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 453 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 454 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 455 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |


|  | M | N | 0 | P | Q | R | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 456 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 457 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 458 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 459 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 460 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 |
| 461 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 |
| 462 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 |
| 463 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 |
| 464 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 |
| 465 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 |
| 466 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 467 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 |
| 468 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 |
| 469 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 |
| 470 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 |
| 471 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 |
| 472 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 |
| 473 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 |
| 474 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 |
| 475 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 |
| 476 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 |
| 477 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 |
| 478 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 |
| 479 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 |
| 480 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 |
| 481 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 |
| 482 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 |
| 483 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 |
| 484 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 |
| 485 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 |
| 486 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 |
| 487 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 |
| 488 |  |  |  |  |  |  |  |
| 489 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 490 | 1.045 |  | 1.045 |  | 1.045 |  | 1.0451 .045 |



|  | T | U | V | W | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |
| 2 |  | Inputs |  |  |  |  |  |  |
| 3 |  | Calculated |  |  |  |  |  |  |
| 4 |  | Input from other |  |  |  |  |  |  |
| 5 |  | tab |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |
| 17 |  |  |  | Repre | Cost |  |  |  |
| 18 |  |  |  | tial Capit | ompoen |  |  |  |
| 19 | Capacity Factor | Preparation (\$/k | veyance | o-Mechan | werhous | c. Infra | ng. \& Con | v. Mitigatio |
| 20 | 0.34 | \$145 | \$614 | \$526 | \$606 | \$0 | \$165 | \$189 |
| 21 | 0.41 | \$63 | \$3,030 | \$601 | \$202 | \$90 | \$598 | \$399 |
| 22 | 0.33 | \$92 | \$2,553 | \$871 | \$359 | \$65 | \$591 | \$394 |
| 23 | 0.38 | \$228 | \$6,883 | \$1,310 | \$520 | \$104 | \$1,357 | \$905 |
| 24 | 0.44 | \$55 | \$84 | \$1,251 | \$1,653 | \$78 | \$468 | \$312 |
| 25 | 0.44 | \$256 | \$1,023 | \$1,520 | \$2,229 | \$62 | \$764 | \$509 |
| 26 | 0.61 | \$536 | \$1,636 | \$2,569 | \$4,016 | \$77 | \$1,325 | \$883 |
| 27 | 0.31 | \$1,627 | \$3,228 | \$3,229 | \$3,739 | \$89 | \$1,787 | \$1,191 |
| 28 | 0.66 |  |  |  |  |  |  |  |
| 29 | 0.66 |  |  |  |  |  |  |  |
| 30 | 0.62 |  |  |  |  |  |  |  |
| 31 | 0.66 |  |  |  |  |  |  |  |
| 32 |  |  |  |  |  |  |  |  |
| 33 |  |  |  |  |  |  |  |  |
| 34 |  |  |  |  |  |  |  |  |
| 35 |  |  |  |  |  |  |  |  |


|  | T | U | V | W | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  |  |
| 42 |  |  |  |  |  |  |  |  |
| 43 |  |  |  |  |  |  |  |  |
| 44 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
| 45 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 46 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 47 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 48 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 49 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 50 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 51 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 52 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 53 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 54 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 55 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 56 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 57 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 58 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 59 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |
| 60 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |
| 61 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |
| 62 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 63 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 64 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 65 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 66 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 67 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 68 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 69 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 70 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |



|  | T | U | V |  | W |  | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 106 |  |  |  |  |  |  |  |  |  |  |
| 107 |  |  |  |  |  |  |  |  |  |  |
| 108 |  |  |  |  |  |  |  |  |  |  |
| 109 | 66\% | 66\% | 66\% |  |  | 66\% | 66\% | 66\% | 66\% | 66\% |
| 110 | 66\% | 66\% | 66\% |  |  | 66\% | 66\% | 66\% | 66\% |  |
| 111 | 66\% | 66\% | 66\% |  |  | 66\% | 66\% | 66\% | 66\% | 66\% |
| 112 | 66\% | 66\% | 66\% |  |  | 66\% | 66\% | 66\% | 66\% | 66\% |
| 113 | 66\% | 66\% | 66\% |  |  | 66\% | 66\% | 66\% | 66\% | 66\% |
| 114 | 66\% | 66\% | 66\% |  |  | 66\% | 66\% | 66\% | 66\% | 66\% |
| 115 | 62\% | 62\% | 62\% |  |  | 62\% | 62\% | 62\% | 62\% | 62\% |
| 116 | 62\% | 62\% | 62\% |  |  | 62\% | 62\% | 62\% | 62\% | 62\% |
| 117 | 62\% | 62\% | 62\% |  |  | 62\% | 62\% | 62\% | 62\% |  |
| 118 | 66\% | 66\% | 66\% |  |  | 66\% | 66\% | 66\% | 66\% | 62\% |
| 119 | 66\% | 66\% | 66\% |  |  | 66\% | 66\% | 66\% | 66\% | 66\% |
| 120 | 66\% | 66\% | 66\% |  |  | 66\% | 66\% | 66\% | 66\% | 66\% |
| 121 |  |  |  |  |  |  |  |  |  |  |
| 122 | 2027 | 2028 | 2029 |  | 2030 |  | 2031 | 2032 | 2033 | 2034 |
| 123 | 3,006 | 3,006 | 3,006 |  |  | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 |
| 124 | 3,006 | 3,006 | 3,006 |  |  | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 |
| 125 | 3,006 | 3,006 | 3,006 |  |  | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 |
| 126 | 3,628 | 3,628 | 3,628 |  |  | 3,315 | 3,315 | 3,315 | 3,315 | 3,315 |
| 127 | 3,628 | 3,628 | 3,628 |  |  | 3,315 | 3,315 | 3,315 | 3,315 | 3,315 |
| 128 | 3,628 | 3,628 | 3,628 |  |  | 3,628 | 3,628 | 3,628 | 3,628 | 3,628 |
| 129 | 2,895 | 2,895 | 2,895 |  |  | 2,813 | 2,813 | 2,813 | 2,813 | 2,813 |
| 130 | 2,895 | 2,895 | 2,895 |  |  | 2,813 | 2,813 | 2,813 | 2,813 | 2,813 |
| 131 | 2,895 | 2,895 | 2,895 |  |  | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 |
| 132 | 3,300 | 3,300 |  | 3,300 |  | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 |
| 133 | 3,300 | 3,300 |  | 3,300 |  | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 |
| 134 | 3,300 | 3,300 |  | 3,300 |  | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 |
| 135 | 3,873 | 3,873 |  | 3,873 |  | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 |
| 136 | 3,873 | 3,873 |  | 3,873 |  | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 |
| 137 | 3,873 | 3,873 |  | 3,873 |  | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |
| 138 | 3,873 | 3,873 |  | 3,873 |  | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 |
| 139 | 3,873 | 3,873 |  | 3,873 |  | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 |
| 140 | 3,873 | 3,873 |  | 3,873 |  | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |


|  | T | U | V | W | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 141 | 5,357 | 5,357 | 5,357 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 |
| 142 | 5,357 | 5,357 | 5,357 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 |
| 143 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 |
| 144 | 2,678 | 2,678 | 2,678 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 |
| 145 | 2,678 | 2,678 | 2,678 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 |
| 146 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 |
| 147 |  |  |  |  |  |  |  |  |
| 148 |  |  |  |  |  |  |  |  |
| 149 |  |  |  |  |  |  |  |  |
| 150 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |
| 151 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |
| 152 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |
| 153 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |
| 154 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |
| 155 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |
| 156 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |
| 157 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |
| 158 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |
| 159 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |
| 160 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |
| 161 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |
| 162 |  |  |  |  |  |  |  |  |
| 163 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
| 164 | \$2,523 | \$2,497 | \$2,471 | \$2,445 | \$2,423 | \$2,401 | \$2,379 | \$2,357 |
| 165 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 |
| 166 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 |
| 167 | \$4,415 | \$3,865 | \$3,315 | \$2,766 | \$2,741 | \$2,715 | \$2,690 | \$2,665 |
| 168 | \$4,994 | \$4,733 | \$4,473 | \$4,213 | \$3,952 | \$3,692 | \$3,432 | \$3,171 |
| 169 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 |
| 170 | \$4,468 | \$3,966 | \$3,465 | \$2,963 | \$2,936 | \$2,910 | \$2,883 | \$2,856 |
| 171 | \$5,000 | \$4,765 | \$4,530 | \$4,295 | \$4,060 | \$3,825 | \$3,589 | \$3,354 |
| 172 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 |
| 173 | \$10,363 | \$9,359 | \$8,355 | \$7,350 | \$7,284 | \$7,217 | \$7,151 | \$7,084 |
| 174 | \$11,445 | \$10,982 | \$10,518 | \$10,055 | \$9,591 | \$9,128 | \$8,664 | \$8,201 |
| 175 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 |


|  | T | U | V | W | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 176 | \$4,361 | \$4,434 | \$4,507 | \$4,579 | \$4,538 | \$4,497 | \$4,455 | \$4,414 |
| 177 | \$4,337 | \$4,397 | \$4,458 | \$4,518 | \$4,579 | \$4,639 | \$4,700 | \$4,760 |
| 178 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 |
| 179 | \$7,111 | \$7,230 | \$7,348 | \$7,467 | \$7,399 | \$7,332 | \$7,264 | \$7,197 |
| 180 | \$7,071 | \$7,170 | \$7,268 | \$7,367 | \$7,465 | \$7,564 | \$7,663 | \$7,761 |
| 181 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 |
| 182 | \$11,089 | \$10,689 | \$10,290 | \$9,890 | \$9,801 | \$9,711 | \$9,622 | \$9,532 |
| 183 | \$11,593 | \$11,445 | \$11,297 | \$11,150 | \$11,002 | \$10,854 | \$10,706 | \$10,559 |
| 184 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 |
| 185 | \$15,810 | \$15,573 | \$15,337 | \$15,100 | \$14,964 | \$14,827 | \$14,690 | \$14,554 |
| 186 | \$16,205 | \$16,167 | \$16,128 | \$16,089 | \$16,050 | \$16,011 | \$15,973 | \$15,934 |
| 187 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 |
| 188 |  |  |  |  |  |  |  |  |
| 189 |  |  |  |  |  |  |  |  |
| 190 |  |  |  |  |  |  |  |  |
| 191 | \$7,766 | \$7,766 | \$7,766 | \$7,766 | \$7,766 | \$7,766 | \$7,766 | \$7,766 |
| 192 | \$7,965 | \$7,965 | \$7,965 | \$7,965 | \$7,965 | \$7,965 | \$7,965 | \$7,965 |
| 193 | \$8,006 | \$8,006 | \$8,006 | \$8,006 | \$8,006 | \$8,006 | \$8,006 | \$8,006 |
| 194 | \$6,933 | \$6,933 | \$6,933 | \$6,933 | \$6,933 | \$6,933 | \$6,933 | \$6,933 |
| 195 | \$7,111 | \$7,111 | \$7,111 | \$7,111 | \$7,111 | \$7,111 | \$7,111 | \$7,111 |
| 196 | \$7,148 | \$7,148 | \$7,148 | \$7,148 | \$7,148 | \$7,148 | \$7,148 | \$7,148 |
| 197 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 |
| 198 | \$6,965 | \$6,965 | \$6,965 | \$6,965 | \$6,965 | \$6,965 | \$6,965 | \$6,965 |
| 199 | \$7,001 | \$7,001 | \$7,001 | \$7,001 | \$7,001 | \$7,001 | \$7,001 | \$7,001 |
| 200 | \$6,113 | \$6,113 | \$6,113 | \$6,113 | \$6,113 | \$6,113 | \$6,113 | \$6,113 |
| 201 | \$6,270 | \$6,270 | \$6,270 | \$6,270 | \$6,270 | \$6,270 | \$6,270 | \$6,270 |
| 202 | \$6,302 | \$6,302 | \$6,302 | \$6,302 | \$6,302 | \$6,302 | \$6,302 | \$6,302 |
| 203 |  |  |  |  |  |  |  |  |
| 204 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
| 205 | \$109 | \$108 | \$107 | \$106 | \$105 | \$104 | \$103 | \$102 |
| 206 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 |
| 207 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 |
| 208 | \$192 | \$168 | \$144 | \$120 | \$119 | \$118 | \$117 | \$116 |
| 209 | $\$ 217$$\$ 239$ | \$205$\$ 239$ | \$194 | \$183 | \$171 | \$160 | \$149 | \$138$\$ 239$ |
| 210 |  |  | \$239 | \$239 | \$239 | \$239 | \$239 |  |


|  | T | U | V | W | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 211 | \$194 | \$172 | \$150 | \$129 | \$127 | \$126 | \$125 | \$124 |
| 212 | \$217 | \$207 | \$197 | \$186 | \$176 | \$166 | \$156 | \$146 |
| 213 | \$237 | \$237 | \$237 | \$237 | \$237 | \$237 | \$237 | \$237 |
| 214 | \$450 | \$406 | \$362 | \$319 | \$316 | \$313 | \$310 | \$307 |
| 215 | \$497 | \$476 | \$456 | \$436 | \$416 | \$396 | \$376 | \$356 |
| 216 | \$537 | \$537 | \$537 | \$537 | \$537 | \$537 | \$537 | \$537 |
| 217 | \$189 | \$192 | \$196 | \$199 | \$197 | \$195 | \$193 | \$191 |
| 218 | \$188 | \$191 | \$193 | \$196 | \$199 | \$201 | \$204 | \$206 |
| 219 | \$183 | \$183 | \$183 | \$183 | \$183 | \$183 | \$183 | \$183 |
| 220 | \$308 | \$314 | \$319 | \$324 | \$321 | \$318 | \$315 | \$312 |
| 221 | \$307 | \$311 | \$315 | \$320 | \$324 | \$328 | \$332 | \$337 |
| 222 | \$298 | \$298 | \$298 | \$298 | \$298 | \$298 | \$298 | \$298 |
| 223 | \$481 | \$464 | \$446 | \$429 | \$425 | \$421 | \$417 | \$414 |
| 224 | \$503 | \$497 | \$490 | \$484 | \$477 | \$471 | \$464 | \$458 |
| 225 | \$516 | \$516 | \$516 | \$516 | \$516 | \$516 | \$516 | \$516 |
| 226 | \$686 | \$676 | \$665 | \$655 | \$649 | \$643 | \$637 | \$631 |
| 227 | \$703 | \$701 | \$700 | \$698 | \$696 | \$695 | \$693 | \$691 |
| 228 | \$706 | \$706 | \$706 | \$706 | \$706 | \$706 | \$706 | \$706 |
| 229 |  |  |  |  |  |  |  |  |
| 230 |  |  |  |  |  |  |  |  |
| 231 |  |  |  |  |  |  |  |  |
| 232 | \$337 | \$337 | \$337 | \$337 | \$337 | \$337 | \$337 | \$337 |
| 233 | \$346 | \$346 | \$346 | \$346 | \$346 | \$346 | \$346 | \$346 |
| 234 | \$347 | \$347 | \$347 | \$347 | \$347 | \$347 | \$347 | \$347 |
| 235 | \$301 | \$301 | \$301 | \$301 | \$301 | \$301 | \$301 | \$301 |
| 236 | \$308 | \$308 | \$308 | \$308 | \$308 | \$308 | \$308 | \$308 |
| 237 | \$310 | \$310 | \$310 | \$310 | \$310 | \$310 | \$310 | \$310 |
| 238 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 |
| 239 | \$302 | \$302 | \$302 | \$302 | \$302 | \$302 | \$302 | \$302 |
| 240 | \$304 | \$304 | \$304 | \$304 | \$304 | \$304 | \$304 | \$304 |
| 241 | \$265 | \$265 | \$265 | \$265 | \$265 | \$265 | \$265 | \$265 |
| 242 | \$272 | \$272 | \$272 | \$272 | \$272 | \$272 | \$272 | \$272 |
| 243 | \$273 | \$273 | \$273 | \$273 | \$273 | \$273 | \$273 | \$273 |
| 244 |  |  |  |  |  |  |  |  |
| 245 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |


|  | T | U | V | W | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 246 | \$2,413 | \$2,389 | \$2,364 | \$2,339 | \$2,318 | \$2,297 | \$2,276 | \$2,255 |
| 247 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 |
| 248 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 |
| 249 | \$4,223 | \$3,697 | \$3,172 | \$2,646 | \$2,622 | \$2,598 | \$2,574 | \$2,550 |
| 250 | \$4,777 | \$4,528 | \$4,279 | \$4,030 | \$3,781 | \$3,532 | \$3,283 | \$3,034 |
| 251 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 |
| 252 | \$4,274 | \$3,794 | \$3,314 | \$2,835 | \$2,809 | \$2,783 | \$2,758 | \$2,732 |
| 253 | \$4,783 | \$4,558 | \$4,334 | \$4,109 | \$3,884 | \$3,659 | \$3,434 | \$3,209 |
| 254 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 |
| 255 | \$9,914 | \$8,953 | \$7,992 | \$7,031 | \$6,968 | \$6,904 | \$6,840 | \$6,777 |
| 256 | \$10,949 | \$10,505 | \$10,062 | \$9,619 | \$9,175 | \$8,732 | \$8,288 | \$7,845 |
| 257 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 |
| 258 | \$4,172 | \$4,242 | \$4,311 | \$4,381 | \$4,341 | \$4,301 | \$4,262 | \$4,222 |
| 259 | \$4,149 | \$4,206 | \$4,264 | \$4,322 | \$4,380 | \$4,438 | \$4,496 | \$4,553 |
| 260 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 |
| 261 | \$6,803 | \$6,916 | \$7,030 | \$7,143 | \$7,078 | \$7,014 | \$6,949 | \$6,884 |
| 262 | \$6,764 | \$6,859 | \$6,953 | \$7,047 | \$7,142 | \$7,236 | \$7,330 | \$7,425 |
| 263 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 |
| 264 | \$10,608 | \$10,226 | \$9,843 | \$9,461 | \$9,376 | \$9,290 | \$9,204 | \$9,119 |
| 265 | \$11,090 | \$10,949 | \$10,807 | \$10,666 | \$10,525 | \$10,383 | \$10,242 | \$10,100 |
| 266 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 |
| 267 | \$15,124 | \$14,898 | \$14,672 | \$14,445 | \$14,315 | \$14,184 | \$14,053 | \$13,922 |
| 268 | \$15,502 | \$15,465 | \$15,428 | \$15,391 | \$15,354 | \$15,317 | \$15,280 | \$15,243 |
| 269 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 |
| 270 |  |  |  |  |  |  |  |  |
| 271 |  |  |  |  |  |  |  |  |
| 272 |  |  |  |  |  |  |  |  |
| 273 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 |
| 274 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 |
| 275 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 |
| 276 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 |
| 277 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 |
| 278 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 |
| 279 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 |
| 280 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 |


|  | T | U | V | W | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 281 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 |
| 282 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 |
| 283 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 |
| 284 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 |
| 285 |  |  |  |  |  |  |  |  |
| 286 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
| 287 | \$64 | \$64 | \$64 | \$61 | \$61 | \$61 | \$61 | \$61 |
| 288 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 |
| 289 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 |
| 290 | \$77 | \$77 | \$77 | \$74 | \$74 | \$74 | \$74 | \$74 |
| 291 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 |
| 292 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 |
| 293 | \$91 | \$91 | \$91 | \$87 | \$87 | \$87 | \$87 | \$87 |
| 294 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 295 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 296 | \$154 | \$154 | \$154 | \$147 | \$147 | \$147 | \$147 | \$147 |
| 297 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 |
| 298 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 |
| 299 | \$30 | \$30 | \$30 | \$28 | \$28 | \$28 | \$28 | \$28 |
| 300 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 |
| 301 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 |
| 302 | \$34 | \$34 | \$34 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 303 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 304 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 305 | \$54 | \$54 | \$54 | \$52 | \$52 | \$52 | \$52 | \$52 |
| 306 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 |
| 307 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 |
| 308 | \$119 | \$119 | \$119 | \$113 | \$113 | \$113 | \$113 | \$113 |
| 309 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 |
| 310 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 |
| 311 |  |  |  |  |  |  |  |  |
| 312 |  |  |  |  |  |  |  |  |
| 313 |  |  |  |  |  |  |  |  |
| 314 | \$94 | \$90 | \$87 | \$84 | \$81 | \$79 | \$76 | \$73 |
| 315 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 |


|  | T | U | V | W | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 316 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 |
| 317 | \$31 | \$29 | \$28 | \$27 | \$27 | \$26 | \$25 | \$24 |
| 318 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 |
| 319 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 |
| 320 | \$88 | \$85 | \$82 | \$79 | \$77 | \$74 | \$71 | \$69 |
| 321 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 |
| 322 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 |
| 323 | \$22 | \$21 | \$20 | \$20 | \$19 | \$18 | \$18 | \$17 |
| 324 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 325 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 326 |  |  |  |  |  |  |  |  |
| 327 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
| 328 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 329 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 330 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 331 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 332 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 333 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 334 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 335 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 336 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 337 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 338 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 339 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 340 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 341 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 342 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 343 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 344 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 345 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 346 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 347 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 348 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 349 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 350 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |




|  | T | U | V | W | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 421 | \$213 | \$197 | \$181 | \$162 | \$161 | \$160 | \$159 | \$158 |
| 422 | \$230 | \$223 | \$216 | \$208 | \$201 | \$193 | \$186 | \$178 |
| 423 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 |
| 424 | \$67 | \$68 | \$69 | \$52 | \$52 | \$52 | \$51 | \$51 |
| 425 | \$67 | \$68 | \$69 | \$52 | \$53 | \$53 | \$54 | \$55 |
| 426 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 |
| 427 | \$106 | \$108 | \$109 | \$83 | \$82 | \$81 | \$81 | \$80 |
| 428 | \$105 | \$107 | \$108 | \$82 | \$83 | \$84 | \$85 | \$86 |
| 429 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 |
| 430 | \$120 | \$116 | \$112 | \$104 | \$103 | \$102 | \$101 | \$101 |
| 431 | \$125 | \$123 | \$122 | \$117 | \$115 | \$114 | \$112 | \$111 |
| 432 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 |
| 433 | \$357 | \$352 | \$348 | \$278 | \$276 | \$274 | \$272 | \$269 |
| 434 | \$365 | \$364 | \$363 | \$296 | \$295 | \$295 | \$294 | \$293 |
| 435 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 |
| 436 |  |  |  |  |  |  |  |  |
| 437 |  |  |  |  |  |  |  |  |
| 438 |  |  |  |  |  |  |  |  |
| 439 | \$88 | \$87 | \$87 | \$86 | \$86 | \$85 | \$85 | \$84 |
| 440 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 |
| 441 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 |
| 442 | \$69 | \$68 | \$68 | \$68 | \$68 | \$68 | \$68 | \$67 |
| 443 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 |
| 444 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 |
| 445 | \$82 | \$81 | \$81 | \$80 | \$80 | \$79 | \$79 | \$78 |
| 446 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 447 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 448 | \$59 | \$59 | \$59 | \$59 | \$59 | \$59 | \$59 | \$59 |
| 449 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 |
| 450 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 |
| 451 |  |  |  |  |  |  |  |  |
| 452 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
| 453 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 454 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 455 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |



|  | T | U | V |  | W |  | X | Y | Z | AA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 491 | 1.045 | 1.045 |  | 1.045 |  | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 492 | 1.045 | 1.045 |  | 1.045 |  | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 493 |  |  |  |  |  |  |  |  |  |  |
| 494 | 1.020 | 1.020 |  | 1.020 |  | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 |
| 495 | 1.061 | 1.061 |  | 1.061 |  | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 |
| 496 | 1.103 | 1.103 |  | 1.103 |  | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 |
| 497 | 1.058 | 1.058 |  | 1.058 |  | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 498 | 1.185 | 1.185 |  | 1.185 |  | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 499 | 1.328 | 1.328 |  | 1.328 |  | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 500 | 1.058 | 1.058 |  | 1.058 |  | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 501 | 1.185 | 1.185 |  | 1.185 |  | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 502 | 1.328 | 1.328 |  | 1.328 |  | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 503 | 1.058 | 1.058 |  | 1.058 |  | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 504 | 1.185 | 1.185 |  | 1.185 |  | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 505 | 1.328 | 1.328 |  | 1.328 |  | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 506 |  |  |  |  |  |  |  |  |  |  |
| 507 |  |  |  |  |  |  |  |  |  |  |
| 508 |  |  |  |  |  |  |  |  |  |  |
| 509 |  |  |  |  |  |  |  |  |  |  |
| 510 |  |  |  |  |  |  |  |  |  |  |
| 511 |  |  |  |  |  |  |  |  |  |  |
| 512 |  |  |  |  |  |  |  |  |  |  |
| 513 |  |  |  |  |  |  |  |  |  |  |
| 514 |  |  |  |  |  |  |  |  |  |  |
| 515 |  |  |  |  |  |  |  |  |  |  |
| 516 |  |  |  |  |  |  |  |  |  |  |
| 517 |  |  |  |  |  |  |  |  |  |  |
| 518 |  |  |  |  |  |  |  |  |  |  |
| 519 |  |  |  |  |  |  |  |  |  |  |
| 520 |  |  |  |  |  |  |  |  |  |  |
| 521 |  |  |  |  |  |  |  |  |  |  |



|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  |  |  |  |
| 42 |  |  |  |  |  |  |  |  |  |  |
| 43 |  |  |  |  |  |  |  |  |  |  |
| 44 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
| 45 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |
| 46 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 47 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 48 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 49 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 50 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 51 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |
| 52 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |
| 53 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 54 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 55 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |
| 56 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 57 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 58 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |
| 59 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |
| 60 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |
| 61 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |
| 62 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |
| 63 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 64 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 65 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |
| 66 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 67 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 68 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |
| 69 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 70 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |


|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |
| 72 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 73 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 74 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |
| 75 |  |  |  |  |  |  |  |  |  |  |
| 76 |  |  |  |  |  |  |  |  |  |  |
| 77 |  |  |  |  |  |  |  |  |  |  |
| 78 |  |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |  |
| 81 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
| 82 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |
| 83 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |
| 84 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |
| 85 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 86 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 87 | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% |
| 88 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 89 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |
| 90 | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% |
| 91 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 92 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 93 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |
| 94 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 95 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 96 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 97 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 98 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |
| 99 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |
| 100 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |
| 101 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |
| 102 | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% |
| 103 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 104 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |
| 105 | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |



|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 141 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 |
| 142 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 |
| 143 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 |
| 144 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 |
| 145 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 |
| 146 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 |
| 147 |  |  |  |  |  |  |  |  |  |  |
| 148 |  |  |  |  |  |  |  |  |  |  |
| 149 |  |  |  |  |  |  |  |  |  |  |
| 150 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |
| 151 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |
| 152 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |
| 153 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |
| 154 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |
| 155 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |
| 156 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |
| 157 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |
| 158 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |
| 159 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |
| 160 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |
| 161 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |
| 162 |  |  |  |  |  |  |  |  |  |  |
| 163 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
| 164 | \$2,335 | \$2,313 | \$2,290 | \$2,268 | \$2,246 | \$2,224 | \$2,224 | \$2,224 | \$2,224 | \$2,224 |
| 165 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,471 | \$2,471 | \$2,471 | \$2,471 | \$2,471 |
| 166 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 |
| 167 | \$2,640 | \$2,615 | \$2,590 | \$2,565 | \$2,540 | \$2,515 | \$2,515 | \$2,515 | \$2,515 | \$2,515 |
| 168 | \$2,911 | \$2,911 | \$2,911 | \$2,911 | \$2,911 | \$2,795 | \$2,795 | \$2,795 | \$2,795 | \$2,795 |
| 169 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 |
| 170 | \$2,829 | \$2,802 | \$2,775 | \$2,749 | \$2,722 | \$2,695 | \$2,695 | \$2,695 | \$2,695 | \$2,695 |
| 171 | \$3,119 | \$3,119 | \$3,119 | \$3,119 | \$3,119 | \$2,994 | \$2,994 | \$2,994 | \$2,994 | \$2,994 |
| 172 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 |
| 173 | \$7,018 | \$6,951 | \$6,885 | \$6,818 | \$6,751 | \$6,685 | \$6,685 | \$6,685 | \$6,685 | \$6,685 |
| 174 | \$7,737 | \$7,737 | \$7,737 | \$7,737 | \$7,737 | \$7,428 | \$7,428 | \$7,428 | \$7,428 | \$7,428 |
| 175 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 |



|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 211 | \$123 | \$122 | \$120 | \$119 | \$118 | \$117 | \$117 | \$117 | \$117 | \$117 |
| 212 | \$135 | \$135 | \$135 | \$135 | \$135 | \$130 | \$130 | \$130 | \$130 | \$130 |
| 213 | \$237 | \$237 | \$237 | \$237 | \$237 | \$237 | \$237 | \$237 | \$237 | \$237 |
| 214 | \$304 | \$302 | \$299 | \$296 | \$293 | \$290 | \$290 | \$290 | \$290 | \$290 |
| 215 | \$336 | \$336 | \$336 | \$336 | \$336 | \$322 | \$322 | \$322 | \$322 | \$322 |
| 216 | \$537 | \$537 | \$537 | \$537 | \$537 | \$537 | \$537 | \$537 | \$537 | \$537 |
| 217 | \$190 | \$188 | \$186 | \$184 | \$182 | \$181 | \$181 | \$181 | \$181 | \$181 |
| 218 | \$209 | \$209 | \$209 | \$209 | \$209 | \$201 | \$201 | \$201 | \$201 | \$201 |
| 219 | \$183 | \$183 | \$183 | \$183 | \$183 | \$183 | \$183 | \$183 | \$183 | \$183 |
| 220 | \$309 | \$306 | \$303 | \$300 | \$298 | \$295 | \$295 | \$295 | \$295 | \$295 |
| 221 | \$341 | \$341 | \$341 | \$341 | \$341 | \$327 | \$327 | \$327 | \$327 | \$327 |
| 222 | \$298 | \$298 | \$298 | \$298 | \$298 | \$298 | \$298 | \$298 | \$298 | \$298 |
| 223 | \$410 | \$406 | \$402 | \$398 | \$394 | \$390 | \$390 | \$390 | \$390 | \$390 |
| 224 | \$452 | \$452 | \$452 | \$452 | \$452 | \$434 | \$434 | \$434 | \$434 | \$434 |
| 225 | \$516 | \$516 | \$516 | \$516 | \$516 | \$516 | \$516 | \$516 | \$516 | \$516 |
| 226 | \$625 | \$619 | \$614 | \$608 | \$602 | \$596 | \$596 | \$596 | \$596 | \$596 |
| 227 | \$690 | \$690 | \$690 | \$690 | \$690 | \$662 | \$662 | \$662 | \$662 | \$662 |
| 228 | \$706 | \$706 | \$706 | \$706 | \$706 | \$706 | \$706 | \$706 | \$706 | \$706 |
| 229 |  |  |  |  |  |  |  |  |  |  |
| 230 |  |  |  |  |  |  |  |  |  |  |
| 231 |  |  |  |  |  |  |  |  |  |  |
| 232 | \$337 | \$337 | \$337 | \$337 | \$337 | \$337 | \$337 | \$337 | \$337 | \$337 |
| 233 | \$346 | \$346 | \$346 | \$346 | \$346 | \$346 | \$346 | \$346 | \$346 | \$346 |
| 234 | \$347 | \$347 | \$347 | \$347 | \$347 | \$347 | \$347 | \$347 | \$347 | \$347 |
| 235 | \$301 | \$301 | \$301 | \$301 | \$301 | \$301 | \$301 | \$301 | \$301 | \$301 |
| 236 | \$308 | \$308 | \$308 | \$308 | \$308 | \$308 | \$308 | \$308 | \$308 | \$308 |
| 237 | \$310 | \$310 | \$310 | \$310 | \$310 | \$310 | \$310 | \$310 | \$310 | \$310 |
| 238 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 |
| 239 | \$302 | \$302 | \$302 | \$302 | \$302 | \$302 | \$302 | \$302 | \$302 | \$302 |
| 240 | \$304 | \$304 | \$304 | \$304 | \$304 | \$304 | \$304 | \$304 | \$304 | \$304 |
| 241 | \$265 | \$265 | \$265 | \$265 | \$265 | \$265 | \$265 | \$265 | \$265 | \$265 |
| 242 | \$272 | \$272 | \$272 | \$272 | \$272 | \$272 | \$272 | \$272 | \$272 | \$272 |
| 243 | \$273 | \$273 | \$273 | \$273 | \$273 | \$273 | \$273 | \$273 | \$273 | \$273 |
| 244 |  |  |  |  |  |  |  |  |  |  |
| 245 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |


|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
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| 246 | \$2,233 | \$2,212 | \$2,191 | \$2,170 | \$2,149 | \$2,128 | \$2,128 | \$2,128 | \$2,128 | \$2,128 |
| 247 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,364 | \$2,364 | \$2,364 | \$2,364 | \$2,364 |
| 248 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 |
| 249 | \$2,526 | \$2,502 | \$2,478 | \$2,454 | \$2,430 | \$2,406 | \$2,406 | \$2,406 | \$2,406 | \$2,406 |
| 250 | \$2,785 | \$2,785 | \$2,785 | \$2,785 | \$2,785 | \$2,673 | \$2,673 | \$2,673 | \$2,673 | \$2,673 |
| 251 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 |
| 252 | \$2,706 | \$2,681 | \$2,655 | \$2,629 | \$2,604 | \$2,578 | \$2,578 | \$2,578 | \$2,578 | \$2,578 |
| 253 | \$2,984 | \$2,984 | \$2,984 | \$2,984 | \$2,984 | \$2,865 | \$2,865 | \$2,865 | \$2,865 | \$2,865 |
| 254 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 |
| 255 | \$6,713 | \$6,650 | \$6,586 | \$6,522 | \$6,459 | \$6,395 | \$6,395 | \$6,395 | \$6,395 | \$6,395 |
| 256 | \$7,402 | \$7,402 | \$7,402 | \$7,402 | \$7,402 | \$7,105 | \$7,105 | \$7,105 | \$7,105 | \$7,105 |
| 257 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 |
| 258 | \$4,182 | \$4,143 | \$4,103 | \$4,064 | \$4,024 | \$3,984 | \$3,984 | \$3,984 | \$3,984 | \$3,984 |
| 259 | \$4,611 | \$4,611 | \$4,611 | \$4,611 | \$4,611 | \$4,427 | \$4,427 | \$4,427 | \$4,427 | \$4,427 |
| 260 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 |
| 261 | \$6,820 | \$6,755 | \$6,690 | \$6,626 | \$6,561 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 |
| 262 | \$7,519 | \$7,519 | \$7,519 | \$7,519 | \$7,519 | \$7,218 | \$7,218 | \$7,218 | \$7,218 | \$7,218 |
| 263 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 |
| 264 | \$9,033 | \$8,947 | \$8,862 | \$8,776 | \$8,690 | \$8,605 | \$8,605 | \$8,605 | \$8,605 | \$8,605 |
| 265 | \$9,959 | \$9,959 | \$9,959 | \$9,959 | \$9,959 | \$9,561 | \$9,561 | \$9,561 | \$9,561 | \$9,561 |
| 266 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 |
| 267 | \$13,791 | \$13,661 | \$13,530 | \$13,399 | \$13,268 | \$13,138 | \$13,138 | \$13,138 | \$13,138 | \$13,138 |
| 268 | \$15,206 | \$15,206 | \$15,206 | \$15,206 | \$15,206 | \$14,597 | \$14,597 | \$14,597 | \$14,597 | \$14,597 |
| 269 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 |
| 270 |  |  |  |  |  |  |  |  |  |  |
| 271 |  |  |  |  |  |  |  |  |  |  |
| 272 |  |  |  |  |  |  |  |  |  |  |
| 273 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 |
| 274 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 |
| 275 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 |
| 276 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 |
| 277 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 |
| 278 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 |
| 279 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 |
| 280 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 |


|  | AB | AC | AD | AE | AF | AG | AH | Al | AJ | AK |
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| 281 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 |
| 282 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 |
| 283 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 |
| 284 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 |
| 285 |  |  |  |  |  |  |  |  |  |  |
| 286 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
| 287 | \$61 | \$61 | \$61 | \$61 | \$61 | \$56 | \$56 | \$56 | \$56 | \$56 |
| 288 | \$64 | \$64 | \$64 | \$64 | \$64 | \$62 | \$62 | \$62 | \$62 | \$62 |
| 289 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 |
| 290 | \$74 | \$74 | \$74 | \$74 | \$74 | \$67 | \$67 | \$67 | \$67 | \$67 |
| 291 | \$77 | \$77 | \$77 | \$77 | \$77 | \$74 | \$74 | \$74 | \$74 | \$74 |
| 292 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 |
| 293 | \$87 | \$87 | \$87 | \$87 | \$87 | \$79 | \$79 | \$79 | \$79 | \$79 |
| 294 | \$91 | \$91 | \$91 | \$91 | \$91 | \$88 | \$88 | \$88 | \$88 | \$88 |
| 295 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 296 | \$147 | \$147 | \$147 | \$147 | \$147 | \$133 | \$133 | \$133 | \$133 | \$133 |
| 297 | \$154 | \$154 | \$154 | \$154 | \$154 | \$148 | \$148 | \$148 | \$148 | \$148 |
| 298 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 |
| 299 | \$28 | \$28 | \$28 | \$28 | \$28 | \$26 | \$26 | \$26 | \$26 | \$26 |
| 300 | \$30 | \$30 | \$30 | \$30 | \$30 | \$29 | \$29 | \$29 | \$29 | \$29 |
| 301 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 |
| 302 | \$32 | \$32 | \$32 | \$32 | \$32 | \$29 | \$29 | \$29 | \$29 | \$29 |
| 303 | \$34 | \$34 | \$34 | \$34 | \$34 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 304 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |
| 305 | \$52 | \$52 | \$52 | \$52 | \$52 | \$47 | \$47 | \$47 | \$47 | \$47 |
| 306 | \$54 | \$54 | \$54 | \$54 | \$54 | \$52 | \$52 | \$52 | \$52 | \$52 |
| 307 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 |
| 308 | \$113 | \$113 | \$113 | \$113 | \$113 | \$103 | \$103 | \$103 | \$103 | \$103 |
| 309 | \$119 | \$119 | \$119 | \$119 | \$119 | \$114 | \$114 | \$114 | \$114 | \$114 |
| 310 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 |
| 311 |  |  |  |  |  |  |  |  |  |  |
| 312 |  |  |  |  |  |  |  |  |  |  |
| 313 |  |  |  |  |  |  |  |  |  |  |
| 314 | \$71 | \$68 | \$68 | \$68 | \$67 | \$67 | \$67 | \$66 | \$66 | \$66 |
| 315 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 |


|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
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| 316 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 |
| 317 | \$23 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$22 | \$21 |
| 318 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 |
| 319 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 |
| 320 | \$67 | \$64 | \$64 | \$64 | \$63 | \$63 | \$63 | \$62 | \$62 | \$62 |
| 321 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 |
| 322 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 |
| 323 | \$16 | \$16 | \$16 | \$16 | \$16 | \$16 | \$15 | \$15 | \$15 | \$15 |
| 324 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 325 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |
| 326 |  |  |  |  |  |  |  |  |  |  |
| 327 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
| 328 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 329 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 330 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 331 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 332 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 333 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 334 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 335 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 336 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 337 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 338 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
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| 341 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 342 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 343 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 344 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 345 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
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| 347 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 348 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 349 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 350 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |



|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
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| 386 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 387 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 388 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 389 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 390 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 391 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 392 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 393 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 394 |  |  |  |  |  |  |  |  |  |  |
| 395 |  |  |  |  |  |  |  |  |  |  |
| 396 |  |  |  |  |  |  |  |  |  |  |
| 397 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 398 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
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| 401 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 402 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 403 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 404 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 405 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 406 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 407 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 408 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 409 |  |  |  |  |  |  |  |  |  |  |
| 410 |  |  |  |  |  |  |  |  |  |  |
| 411 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
| 412 | \$61 | \$61 | \$61 | \$60 | \$60 | \$58 | \$58 | \$58 | \$58 | \$58 |
| 413 | \$67 | \$67 | \$67 | \$67 | \$67 | \$64 | \$64 | \$64 | \$64 | \$64 |
| 414 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 |
| 415 | \$64 | \$64 | \$64 | \$63 | \$63 | \$60 | \$60 | \$60 | \$60 | \$60 |
| 416 | \$70 | \$70 | \$70 | \$70 | \$70 | \$67 | \$67 | \$67 | \$67 | \$67 |
| 417 | \$102 | \$102 | \$102 | \$102 | \$102 | \$102 | \$102 | \$102 | \$102 | \$102 |
| 418 | \$84 | \$84 | \$83 | \$83 | \$82 | \$79 | \$79 | \$79 | \$79 | \$79 |
| 419 | \$91 | \$91 | \$91 | \$91 | \$91 | \$88 | \$88 | \$88 | \$88 | \$88 |
| 420 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 |


|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
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| 421 | \$157 | \$156 | \$155 | \$154 | \$153 | \$148 | \$148 | \$148 | \$148 | \$148 |
| 422 | \$171 | \$171 | \$171 | \$171 | \$171 | \$164 | \$164 | \$164 | \$164 | \$164 |
| 423 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 |
| 424 | \$50 | \$50 | \$50 | \$49 | \$49 | \$48 | \$48 | \$48 | \$48 | \$48 |
| 425 | \$55 | \$55 | \$55 | \$55 | \$55 | \$53 | \$53 | \$53 | \$53 | \$53 |
| 426 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 |
| 427 | \$79 | \$79 | \$78 | \$77 | \$77 | \$75 | \$75 | \$75 | \$75 | \$75 |
| 428 | \$87 | \$87 | \$87 | \$87 | \$87 | \$84 | \$84 | \$84 | \$84 | \$84 |
| 429 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 |
| 430 | \$100 | \$99 | \$98 | \$97 | \$96 | \$95 | \$95 | \$95 | \$95 | \$95 |
| 431 | \$109 | \$109 | \$109 | \$109 | \$109 | \$105 | \$105 | \$105 | \$105 | \$105 |
| 432 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 |
| 433 | \$267 | \$265 | \$263 | \$261 | \$258 | \$253 | \$253 | \$253 | \$253 | \$253 |
| 434 | \$293 | \$293 | \$293 | \$293 | \$293 | \$281 | \$281 | \$281 | \$281 | \$281 |
| 435 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 |
| 436 |  |  |  |  |  |  |  |  |  |  |
| 437 |  |  |  |  |  |  |  |  |  |  |
| 438 |  |  |  |  |  |  |  |  |  |  |
| 439 | \$84 | \$83 | \$83 | \$83 | \$83 | \$83 | \$83 | \$83 | \$83 | \$83 |
| 440 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 |
| 441 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 |
| 442 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 |
| 443 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 |
| 444 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 |
| 445 | \$78 | \$78 | \$78 | \$78 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 |
| 446 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 447 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |
| 448 | \$58 | \$58 | \$58 | \$58 | \$58 | \$58 | \$58 | \$58 | \$58 | \$58 |
| 449 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 |
| 450 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 |
| 451 |  |  |  |  |  |  |  |  |  |  |
| 452 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
| 453 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 454 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |
| 455 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |


|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 456 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 457 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 458 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 459 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 460 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 |
| 461 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 |
| 462 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 |
| 463 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 |
| 464 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 |
| 465 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 |
| 466 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
| 467 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 |
| 468 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 |
| 469 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 |
| 470 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 |
| 471 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 |
| 472 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 |
| 473 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 |
| 474 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 |
| 475 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 |
| 476 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 |
| 477 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 |
| 478 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 |
| 479 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 |
| 480 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 |
| 481 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 |
| 482 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 |
| 483 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 |
| 484 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 |
| 485 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 |
| 486 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 |
| 487 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 |
| 488 |  |  |  |  |  |  |  |  |  |  |
| 489 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 |
| 490 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |


|  | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 491 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 492 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |
| 493 |  |  |  |  |  |  |  |  |  |  |
| 494 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 |
| 495 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 |
| 496 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 |
| 497 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 498 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 499 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 500 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 501 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 502 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 503 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| 504 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |
| 505 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |
| 506 |  |  |  |  |  |  |  |  |  |  |
| 507 |  |  |  |  |  |  |  |  |  |  |
| 508 |  |  |  |  |  |  |  |  |  |  |
| 509 |  |  |  |  |  |  |  |  |  |  |
| 510 |  |  |  |  |  |  |  |  |  |  |
| 511 |  |  |  |  |  |  |  |  |  |  |
| 512 <br> 513 |  | NSD: Kao et al | 14) |  |  |  |  |  |  |  |
| 513 |  | ORNL/TM-202 | 56 Oak Ri | TN: Oak R | National | ratory; NS | dropowe | (DOE 201 |  |  |
| 514 |  | ORNL/TM-202 | 56. Oak R | TN: Oak | National | ratory; N | ydropowe | (DOE 201 |  |  |
| 515 |  |  |  |  |  |  |  |  |  |  |
| 516 |  |  |  |  |  |  |  |  |  |  |
| 517 |  |  |  |  |  |  |  |  |  |  |
| 518 |  |  |  |  |  |  |  |  |  |  |
| 519 |  | ORNL/TM-202 | 656. Oak | TN: Oak | Nationa | ratory; A | ptions; N | me as Base |  |  |
| 520 |  | ORNL/TM-202 | 56. Oak R | TN: Oak | National | ratory + A | mptions; N | dropower | (DOE 201 |  |
| 521 |  | ORNL/TM-202 | 56. Oak R | TN: Oak | National | ratory + A | mptions; | dropower | (DOE 201 |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  | Number of Projects: NSD |  |  |  |  |  |  |
| 7 |  |  |  |  | All Head | 0-3 ft | 3-6 ft | 6-15 ft | 15-30 ft | 30-60 ft |
| 8 |  |  |  | 0-0.5 | 211,933 | 32,672 | 28,386 | 112,693 | 33,040 | 4,574 |
| 9 |  |  |  | 0.5-1 | 8,382 | 266 | 490 | 3,323 | 3,099 | 985 |
| 10 |  |  |  | 1-5 | 6,717 | 20 | - - - 168 | - $2,7 \overline{64}$ | 2,595 | $92 \overline{2}$ |
| 11 |  |  |  | 5-10 | 796 | 0 | 12 | 247 | 342 | 160 |
| 12 |  |  |  | 10-30 | 382 | 0 | 6 | 69 | 202 | 78 |
| 13 |  |  |  | 30+ | 82 | 0 | 4 | 27 | 23 | 22 |
| 14 |  |  |  | All Capacity | 228,292 | 32,958 | 29,066 | 119,123 | 39,301 | 6,741 |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  | Sum of Capacity in Megawatts |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  | All Head | 0-3 ft | 3-6 ft | 6-15 ft | 15-30 ft | 30-60 ft |
| 20 |  |  |  | 0-0.5 | 16,792 | 837 | 1,422 | 8,877 | 4,522 | 968 |
| 21 |  |  |  | 0.5-1 | 5,770 | 173 | 340 | 2,264 | 2,149 | 689 |
| 22 |  |  |  | 1-5 | 13,384 | 24 | 346 | 5,347 | 5,178 | 1,969 |
| 23 |  |  |  | 5-10 | 5,474 | 0 | 62 | 1,659 | 2,390 | 1,115 |
| 24 |  |  |  |  |  |  |  |  |  |  |
| 25 |  |  |  |  |  |  |  |  |  |  |
| 26 |  |  |  |  |  |  |  |  |  |  |
| 27 |  |  |  |  |  |  |  |  |  |  |
| 28 |  |  |  | 10-30 | 6,244 | 0 | 89 | 934 | 3,524 | 1,267 |
| 29 |  |  |  | 30+ | 5,568 | 0 | 288 | 1,227 | 1,701 | 1,804 |
| 30 |  |  |  | All Capacity | 53,231 | 1,033 | 2,547 | 20,307 | 19,464 | 7,813 |
| 31 |  |  |  | Max | 357 | 2 | 136 | 155 | 143 | 357 |
| 32 |  |  |  | Min | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 |  |  |  |  |  |  |  |  |  |  |
| 34 |  |  |  | Weighted Average Capital Cost (\$/kW) |  |  |  |  |  |  |
| 35 |  |  |  |  | All Head | 0-3 ft | 3-6 ft | 6-15 ft | 15-30 ft | 30-60 ft |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 |  |  |  |  |  |  |  |  |  |  |
| 37 |  |  |  |  |  |  |  |  |  |  |
| 38 |  |  |  |  |  |  |  |  |  |  |
| 39 |  |  |  |  |  |  |  |  |  |  |
| 40 |  |  |  |  |  |  |  |  |  |  |
| 41 |  |  |  |  |  |  |  |  |  |  |
| 42 |  |  |  |  |  |  |  |  |  |  |
| 43 |  |  |  |  |  |  |  |  |  |  |
| 44 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 45 | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% | 2.5\% |  |  |  |  |
| 46 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |  |  |  |  |
| 47 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |  |  |  |  |
| 48 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |  |  |  |  |
| 49 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |  |  |  |  |
| 50 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |  |  |  |  |
| 51 | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% | 1.5\% |  |  |  |  |
| 52 | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% | 4.0\% |  |  |  |  |
| 53 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |  |  |  |  |
| 54 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |  |  |  |  |
| 55 | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |  |  |  |  |
| 56 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |  |  |  |  |
| 57 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |  |  |  |  |
| 58 | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% | 7.3\% |  |  |  |  |
| 59 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |  |  |  |  |
| 60 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |  |  |  |  |
| 61 | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% | 71.9\% |  |  |  |  |
| 62 | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% | 25.7\% |  |  |  |  |
| 63 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |  |  |  |  |
| 64 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |  |  |  |  |
| 65 | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% | 4.9\% |  |  |  |  |
| 66 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |  |  |  |  |
| 67 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |  |  |  |  |
| 68 | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% | 2.4\% |  |  |  |  |
| 69 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |  |  |  |  |
| 70 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% | 6.5\% |  |  |  |  |
| 72 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |  |  |  |  |
| 73 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |  |  |  |  |
| 74 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% |  |  |  |  |
| 75 |  |  |  |  |  |  |  |  |  |  |
| 76 |  |  |  |  |  |  |  |  |  |  |
| 77 |  |  |  |  |  |  |  |  |  |  |
| 78 |  |  |  |  |  |  |  |  |  |  |
| 79 |  |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |  |
| 81 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 82 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |  |  |  |  |
| 83 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |  |  |  |  |
| 84 | 34\% | 34\% | 34\% | 34\% | 34\% | 34\% |  |  |  |  |
| 85 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |  |  |  |  |
| 86 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |  |  |  |  |
| 87 | 41\% | 41\% | 41\% | 41\% | 41\% | 41\% |  |  |  |  |
| 88 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |  |  |  |  |
| 89 | 32\% | 32\% | 32\% | 32\% | 32\% | 32\% |  |  |  |  |
| 90 | 33\% | 33\% | 33\% | 33\% | 33\% | 33\% |  |  |  |  |
| 91 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |  |  |  |  |
| 92 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |  |  |  |  |
| 93 | 38\% | 38\% | 38\% | 38\% | 38\% | 38\% |  |  |  |  |
| 94 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |  |  |  |  |
| 95 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |  |  |  |  |
| 96 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |  |  |  |  |
| 97 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |  |  |  |  |
| 98 | 59\% | 59\% | 59\% | 59\% | 59\% | 59\% |  |  |  |  |
| 99 | 44\% | 44\% | 44\% | 44\% | 44\% | 44\% |  |  |  |  |
| 100 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |  |  |  |  |
| 101 | 63\% | 63\% | 63\% | 63\% | 63\% | 63\% |  |  |  |  |
| 102 | 61\% | 61\% | 61\% | 61\% | 61\% | 61\% |  |  |  |  |
| 103 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |  |  |  |  |
| 104 | 37\% | 37\% | 37\% | 37\% | 37\% | 37\% |  |  |  |  |
| 105 | 31\% | 31\% | 31\% | 31\% | 31\% | 31\% |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 106 |  |  |  |  |  |  |  |  |  |  |
| 107 |  |  |  |  |  |  |  |  |  |  |
| 108 |  |  |  |  |  |  |  |  |  |  |
| 109 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |  |  |  |
| 110 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |  |  |  |
| 111 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |  |  |  |
| 112 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |  |  |  |
| 113 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |  |  |  |
| 114 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |  |  |  |
| 115 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |  |  |  |  |
| 116 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |  |  |  |  |
| 117 | 62\% | 62\% | 62\% | 62\% | 62\% | 62\% |  |  |  |  |
| 118 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |  |  |  |
| 119 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |  |  |  |
| 120 | 66\% | 66\% | 66\% | 66\% | 66\% | 66\% |  |  |  |  |
| 121 |  |  |  |  |  |  |  |  |  |  |
| 122 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 123 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 |  |  |  |  |
| 124 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 |  |  |  |  |
| 125 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 | 3,006 |  |  |  |  |
| 126 | 3,315 | 3,315 | 3,315 | 3,315 | 3,315 | 3,315 |  |  |  |  |
| 127 | 3,315 | 3,315 | 3,315 | 3,315 | 3,315 | 3,315 |  |  |  |  |
| 128 | 3,628 | 3,628 | 3,628 | 3,628 | 3,628 | 3,628 |  |  |  |  |
| 129 | 2,813 | 2,813 | 2,813 | 2,813 | 2,813 | 2,813 |  |  |  |  |
| 130 | 2,813 | 2,813 | 2,813 | 2,813 | 2,813 | 2,813 |  |  |  |  |
| 131 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 | 2,895 |  |  |  |  |
| 132 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 |  |  |  |  |
| 133 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 |  |  |  |  |
| 134 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 |  |  |  |  |
| 135 | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 |  |  |  |  |
| 136 | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 |  |  |  |  |
| 137 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |  |  |  |  |
| 138 | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 |  |  |  |  |
| 139 | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 | 5,163 |  |  |  |  |
| 140 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 | 3,873 |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 141 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 |  |  |  |  |
| 142 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 | 5,535 |  |  |  |  |
| 143 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 | 5,357 |  |  |  |  |
| 144 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 |  |  |  |  |
| 145 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 | 3,281 |  |  |  |  |
| 146 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 |  |  |  |  |
| 147 |  |  |  |  |  |  |  |  |  |  |
| 148 |  |  |  |  |  |  |  |  |  |  |
| 149 |  |  |  |  |  |  |  |  |  |  |
| 150 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |  |  |  |  |
| 151 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |  |  |  |  |
| 152 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 | 5,750 |  |  |  |  |
| 153 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |  |  |  |  |
| 154 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |  |  |  |  |
| 155 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 | 5,799 |  |  |  |  |
| 156 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |  |  |  |  |
| 157 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |  |  |  |  |
| 158 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 | 5,462 |  |  |  |  |
| 159 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |  |  |  |  |
| 160 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |  |  |  |  |
| 161 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 | 5,821 |  |  |  |  |
| 162 |  |  |  |  |  |  |  |  |  |  |
| 163 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 164 | \$2,224 | \$2,224 | \$2,224 | \$2,224 | \$2,224 | \$2,224 |  |  |  |  |
| 165 | \$2,471 | \$2,471 | \$2,471 | \$2,471 | \$2,471 | \$2,471 |  |  |  |  |
| 166 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 | \$2,574 |  |  |  |  |
| 167 | \$2,515 | \$2,515 | \$2,515 | \$2,515 | \$2,515 | \$2,515 |  |  |  |  |
| 168 | \$2,795 | \$2,795 | \$2,795 | \$2,795 | \$2,795 | \$2,795 |  |  |  |  |
| 169 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 | \$5,514 |  |  |  |  |
| 170 | \$2,695 | \$2,695 | \$2,695 | \$2,695 | \$2,695 | \$2,695 |  |  |  |  |
| 171 | \$2,994 | \$2,994 | \$2,994 | \$2,994 | \$2,994 | \$2,994 |  |  |  |  |
| 172 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 | \$5,471 |  |  |  |  |
| 173 | \$6,685 | \$6,685 | \$6,685 | \$6,685 | \$6,685 | \$6,685 |  |  |  |  |
| 174 | \$7,428 | \$7,428 | \$7,428 | \$7,428 | \$7,428 | \$7,428 |  |  |  |  |
| 175 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 | \$12,372 |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 176 | \$4,165 | \$4,165 | \$4,165 | \$4,165 | \$4,165 | \$4,165 |  |  |  |  |
| 177 | \$4,628 | \$4,628 | \$4,628 | \$4,628 | \$4,628 | \$4,628 |  |  |  |  |
| 178 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 | \$4,216 |  |  |  |  |
| 179 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 |  |  |  |  |
| 180 | \$7,545 | \$7,545 | \$7,545 | \$7,545 | \$7,545 | \$7,545 |  |  |  |  |
| 181 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 | \$6,874 |  |  |  |  |
| 182 | \$8,995 | \$8,995 | \$8,995 | \$8,995 | \$8,995 | \$8,995 |  |  |  |  |
| 183 | \$9,994 | \$9,994 | \$9,994 | \$9,994 | \$9,994 | \$9,994 |  |  |  |  |
| 184 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 | \$11,888 |  |  |  |  |
| 185 | \$13,733 | \$13,733 | \$13,733 | \$13,733 | \$13,733 | \$13,733 |  |  |  |  |
| 186 | \$15,259 | \$15,259 | \$15,259 | \$15,259 | \$15,259 | \$15,259 |  |  |  |  |
| 187 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 | \$16,283 |  |  |  |  |
| 188 |  |  |  |  |  |  |  |  |  |  |
| 189 |  |  |  |  |  |  |  |  |  |  |
| 190 |  |  |  |  |  |  |  |  |  |  |
| 191 | \$7,766 | \$7,766 | \$7,766 | \$7,766 | \$7,766 | \$7,766 |  |  |  |  |
| 192 | \$7,965 | \$7,965 | \$7,965 | \$7,965 | \$7,965 | \$7,965 |  |  |  |  |
| 193 | \$8,006 | \$8,006 | \$8,006 | \$8,006 | \$8,006 | \$8,006 |  |  |  |  |
| 194 | \$6,933 | \$6,933 | \$6,933 | \$6,933 | \$6,933 | \$6,933 |  |  |  |  |
| 195 | \$7,111 | \$7,111 | \$7,111 | \$7,111 | \$7,111 | \$7,111 |  |  |  |  |
| 196 | \$7,148 | \$7,148 | \$7,148 | \$7,148 | \$7,148 | \$7,148 |  |  |  |  |
| 197 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 | \$6,791 |  |  |  |  |
| 198 | \$6,965 | \$6,965 | \$6,965 | \$6,965 | \$6,965 | \$6,965 |  |  |  |  |
| 199 | \$7,001 | \$7,001 | \$7,001 | \$7,001 | \$7,001 | \$7,001 |  |  |  |  |
| 200 | \$6,113 | \$6,113 | \$6,113 | \$6,113 | \$6,113 | \$6,113 |  |  |  |  |
| 201 | \$6,270 | \$6,270 | \$6,270 | \$6,270 | \$6,270 | \$6,270 |  |  |  |  |
| 202 | \$6,302 | \$6,302 | \$6,302 | \$6,302 | \$6,302 | \$6,302 |  |  |  |  |
| 203 |  |  |  |  |  |  |  |  |  |  |
| 204 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 205 | \$96 | \$96 | \$96 | \$96 | \$96 | \$96 |  |  |  |  |
| 206 | \$107 | \$107 | \$107 | \$107 | \$107 | \$107 |  |  |  |  |
| 207 | \$112 | \$112 | \$112 | \$112 | \$112 | \$112 |  |  |  |  |
| 208 | \$109 | \$109 | \$109 | \$109 | \$109 | \$109 |  |  |  |  |
| 209 | \$121 | \$121 | \$121 | \$121 | \$121 | \$121 |  |  |  |  |
| 210 | \$239 | \$239 | \$239 | \$239 | \$239 | \$239 |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 211 | \$117 | \$117 | \$117 | \$117 | \$117 | \$117 |  |  |  |  |
| 212 | \$130 | \$130 | \$130 | \$130 | \$130 | \$130 |  |  |  |  |
| 213 | \$237 | \$237 | \$237 | \$237 | \$237 | \$237 |  |  |  |  |
| 214 | \$290 | \$290 | \$290 | \$290 | \$290 | \$290 |  |  |  |  |
| 215 | \$322 | \$322 | \$322 | \$322 | \$322 | \$322 |  |  |  |  |
| 216 | \$537 | \$537 | \$537 | \$537 | \$537 | \$537 |  |  |  |  |
| 217 | \$181 | \$181 | \$181 | \$181 | \$181 | \$181 |  |  |  |  |
| 218 | \$201 | \$201 | \$201 | \$201 | \$201 | \$201 |  |  |  |  |
| 219 | \$183 | \$183 | \$183 | \$183 | \$183 | \$183 |  |  |  |  |
| 220 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 |  |  |  |  |
| 221 | \$327 | \$327 | \$327 | \$327 | \$327 | \$327 |  |  |  |  |
| 222 | \$298 | \$298 | \$298 | \$298 | \$298 | \$298 |  |  |  |  |
| 223 | \$390 | \$390 | \$390 | \$390 | \$390 | \$390 |  |  |  |  |
| 224 | \$434 | \$434 | \$434 | \$434 | \$434 | \$434 |  |  |  |  |
| 225 | \$516 | \$516 | \$516 | \$516 | \$516 | \$516 |  |  |  |  |
| 226 | \$596 | \$596 | \$596 | \$596 | \$596 | \$596 |  |  |  |  |
| 227 | \$662 | \$662 | \$662 | \$662 | \$662 | \$662 |  |  |  |  |
| 228 | \$706 | \$706 | \$706 | \$706 | \$706 | \$706 |  |  |  |  |
| 229 |  |  |  |  |  |  |  |  |  |  |
| 230 |  |  |  |  |  |  |  |  |  |  |
| 231 |  |  |  |  |  |  |  |  |  |  |
| 232 | \$337 | \$337 | \$337 | \$337 | \$337 | \$337 |  |  |  |  |
| 233 | \$346 | \$346 | \$346 | \$346 | \$346 | \$346 |  |  |  |  |
| 234 | \$347 | \$347 | \$347 | \$347 | \$347 | \$347 |  |  |  |  |
| 235 | \$301 | \$301 | \$301 | \$301 | \$301 | \$301 |  |  |  |  |
| 236 | \$308 | \$308 | \$308 | \$308 | \$308 | \$308 |  |  |  |  |
| 237 | \$310 | \$310 | \$310 | \$310 | \$310 | \$310 |  |  |  |  |
| 238 | \$295 | \$295 | \$295 | \$295 | \$295 | \$295 |  |  |  |  |
| 239 | \$302 | \$302 | \$302 | \$302 | \$302 | \$302 |  |  |  |  |
| 240 | \$304 | \$304 | \$304 | \$304 | \$304 | \$304 |  |  |  |  |
| 241 | \$265 | \$265 | \$265 | \$265 | \$265 | \$265 |  |  |  |  |
| 242 | \$272 | \$272 | \$272 | \$272 | \$272 | \$272 |  |  |  |  |
| 243 | \$273 | \$273 | \$273 | \$273 | \$273 | \$273 |  |  |  |  |
| 244 |  |  |  |  |  |  |  |  |  |  |
| 245 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 246 | \$2,128 | \$2,128 | \$2,128 | \$2,128 | \$2,128 | \$2,128 |  |  |  |  |
| 247 | \$2,364 | \$2,364 | \$2,364 | \$2,364 | \$2,364 | \$2,364 |  |  |  |  |
| 248 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 | \$2,462 |  |  |  |  |
| 249 | \$2,406 | \$2,406 | \$2,406 | \$2,406 | \$2,406 | \$2,406 |  |  |  |  |
| 250 | \$2,673 | \$2,673 | \$2,673 | \$2,673 | \$2,673 | \$2,673 |  |  |  |  |
| 251 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 | \$5,275 |  |  |  |  |
| 252 | \$2,578 | \$2,578 | \$2,578 | \$2,578 | \$2,578 | \$2,578 |  |  |  |  |
| 253 | \$2,865 | \$2,865 | \$2,865 | \$2,865 | \$2,865 | \$2,865 |  |  |  |  |
| 254 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 | \$5,233 |  |  |  |  |
| 255 | \$6,395 | \$6,395 | \$6,395 | \$6,395 | \$6,395 | \$6,395 |  |  |  |  |
| 256 | \$7,105 | \$7,105 | \$7,105 | \$7,105 | \$7,105 | \$7,105 |  |  |  |  |
| 257 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 | \$11,836 |  |  |  |  |
| 258 | \$3,984 | \$3,984 | \$3,984 | \$3,984 | \$3,984 | \$3,984 |  |  |  |  |
| 259 | \$4,427 | \$4,427 | \$4,427 | \$4,427 | \$4,427 | \$4,427 |  |  |  |  |
| 260 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 | \$4,033 |  |  |  |  |
| 261 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 |  |  |  |  |
| 262 | \$7,218 | \$7,218 | \$7,218 | \$7,218 | \$7,218 | \$7,218 |  |  |  |  |
| 263 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 | \$6,576 |  |  |  |  |
| 264 | \$8,605 | \$8,605 | \$8,605 | \$8,605 | \$8,605 | \$8,605 |  |  |  |  |
| 265 | \$9,561 | \$9,561 | \$9,561 | \$9,561 | \$9,561 | \$9,561 |  |  |  |  |
| 266 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 | \$11,373 |  |  |  |  |
| 267 | \$13,138 | \$13,138 | \$13,138 | \$13,138 | \$13,138 | \$13,138 |  |  |  |  |
| 268 | \$14,597 | \$14,597 | \$14,597 | \$14,597 | \$14,597 | \$14,597 |  |  |  |  |
| 269 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 | \$15,577 |  |  |  |  |
| 270 |  |  |  |  |  |  |  |  |  |  |
| 271 |  |  |  |  |  |  |  |  |  |  |
| 272 |  |  |  |  |  |  |  |  |  |  |
| 273 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 | \$7,429 |  |  |  |  |
| 274 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 | \$7,620 |  |  |  |  |
| 275 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 | \$7,659 |  |  |  |  |
| 276 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 | \$6,632 |  |  |  |  |
| 277 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 | \$6,802 |  |  |  |  |
| 278 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 | \$6,837 |  |  |  |  |
| 279 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 | \$6,496 |  |  |  |  |
| 280 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 | \$6,663 |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 281 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 | \$6,697 |  |  |  |  |
| 282 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 | \$5,848 |  |  |  |  |
| 283 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 | \$5,998 |  |  |  |  |
| 284 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 | \$6,029 |  |  |  |  |
| 285 |  |  |  |  |  |  |  |  |  |  |
| 286 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 287 | \$56 | \$56 | \$56 | \$56 | \$56 | \$56 |  |  |  |  |
| 288 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 |  |  |  |  |
| 289 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 |  |  |  |  |
| 290 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 |  |  |  |  |
| 291 | \$74 | \$74 | \$74 | \$74 | \$74 | \$74 |  |  |  |  |
| 292 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 |  |  |  |  |
| 293 | \$79 | \$79 | \$79 | \$79 | \$79 | \$79 |  |  |  |  |
| 294 | \$88 | \$88 | \$88 | \$88 | \$88 | \$88 |  |  |  |  |
| 295 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |  |  |  |  |
| 296 | \$133 | \$133 | \$133 | \$133 | \$133 | \$133 |  |  |  |  |
| 297 | \$148 | \$148 | \$148 | \$148 | \$148 | \$148 |  |  |  |  |
| 298 | \$154 | \$154 | \$154 | \$154 | \$154 | \$154 |  |  |  |  |
| 299 | \$26 | \$26 | \$26 | \$26 | \$26 | \$26 |  |  |  |  |
| 300 | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 |  |  |  |  |
| 301 | \$30 | \$30 | \$30 | \$30 | \$30 | \$30 |  |  |  |  |
| 302 | \$29 | \$29 | \$29 | \$29 | \$29 | \$29 |  |  |  |  |
| 303 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |  |  |  |  |
| 304 | \$34 | \$34 | \$34 | \$34 | \$34 | \$34 |  |  |  |  |
| 305 | \$47 | \$47 | \$47 | \$47 | \$47 | \$47 |  |  |  |  |
| 306 | \$52 | \$52 | \$52 | \$52 | \$52 | \$52 |  |  |  |  |
| 307 | \$54 | \$54 | \$54 | \$54 | \$54 | \$54 |  |  |  |  |
| 308 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 |  |  |  |  |
| 309 | \$114 | \$114 | \$114 | \$114 | \$114 | \$114 |  |  |  |  |
| 310 | \$119 | \$119 | \$119 | \$119 | \$119 | \$119 |  |  |  |  |
| 311 |  |  |  |  |  |  |  |  |  |  |
| 312 |  |  |  |  |  |  |  |  |  |  |
| 313 |  |  |  |  |  |  |  |  |  |  |
| 314 | \$65 | \$65 | \$65 | \$64 | \$64 | \$64 |  |  |  |  |
| 315 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 316 | \$137 | \$137 | \$137 | \$137 | \$137 | \$137 |  |  |  |  |
| 317 | \$21 | \$21 | \$21 | \$21 | \$21 | \$21 |  |  |  |  |
| 318 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 |  |  |  |  |
| 319 | \$45 | \$45 | \$45 | \$45 | \$45 | \$45 |  |  |  |  |
| 320 | \$61 | \$61 | \$61 | \$60 | \$60 | \$60 |  |  |  |  |
| 321 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 |  |  |  |  |
| 322 | \$129 | \$129 | \$129 | \$129 | \$129 | \$129 |  |  |  |  |
| 323 | \$15 | \$15 | \$15 | \$15 | \$15 | \$15 |  |  |  |  |
| 324 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |  |  |  |  |
| 325 | \$32 | \$32 | \$32 | \$32 | \$32 | \$32 |  |  |  |  |
| 326 |  |  |  |  |  |  |  |  |  |  |
| 327 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 328 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 329 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 330 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 331 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 332 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 333 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 334 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 335 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 336 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 337 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 338 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 339 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 340 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 341 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 342 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 343 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 344 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 345 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 346 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 347 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 348 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 349 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 350 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |


|  | AL |  | AM |  | AN |  | AO |  | AP |  | AQ |  | AR | AS | AT | AU |
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| 351 | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |  |
| 352 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 353 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 354 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 355 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 356 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 357 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 358 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 359 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 360 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 361 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 362 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 363 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 364 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 365 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 366 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 367 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 368 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 369 | 2045 |  | 2046 |  | 2047 |  | 2048 |  | 2049 |  | 2050 |  |  |  |  |  |
| 370 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 371 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 372 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 373 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 374 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 375 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 376 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 377 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 378 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 379 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 380 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 381 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 382 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 383 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 384 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |
| 385 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  | \$0 |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 386 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 387 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 388 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 389 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 390 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 391 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 392 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 393 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 394 |  |  |  |  |  |  |  |  |  |  |
| 395 |  |  |  |  |  |  |  |  |  |  |
| 396 |  |  |  |  |  |  |  |  |  |  |
| 397 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 398 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 399 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 400 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 401 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 402 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 403 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 404 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 405 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 406 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 407 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 408 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 409 |  |  |  |  |  |  |  |  |  |  |
| 410 |  |  |  |  |  |  |  |  |  |  |
| 411 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 412 <br> 413 | \$58 | \$58 | \$58 | \$58 | \$58 | \$58 |  |  |  |  |
| 413 | \$64 | \$64 | \$64 | \$64 | \$64 | \$64 |  |  |  |  |
| 414 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 |  |  |  |  |
| 415 | \$60 | \$60 | \$60 | \$60 | \$60 | \$60 |  |  |  |  |
| 416 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 |  |  |  |  |
| 417 | \$102 | \$102 | \$102 | \$102 | \$102 | \$102 |  |  |  |  |
| 418 \| | \$79 | \$79 | \$79 | \$79 | \$79 | \$79 |  |  |  |  |
| 419 | \$88 | \$88 | \$88 | \$88 | \$88 | \$88 |  |  |  |  |
| 420 | \$132 | \$132 | \$132 | \$132 | \$132 | \$132 |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
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| 421 | \$148 | \$148 | \$148 | \$148 | \$148 | \$148 |  |  |  |  |
| 422 | \$164 | \$164 | \$164 | \$164 | \$164 | \$164 |  |  |  |  |
| 423 | \$245 | \$245 | \$245 | \$245 | \$245 | \$245 |  |  |  |  |
| 424 | \$48 | \$48 | \$48 | \$48 | \$48 | \$48 |  |  |  |  |
| 425 | \$53 | \$53 | \$53 | \$53 | \$53 | \$53 |  |  |  |  |
| 426 | \$65 | \$65 | \$65 | \$65 | \$65 | \$65 |  |  |  |  |
| 427 | \$75 | \$75 | \$75 | \$75 | \$75 | \$75 |  |  |  |  |
| 428 | \$84 | \$84 | \$84 | \$84 | \$84 | \$84 |  |  |  |  |
| 429 | \$103 | \$103 | \$103 | \$103 | \$103 | \$103 |  |  |  |  |
| 430 | \$95 | \$95 | \$95 | \$95 | \$95 | \$95 |  |  |  |  |
| 431 | \$105 | \$105 | \$105 | \$105 | \$105 | \$105 |  |  |  |  |
| 432 | \$128 | \$128 | \$128 | \$128 | \$128 | \$128 |  |  |  |  |
| 433 | \$253 | \$253 | \$253 | \$253 | \$253 | \$253 |  |  |  |  |
| 434 | \$281 | \$281 | \$281 | \$281 | \$281 | \$281 |  |  |  |  |
| 435 | \$366 | \$366 | \$366 | \$366 | \$366 | \$366 |  |  |  |  |
| 436 |  |  |  |  |  |  |  |  |  |  |
| 437 |  |  |  |  |  |  |  |  |  |  |
| 438 |  |  |  |  |  |  |  |  |  |  |
| 439 | \$83 | \$83 | \$83 | \$83 | \$83 | \$83 |  |  |  |  |
| 440 | \$97 | \$97 | \$97 | \$97 | \$97 | \$97 |  |  |  |  |
| 441 | \$98 | \$98 | \$98 | \$98 | \$98 | \$98 |  |  |  |  |
| 442 | \$67 | \$67 | \$67 | \$67 | \$67 | \$67 |  |  |  |  |
| 443 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 |  |  |  |  |
| 444 | \$73 | \$73 | \$73 | \$73 | \$73 | \$73 |  |  |  |  |
| 445 | \$77 | \$77 | \$77 | \$77 | \$77 | \$77 |  |  |  |  |
| 446 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |  |  |  |  |
| 447 | \$91 | \$91 | \$91 | \$91 | \$91 | \$91 |  |  |  |  |
| 448 | \$58 | \$58 | \$58 | \$58 | \$58 | \$58 |  |  |  |  |
| 449 | \$62 | \$62 | \$62 | \$62 | \$62 | \$62 |  |  |  |  |
| 450 | \$63 | \$63 | \$63 | \$63 | \$63 | \$63 |  |  |  |  |
| 451 |  |  |  |  |  |  |  |  |  |  |
| 452 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 453 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |  |  |  |  |
| 454 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |  |  |  |  |
| 455 | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% | 11.61\% |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
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| 456 | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |  |  |  |  |
| 457 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 458 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 459 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |  |
| 460 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 |  |  |  |  |
| 461 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 |  |  |  |  |
| 462 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 | 0.638 |  |  |  |  |
| 463 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 |  |  |  |  |
| 464 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 |  |  |  |  |
| 465 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 | 1.126 |  |  |  |  |
| 466 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 467 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 | 0.9529 |  |  |  |  |
| 468 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 | 0.9080 |  |  |  |  |
| 469 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 | 0.8652 |  |  |  |  |
| 470 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 | 0.8244 |  |  |  |  |
| 471 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 | 0.7856 |  |  |  |  |
| 472 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 | 0.7485 |  |  |  |  |
| 473 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 | 0.7133 |  |  |  |  |
| 474 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 | 0.6796 |  |  |  |  |
| 475 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 | 0.6476 |  |  |  |  |
| 476 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 | 0.6171 |  |  |  |  |
| 477 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 | 0.5880 |  |  |  |  |
| 478 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 | 0.5603 |  |  |  |  |
| 479 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 | 0.5339 |  |  |  |  |
| 480 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 | 0.5087 |  |  |  |  |
| 481 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 | 0.4848 |  |  |  |  |
| 482 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 | 0.4619 |  |  |  |  |
| 483 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 | 0.4401 |  |  |  |  |
| 484 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 | 0.4194 |  |  |  |  |
| 485 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 | 0.3996 |  |  |  |  |
| 486 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 | 0.3808 |  |  |  |  |
| 487 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 | 0.3629 |  |  |  |  |
| 488 |  |  |  |  |  |  |  |  |  |  |
| 489 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 |  |  |  |  |
| 490 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |  |  |  |  |


|  | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU |
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| 491 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |  |  |  |  |
| 492 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 | 1.045 |  |  |  |  |
| 493 |  |  |  |  |  |  |  |  |  |  |
| 494 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 |  |  |  |  |
| 495 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 |  |  |  |  |
| 496 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 | 1.103 |  |  |  |  |
| 497 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |  |  |  |  |
| 498 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |  |  |  |  |
| 499 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |  |  |  |  |
| 500 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |  |  |  |  |
| 501 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |  |  |  |  |
| 502 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |  |  |  |  |
| 503 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |  |  |  |  |
| 504 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 | 1.185 |  |  |  |  |
| 505 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 | 1.328 |  |  |  |  |
| 506 |  |  |  |  |  |  |  |  |  |  |
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|  | AV | AW | AX |
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| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 | 60+ ft |  |  |
| 8 | 568 |  |  |
| 9 | 219 |  |  |
| 10 | 248 |  |  |
| 11 | 35 |  |  |
| 12 | 27 |  |  |
| 13 | 6 |  |  |
| 14 | 1,103 |  |  |
| 15 |  |  |  |
| 16 |  |  |  |
| 17 |  |  |  |
| 18 |  |  |  |
| 19 | 60+ ft | Max | Min |
| 20 | 166 | 0 | 0 |
| 21 | 155 | 1 | 1 |
| 22 | 520 | 5 | 1 |
| 23 | 248 | 10 | 5 |
| 24 |  |  |  |
| 25 |  |  |  |
| 26 |  |  |  |
| 27 |  |  |  |
| 28 | 429 | 30 | 10 |
| 29 | 548 | 357 | 30 |
| 30 | 2,067 | 357 | 0 |
| 31 | 165 |  |  |
| 32 | 0 |  |  |
| 33 |  |  |  |
| 34 |  |  |  |
| 35 | 60+ ft | Max | Min |


|  | AV | AW | AX |
| :--- | :--- | :--- | :--- |
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Docket No. E-7, Sub 1276 William E. Powers \& Rao Konidena On Behalf of NC WARN Exhibit 3 Rocky Mountain Power Estimates

# Siting Transmission Lines \& Substations 

 Salt Lake County Electrical Plan Task Force December $3^{\text {rd }}$Mickey Beaver<br>Customer and Community Manager Rocky Mountain Power

## Transmission Lines

Typical 138 kV tangent structure with distribution

- What does a transmission line look like?
- Conductors
- Insulators
- Cross arms
- Shield wire/communications
- Ground wire
- Guy wire
- Foundation
- $3^{\text {rd }}$ party attachments




## Transmission Design

- What is needed to serve the future load
- 5 years?
- 10 years?
- 50 years?
- Company standards
- Avian safe (set by federal regulations)
- Standard materials (restoration and cost)
- Federal, state, and local regulations
- NESC (National Electrical Safety Code)
- WECC (Western Electricity Coordinating Council)
- NERC (North American Electric Reliability Corporation)
- Right of way
- Access for construction, maintenance, and repair


## Transmission Design - What is needed?

- Plan for the future - This is why we are here!
- Build once or build and re-build and re-build and re...
- Incorporate community's master plans and vision within the confines of existing regulations
$>$ Something to think about... when we plan for the future, do we keep our options open or close the door?


## Transmission Line Capacity

- Many factors determine how much power a given transmission line can carry
- Conductor
- Size
- Material
- Conditions

- Ambient temperature
- Wind speed
- Elevation
- Sun angle
- Remember the equation $P($ power $)=V($ voltage $) x I($ current $)$


## Transmission Line Capacity

For a transmission line built with 1557 ACSR conductor, typical capacities are:

- 345,000 Volt line can carry ~ 735 MW

- 230,000 Volt line can carry ~ 490 MW
- 138,000 Volt line can carry ~ 294 MW
- 46,000 Volt line can carry ~ 98 MW
- In comparison, a transmission line built with 795 ACSR conductor, typical capacities are:
- 345,000 Volt line can carry ~ 508 MW
- 230,000 Volt line can carry ~ 339 MW
- 138,000 Volt line can carry ~ 204 MW
- 46,000 Volt line can carry ~ 68 MW


Voltage

## Transmission Design - Company Standards

- Avian safety
- Lines are designed to mitigate accidental electrocution of protected species
o Minimum clearances between energized conductors and grounded components are mandated by federal law
- Standard materials
- Use of standard materials minimizes restoration time when a component fails


## Transmission Design - Government Regulations

- Code Requirements
- Vertical clearance
o Maximum conductor sag (line heating, line tension, ambient temperature, conductor weight)
o What does the conductor cross (roads, railroads, trails, water, structures, etc.)
o Construction error
- Horizontal clearance
o Pole deflection
o Conductor and insulator string blowout
o Construction error


Jim Bridger to Kinport 345,000 Volt Line


## Transmission Design Government Regulations

- Code Requirements (cont.)
- Clearance requirements dependent on transmission line voltage
o As voltages increase, required clearances increase
- General height comparison (there are always exceptions)
o Typical 345 kV single circuit H -frame structure will be $90-120$ ' above ground
o Typical 345 kV double circuit single pole structure will be 130-170, above ground ( $200^{\prime}$ in some cases)
o Typical 138 kV single circuit H -frame structure will be $60-90^{\prime}$ above ground
o Typical 138 kV double circuit single pole structure will be 70-95' above ground (115' in some cases)


## Transmission Right of Way

- Minimum width of right-of-way required for a transmission line is set by the National Electrical Safety Code
- Takes into account conductor blowout
o How far the wire can be expected to swing during a high wind on a hot day
o Can't come close to structures or trees because of wind
- Pole structure, wire size and span length go into the equation
- Single pole structures require less ROW width than lattice or multiple pole structures


## Transmission Right of Way

## - 138 kV

- H-frame
o Typically 100 feet ROW
o 600 ft average span
- Single Pole
o Typically 60 feet ROW
o 300 ft average span


If located near road right-of-way, the private width requirements can be reduced

Transmission lines are often in corridors, areas where two or more transmission lines are in close proximity to each other

## Transmission Design

Energy is transmitted via high voltage lines ( $230 \mathrm{kV}, 345 \mathrm{kV}$ ) from the power generators to major substations

High voltage is used for long distance, bulk energy transmission.


## Sub-transmission Lines (Local Transmission)



## Transmission Reliability

- When do you want your power?
- Rocky Mountain Power must provide reliable service under all normal operating conditions and prefers to serve the majority of customers under expected abnormal operating conditions
- An abnormal operation condition is the loss of one or more electrical components. These include:
- Generators (power plants)
- Transmission lines
- Substation transformers


## Transmission Reliability

- Rocky Mountain Power complies with Western Electricity Coordinating Council (WECC) reliability standards
- Reliability standards are federally mandated and include penalties for poor reliability performance (>=100 kV)
- Rocky Mountain Power must periodically submit reports to the reliability councils
- Public Service Commission has some oversight authority


## Local Area Transmission Reliability

- In areas that have multiple transmission lines, the additional lines have capacity available in case something happens to one of the other lines, e.g. normal operation with one line down (N-1)
$>$ Example: The proposed Railroad to Silver Creek 138 kV line is needed to maintain service to Summit and Wasatch Counties during peak demand upon the loss of either existing 138 kV source to the area


## Transmission Reliability

- Not all local transmission has backup
- Many times a single, lower voltage line will be the only transmission serving an area. If the line goes out of service, customers served by that line lose power
o Typical of smaller demand areas such as in mountains or rural areas
- Example: For the transmission line serving Oakley and Kamas, there is no backup to the single 46 kilovolt lines


## Transmission Reliability

- Not everyone sees the same level of reliability
- It would be prohibitively expensive to ensure all customers have the same reliability
- Customers located in urban areas generally have the ability to receive power from more than one distribution or transmission line
- Remote customers may only have one distribution or transmission line serving their area
- In mountainous areas, snow and wind may cause more outages


## Transmission Design - Increasing Capacity of Existing Lines

- Capacity of existing transmission lines can sometimes be increased
- Increase wire size
- Increase voltage
o If electrical clearances are great enough
o If ROW is available


## - ○ Substations

- A substation transforms or changes voltage levels and contains equipment to protect and control power lines.
- Substations can contain the following:
- Transformers
- Switches
- Circuit breakers
- Large metallic pipe called bus work
- Support structures to terminate transmission lines
- Communications equipment
$>$ Substations do not generate power.

- Major substations (main grid): Convert power from high voltage transmission lines ( $230 \mathrm{kV}, 345 \mathrm{kV}$ ) to sub-transmission voltages ( $46 \mathrm{kV}, 138 \mathrm{kV}$ )
- Regional substations (sub-transmission): Convert power from subtransmission lines ( $46 \mathrm{kV}, 138 \mathrm{kV}$ ) to other sub-transmission voltages and distribution voltages ( $12.5 \mathrm{kV}, 25 \mathrm{kV}$ )
- Silver Creek substation located in Summit County
- Local substations (distribution): Convert power from subtransmission lines ( $46 \mathrm{kV}, 138 \mathrm{kV}$ ) to distribution voltages ( 12.5 $\mathrm{kV}, 25 \mathrm{kV}$ )
- Examples of these in Summit/Wasatch:

Silver Creek sub; Summit Park sub; Snyderville sub; Park City sub; Judge sub; Jordanelle sub; Kamas sub; Oakley sub; Coalville sub; Henefer sub

## - O Substion - Hiahwav Aman Substations - Highway Analogy

- Think of a major (main grid) substation as an on-ramp or offramp from an interstate
- Think of a regional (sub-transmission) substation as an intersection connecting a state highway to a main city street.
- Think of a local (distribution) substation as an intersection connecting a main city street to a residential or commercial subdivision.
- The different types of substations can be co-located.
- Using the highway analogy, electricity travels through lines and substations in the same way a commuter might go home from work.
- First the commuter leaves the interstate by way of an off-ramp or high voltage substation.
- Then high voltage moves down a smaller state highway, leaving the highway at a major intersection or local sub-transmission substation onto a city street.
- Next it turns off the city street via a minor intersection or distribution substation into a subdivision.
- Finally the commuter turns into the driveway via a pole or pad mount transformer.


## - - Local Distribution Substätion Design

- Balance Reliability and Cost
- Location considerations
- Central to the area to be served for local distribution substations
o Most flexibility to recover from outages
o Consistent reliability opportunity for all customers
o Creates strongest support for least cost
o Maximizes coverage area
- Sufficient land area
o Typical local distribution substation requires 1 acre inside fence
o Clearances for electrical safety (NESC minimum)
o Access for large equipment
o Room for expansion to ultimate build-out


## Local Distribution Substãtion Design

- Sufficient land area (continued)
o Ultimately serves up to 80 MW of load
o 1-3 square miles for industrial load
o 2-5 square miles for commercial load
o 6-8 square miles for typical urban residential load (8000 homes)
- Environmental considerations
o Year-round access
o Soil and site conditions
- Proximity to existing electrical infrastructure
o Transmission corridors
o Existing distribution facilities

Cottonwood substation $138-46 \mathrm{kV}$,


Docket No. E-7, Sub 1276

Hoggard substation $138-12.5$ kV


Docket No. E-7, Sub 1276 William E. Powers \& Rao Konidena On Behalf of NC WARN

Exhibit 4
MISO Transmission Cost Estimation Guide For MTEP 23

## Transmission Cost Estimation Guide For MTEP23 <br> May 5, 2023

## Purpose Statement

The MISO transmission planning process focuses on making the benefits of an economically efficient electricity market available to customers by identifying transmission projects that provide access to electricity at the lowest total electric system cost. As a part of this process, MISO identifies essential transmission projects that will improve the reliability and efficiency of energy delivery in the region. Those projects are included in the MISO Transmission Expansion Plan (MTEP), an annual publication that is collaboration between MISO planning staff and stakeholders.

Certain types of projects as identified in MTEP require cost estimates to justify the business case for recommendation to MISO's Board of Directors. MISO provides cost estimates for these certain types of projects in order to evaluate alternatives. MISO's transmission cost estimation guide for MTEP23 describes the approach and cost data that MISO uses in developing its cost estimates. This document's assumptions and cost data are reviewed yearly with stakeholders.

All cost estimate data in this document are in 2023 US Dollars. Cost data was escalated from $2022 \$$ to $2023 \$$ at a rate of $5.0 \%$. All applicable taxes are included within the cost subcategories.

Disclaimer: This document is prepared for informational purposes only to support MISO planning staff in developing cost estimates and deriving benefit-to-cost ratios for solutions proposed for inclusion in the MISO Transmission Expansion Plan (MTEP). MISO's cost estimation approach is based on staff experience, vendor consultation, industry practice, and stakeholder feedback. MISO makes every effort to develop its cost estimates from the most accurate and appropriate assumptions and information available at that time. However, MISO cannot and does not guarantee the accuracy of information, assumptions, judgments, or opinions contained herein or derived therefrom. MISO may revise or terminate this document at any time at its discretion without notice. MISO's cost estimation assumptions are not an indication or a direction for how any particular project shall be designed or built.

## Executive Summary

In MISO's planning process, estimated project costs are necessary to evaluate alternatives and recommend projects. The MISO Transmission Expansion Plan (MTEP) may result in a project(s) to be eligible as a Market

If a potential project passes the initial screening phase, MISO evaluates the costs of a potential project, and provides its planning cost estimate. MISO's planning cost estimates allow all potential projects' costs to be compared to each other using the same cost data and indicative assumptions.

If a potential project continues to show benefits in excess of cost, a more refined scoping cost estimate is created. If the project is not eligible for the Competitive Transmission Process (CTP), the local Transmission Owner will provide the cost estimate and will discuss and review the project scope of work with MISO. If the project is eligible for the Competitive Transmission Process, MISO will provide the scoping cost estimate. MISO's scoping cost estimate is specific for that individual potential project and MISO may adjust any of its cost estimate assumptions and/or any of its unit costs as necessary for that specific potential project. For any facility upgrades included in the project, MISO will discuss its estimate assumptions with the facility owner.


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## 1. Total Project Implementation Cost

Cost estimates that MISO provides are intended to be inclusive of all costs required to implement the project - the total project implementation cost for a potential project. Included in the total project implementation cost estimate is the project cost (as further described in this guide), contingency, and Allowance for Funds Used During Construction (AFUDC).


## Contingency

Contingency is a cost adder to account for all the uncertainties/unpredictability and level of scope definition at the time of estimation. As more investigation is completed for a cost estimate (and a project), less contingency is carried as a cost in the cost estimate. MISO has three cost estimates types it provides, with different levels of contingency shown below.

| $\left\{\begin{array}{l} \text { Pron Contingency } \\ \\| \\ \\| \end{array}\right\}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Cost estimate type | Exploratory cost estimate | Planning cost estimate | Scoping cost estimate | Competitive proposal |
| Level of design investigation | Generic $\$ /$ mile per State | Desktop analysis | Desktop analysis and local outreach | Field analysis |
| Contingency adder (\% of project cost) | 30\% | 20\% | 15\% | Observed: ~5\% |

MISO researched industry practices for project cost estimating approaches and has included an instructive reference from the AACE (formerly the Association for the Advancement of Cost Engineering) International ${ }^{\circ}$. The cost estimates that MISO provides generally align with the classes in the table below as described:

Class 5 - MISO's exploratory cost estimate
Class 4 - MISO's planning cost estimate
Class 3 - MISO's scoping cost estimate

|  | Primary Characteristic | Secondary Characteristic |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ESTIMATE CLASS | MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES <br> Expressed as \% of complete definition | END USAGE <br> Typical purpose of estimate | METHODOLOGY <br> Typical estimating method | EXPECTED ACCURACY RANGE <br> Typical variation in low and high ranges ${ }^{[a]}$ |
| Class 5 | 0\% to 2\% | Concept screening | Capacity factored, parametric models, judgment, or analogy | $\begin{array}{lc} \text { L: } & -20 \% \text { to }-50 \% \\ \mathrm{H}: & +30 \% \text { to }+100 \% \end{array}$ |
| Class 4 | 1\% to 15\% | Study or feasibility | Equipment factored or parametric models | $\begin{array}{ll} \mathrm{L}: & -15 \% \text { to }-30 \% \\ \mathrm{H}: & +20 \% \text { to }+50 \% \end{array}$ |
| Class 3 | 10\% to 40\% | Budget authorization or control | Semi-detailed unit costs with assembly level line items | $\begin{array}{ll} \mathrm{L}: & -10 \% \text { to }-20 \% \\ \mathrm{H}: & +10 \% \text { to }+30 \% \end{array}$ |
| Class 2 | 30\% to 75\% | Control or bid/tender | Detailed unit cost with forced detailed take-off | $\begin{array}{ll} \text { L: } & -5 \% \text { to }-15 \% \\ \text { H: } & +5 \% \text { to }+20 \% \end{array}$ |
| Class 1 | 65\% to 100\% | Check estimate or bid/tender | Detailed unit cost with detailed take-off | $\begin{array}{ll} \mathrm{L}: & -3 \% \text { to }-10 \% \\ \mathrm{H}: & +3 \% \text { to }+15 \% \end{array}$ |

Notes: [a] The state of process technology, availability of applicable reference cost data, and many other risks affect the range markedly. The +/- value represents typical percentage variation of actual costs from the cost estimate after application of contingency (typically at a $50 \%$ level of confidence) for given scope.

## AFUDC

AFUDC is a cost adder to account for the cost of debt and/or the cost of equity required to develop and place the project in service. AFUDC is assumed to be the same value for all the cost estimates MISO provides and is assumed to be $7.5 \%$ of the sum of the project cost and contingency.

## 2. Project Costs

Project cost is the cost to construct and install a project. Project cost estimates are categorized into smaller subcategories of cost that are then estimated for each individual project. Some cost category unit costs are common to all project types, while some are unique to the project type. All the unit costs MISO uses in its cost estimates are described below in this section and in general, align with the cost categories MISO uses in its Request for Proposals in its Competitive Transmission Process and all costs include applicable taxes within their subcategory.

### 2.1 Common Cost Categories among all project types

## Project Management

Project implementation scheduling and project management activities and resources for the project. Project management costs are estimated to be $5.5 \%$ of the project cost.

## Administrative \& General Overhead (A\&G)

Projected overhead costs that will be allocated to the Project for the period prior to placing the project in service. Administrative \& General Overhead (A\&G) is estimated to be $1.5 \%$ of the project cost.

Engineering, environmental studies, and testing and commissioning
Engineering (including route and site evaluation), environmental studies, and testing and commissioning for the project. Engineering, environmental studies, and testing and commissioning costs are estimated to be $3.0 \%$ of the project cost.

Right-of-Way, land acquisition, and regulatory and permitting
Right-of-Way and land acquisition costs are costs to have an easement on the land for projects to be installed, and are typically charged to FERC plant accounts 350 and 359. MISO assumes that new right-of-way is required for all projects except transmission line rebuild projects. MISO has three categories of land costs: pasture, crop, and urban/suburban. Pasture land values are based on USDA published values ${ }^{1}$. MISO utilizes the USDA pasture price as its initial cost for land value as it is a public resource that is updated yearly. MISO assumes that crop land is 3 times more expensive per acre than pasture land and that suburban/urban land is 5 times more expensive than pasture land. Based on its desktop analysis, MISO will determine the land type encountered for each potential project and estimate accordingly. Regulatory and permitting costs include application to state commission boards for approval for construction including public outreach and open houses.

All land costs are based upon the acreage of land that the new transmission line would traverse or the substation or HVDC converter station would be sited. The total land affected for a transmission line is the

[^38]line length multiplied by the right-of-way width of the line. The right-of-way widths that MISO considers are intended to be indicative of right-of-way widths for transmission lines in each voltage class and correlate with the number of structures per mile MISO assumes. Different project conditions (e.g., more or less transmission line structures per mile) in different locations may have a wider or narrower right-of-way width than the indicative value MISO assumes.

Finally, certain states have unique circumstances to be accounted for in their cost estimates. Wisconsin projects involving transmission lines with nominal voltage of 345 kV and above have a one-time environmental impact fee in the amount of $5 \%$ of the total implementation cost of the transmission line MISO will include this additional cost in its cost estimate for projects in Wisconsin. Minnesota has a "buy the farm" statute where additional land may be required to be purchased in addition to the right-of-way required for the transmission line - MISO may consider additional land requirements for projects in Minnesota.

| Table 2.1- Land COStS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| State - land | Right-of-Way cost per acre |  |  |  |  |
|  | Pasture | Crop |  <br> Urban | Acquisition <br> cost per acre |  <br> permitting cost per <br> acre |
| Arkansas | $\$ 2,993$ | $\$ 8,978$ | $\$ 14,963$ | $\$ 13,569$ | $\$ 2,827$ |
| Illinois | $\$ 3,885$ | $\$ 11,655$ | $\$ 19,425$ | $\$ 13,569$ | $\$ 2,827$ |
| Indiana | $\$ 2,835$ | $\$ 8,505$ | $\$ 14,175$ | $\$ 13,569$ | $\$ 2,827$ |
| lowa | $\$ 3,465$ | $\$ 10,395$ | $\$ 17,325$ | $\$ 13,569$ | $\$ 2,827$ |
| Kentucky | $\$ 3,413$ | $\$ 10,238$ | $\$ 17,063$ | $\$ 13,569$ | $\$ 2,827$ |
| Louisiana | $\$ 3,255$ | $\$ 9,765$ | $\$ 16,275$ | $\$ 13,569$ | $\$ 2,827$ |
| Michigan | $\$ 3,045$ | $\$ 9,135$ | $\$ 15,225$ | $\$ 13,569$ | $\$ 2,827$ |
| Minnesota | $\$ 2,111$ | $\$ 6,332$ | $\$ 10,553$ | $\$ 13,569$ | $\$ 9,442$ |
| Mississippi | $\$ 2,835$ | $\$ 8,505$ | $\$ 14,175$ | $\$ 13,569$ | $\$ 2,827$ |
| Missouri | $\$ 2,520$ | $\$ 7,560$ | $\$ 12,600$ | $\$ 13,569$ | $\$ 2,827$ |
| Montana | $\$ 814$ | $\$ 2,441$ | $\$ 4,069$ | $\$ 13,569$ | $\$ 2,827$ |
| North Dakota | $\$ 977$ | $\$ 2,930$ | $\$ 4,883$ | $\$ 13,569$ | $\$ 4,721$ |
| South Dakota | $\$ 1,292$ | $\$ 3,875$ | $\$ 6,458$ | $\$ 13,569$ | $\$ 3,788$ |
| Texas | $\$ 2,153$ | $\$ 6,458$ | $\$ 10,763$ | $\$ 13,569$ | $\$ 2,827$ |
| Wisconsin | $\$ 3,045$ | $\$ 9,135$ | $\$ 15,225$ | $\$ 13,569$ | $\$ 9,442$ |

### 2.2 A/C and HVDC Transmission Lines

MISO's cost estimation guide contains costs both for alternating current (A/C) transmission lines and for high voltage direct current (HVDC) transmission lines. Both types of transmission lines rely on some similar project costs (i.e., land costs, conductor costs), and some unique costs dependent on the scope of work (i.e., structure costs).

MISO's A/C and HVDC transmission line cost estimates are sub-divided into smaller subcategories as shown below. The smaller subcategories of costs align with MISO's Request for Proposal for Competitive Transmission Projects. MISO's cost estimation guide includes estimated for costs for A/C transmission in voltage classes ranging from 69 kV to 765 kV , and HVDC transmission in voltage classes from $\pm 250 \mathrm{kV}$ to $\pm 640 \mathrm{kV}$.

HVDC transmission has two major components - Transmission Line and Converter station. With the advancement of technology, both components of HVDC transmission have many options and customization for a specific need. For the purposes of creating a cost estimate, MISO will assume a bipole HVDC transmission system with a ground electrode return at each converter station, except for the 765 kV interchangeable line described in the next section, where the metallic return would provide a return path. Ground electrodes are assumed to be located at each end of the transmission line and connected by a ground electrode line.

## Structures

Costs estimated to procure and install structures (inclusive of its required foundation) for new potential transmission line projects. Costs shown below encompass cost subcategories of material, foundations, hardware, and installation typically charged to FERC plant accounts 354 and 355 . All structures are designed for the highest applicable NESC loading criteria in the MISO region.

MISO's transmission line cost estimates are comprised of four different structure types:

- Tangent structures are the most commonly used structures where the transmission line alignment is relatively straight and the line angle is between $0^{\circ}$ and $2^{\circ}$. Tangent structures support the conductor using a suspension insulator assembly. The suspension insulator assembly consists of insulator and hardware to provide necessary electrical insulation and strength for load transfer. The shieldwire (OPGW) is attached to the shieldwire suspension assembly near the top of the structure.
- Running angle structures are used where the line alignment changes direction and the line angle is between $2^{\circ}$ and $45^{\circ}$. Running angle structures support the conductor with a suspension insulator assembly similar to tangent structures. The shieldwire (OPGW) is attached to a shieldwire suspension assembly near top of structure.
- Non-Angled deadend structures are partial deadend structures and not designed for full terminal loads and the line angle is between $5^{\circ}$ to $45^{\circ}$. They are designed to withstand some unbalanced wire tensions in one direction of one or all wires on one face of the structure.
- Angled deadend structures are designed for full terminal loads for all wires and the line angle is between $0^{\circ}$ and $90^{\circ}$.

The steel weights and foundation sizes MISO considers for its steel pole and steel tower structure unit costs are intended to be indicative for structures at different voltage classes and are not tied directly to any one structure design for that structure type.

The single and double circuit wood pole structures are included in the guide to address some of the project specific needs involving wood pole construction. The wood pole structure costs that MISO considers for its unit costs are intended to be an indicative value for the structures at different voltage classes and are not tied directly to any one structure design for that structure type.

All structures have the following unit costs as shown in the tables below:

- Material cost includes the cost of design, manufacture (material, labor, equipment) and delivery of the structure to site (laydown yard) and is based on the estimated steel weight.
- Installation cost is the cost to haul, assemble, and install the structure, insulators, and grounding assemblies. This cost includes access to the structure location, and restoration.
- Hardware cost includes material cost for insulator, line hardware and grounding assemblies.
- Foundation cost includes material and installation of the foundations including the cost to procure and install anchor bolts and is based on the estimated foundation size.

Steel structures are assumed to be supported on a concrete drilled pier foundation. Wood pole structures are assumed to be embedded directly in the ground and embedment cost is included in the Installation cost. Drilled pier foundation size for a structure is indicated as concrete volume required per structure in cubic yards.

Interchangable Transmission Lines ( 765 kV AC and $\pm 640$ kV HVDC)
Acquisition of new rights-of-way (ROW) for transmission lines has many regulatory, economic and environmental constraints, which could create uncertainty in terms of time and cost for some projects, especially for extra high voltage lines with wider rights-of-ways. MISO acknowledges these constraints and therefore predicates an interchangeable HVAC/HVDC transmission design in which transmission lines can be operated at 765 kV AC initially and when the investment for converter station costs become viable, build converter stations at both ends and operate the transmission line at $\pm 640 \mathrm{kV}$ DC. The outside phases act as direct current poles and center phase provides return path for the DC transmission, which would eliminate need for separate return path. In this guide the costs of interchangeable structure costs are provided under $\pm 640 \mathrm{kV}$ HVDC transmission line. The costs for interchangeable structures are higher than regular 765 kV transmission structures due to increased insulation and taller structures to achieve HVDC clrearance requirements.

Table 2.2.1 A/C Transmission - Steel Pole - Single circuit

| Tangent structure |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | 69kV line | $\begin{gathered} \text { 115kV } \\ \text { line } \end{gathered}$ | $\begin{gathered} 138 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{aligned} & 161 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{gathered} 230 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 345 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 500 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 765 \mathrm{kV} \\ \text { line } \end{gathered}$ |
| Steel weight (lbs.) | 7,000 | 7,900 | 8,400 | 9,300 | 11,100 | 22,300 | 35,100 | 52,800 |
| Foundation size (Cu. Yd) | 5.5 | 6.0 | 8.0 | 9.0 | 13.0 | 21.0 | 41.0 | 60.0 |
| Material | \$17,297 | \$19,521 | \$20,757 | \$22,981 | \$27,429 | \$55,105 | \$86,735 | \$130,474 |
| Installation | \$25,946 | \$29,282 | \$31,135 | \$34,471 | \$41,143 | \$82,657 | \$129,771 | 195,708 |
| Hardware | \$4,555 | \$5,314 | \$5,694 | \$6,453 | \$7,591 | \$10,157 | \$11,120 | \$22,312 |
| Foundation | \$8,149 | \$8,889 | \$11,852 | \$13,334 | \$19,260 | \$31,112 | \$60,743 | \$88,891 |
| Running angle structure |  |  |  |  |  |  |  |  |
| Voltage class | 69kV line | $\begin{gathered} 115 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 138 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{aligned} & 161 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & \text { 230kV } \\ & \text { line } \end{aligned}$ | $\begin{gathered} 345 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 500 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 765 \mathrm{kV} \\ \text { line } \end{gathered}$ |
| Steel weight (lbs.) | 11,600 | 13,000 | 13,900 | 15,300 | 18,300 | 37,900 | 59,700 | \$149,000 |
| Foundation size (Cu. Yd) | 9.0 | 10.5 | 13.0 | 14.0 | 19.5 | 30.0 | 54.5 | 85.0 |
| Material | \$28,664 | \$32,124 | \$34,348 | \$37,807 | \$45,221 | \$93,654 | \$147,523 | \$368,193 |
| Installation | \$42,997 | \$48,186 | \$51,522 | \$56,711 | \$67,831 | \$140,480 | \$221,284 | \$552,281 |
| Hardware | \$4,555 | \$5,314 | \$5,694 | \$6,453 | \$7,591 | \$10,157 | \$11,120 | \$22,312 |
| Foundation | \$13,334 | \$15,557 | \$19,260 | \$20,742 | \$28,891 | \$44,446 | \$80,744 | \$125,929 |
| Non-angled deadend structure |  |  |  |  |  |  |  |  |
| Voltage class | 69kV line | $115 \mathrm{kV}$ line | $\begin{aligned} & 138 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{gathered} 161 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{aligned} & \text { 230kV } \\ & \text { line } \end{aligned}$ | $\begin{gathered} 345 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{aligned} & 500 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{gathered} 765 \mathrm{kV} \\ \text { line } \end{gathered}$ |
| Steel weight (lbs.) | 14,000 | 15,800 | 16,800 | 18,600 | 22,200 | 42,400 | 66,700 | 154,675 |
| Foundation size (Cu. Yd) | 11.0 | 12.0 | 15.0 | 16.5 | 22.5 | 33.5 | 60.0 | 160.0 |
| Material | \$34,595 | \$39,043 | \$41,514 | \$45,962 | \$54,858 | \$104,773 | \$164,820 | \$382,216 |
| Installation | \$51,892 | \$58,564 | \$62,271 | \$68,943 | \$82,287 | \$157,160 | \$247,231 | \$573,316 |
| Hardware | \$8,981 | \$10,478 | \$11,227 | \$12,723 | \$14,969 | \$36,507 | \$57,427 | \$89,250 |
| Foundation | \$16,297 | \$17,778 | \$22,223 | \$24,446 | \$33,335 | \$49,632 | \$88,892 | \$237,043 |
| Angled deadend structure |  |  |  |  |  |  |  |  |
| Voltage class | 69kV line | $\begin{aligned} & 115 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 138 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 161 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 230 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{gathered} 345 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{aligned} & 500 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{gathered} 765 \mathrm{kV} \\ \text { line } \end{gathered}$ |
| Steel weight (lbs.) | 20,400 | 23,000 | 24,500 | 27,100 | 32,400 | 48,100 | 80,700 | 154,675 |
| Foundation size (Cu. Yd) | 15.0 | 16.5 | 20.0 | 21.5 | 29.0 | 41.5 | 72.0 | 160.0 |
| Material | \$50,410 | \$56,835 | \$60,541 | \$66,966 | \$80,063 | 118,858 | \$199,415 | \$382,216 |
| Installation | \$75,615 | \$85,252 | \$90,812 | 100,449 | 120,094 | \$178,288 | 299,123 | 573,316 |
| Hardware | \$8,981 | \$10,478 | \$11,227 | \$12,723 | \$14,969 | \$36,507 | \$57,427 | \$89,250 |
| Foundation | \$22,223 | \$24,446 | \$29,631 | \$31,854 | \$42,965 | \$61,484 | 106,671 | \$237,043 |

## Table 2.2.2 A/C Transmission - Steel Tower - Single circuit

| Tangent structure |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | 69kV line | $\begin{gathered} \text { 115kV } \\ \text { line } \end{gathered}$ | $\begin{gathered} 138 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{aligned} & 161 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{gathered} 230 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 345 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 500 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 765 \mathrm{kV} \\ \text { line } \end{gathered}$ |
| Steel weight (lbs.) | 6,100 | 6,900 | 7,300 | 8,100 | 10,100 | 20,300 | 27,000 | 34,320 |
| Foundation size (Cu. Yd) | 8.5 | 11.5 | 13.5 | 14.5 | 15.5 | 19.5 | 33.5 | 39.0 |
| Material | \$12,584 | \$14,234 | \$15,059 | \$16,710 | \$20,835 | \$41,877 | \$55,698 | \$84,808 |
| Installation | \$18,876 | \$21,352 | \$22,589 | \$25,065 | \$31,254 | \$62,816 | \$83,548 | \$127,209 |
| Hardware | \$4,555 | \$5,314 | \$5,694 | \$6,453 | \$7,591 | \$10,157 | \$11,120 | \$22,312 |
| Foundation | \$12,594 | \$17,038 | \$20,001 | \$21,483 | \$22,964 | \$28,891 | \$49,632 | \$57,779 |
| Running angle structures |  |  |  |  |  |  |  |  |
| Voltage class | 69kV line | $\begin{gathered} 115 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{aligned} & 138 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 161 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 230 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 345 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{gathered} 500 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{aligned} & 765 \mathrm{kV} \\ & \text { line } \end{aligned}$ |
| Steel weight (lbs.) | 9,200 | 10,400 | 11,000 | 12,200 | 15,200 | 30,500 | 39,800 | 89,400 |
| Foundation size (Cu. Yd) | 16.0 | 19.0 | 19.5 | 22.0 | 24.5 | 39.0 | 72.5 | 81.0 |
| Material | \$18,979 | \$21,454 | \$22,692 | \$25,167 | \$31,356 | \$62,919 | \$82,104 | \$220,916 |
| Installation | \$28,468 | \$32,181 | \$34,038 | \$37,751 | \$47,034 | \$94,378 | \$123,155 | \$331,368 |
| Hardware | \$4,555 | \$5,314 | \$5,694 | \$6,453 | \$7,591 | \$10,157 | \$11,120 | \$22,312 |
| Foundation | \$23,705 | \$28,149 | \$28,891 | \$32,594 | \$36,298 | \$57,780 | 107,412 | \$120,002 |
| Non-angled deadend structure |  |  |  |  |  |  |  |  |
| Voltage class | 69kV line | $\begin{aligned} & 115 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 138 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 161 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 230 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 345 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 500 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 765 \mathrm{kV} \\ & \text { line } \end{aligned}$ |
| Steel weight (lbs.) | 10,400 | 11,700 | 12,400 | 13,800 | 17,200 | 34,500 | 45,900 | 108,273 |
| Foundation size (Cu. Yd) | 21.5 | 25.0 | 25.5 | 28.5 | 34.0 | 48.5 | 96.0 | 180.0 |
| Material | \$21,454 | \$24,136 | \$25,580 | \$28,468 | \$35,482 | \$71,170 | \$94,687 | 267,552 |
| Installation | \$32,181 | \$36,204 | \$38,370 | \$42,702 | \$53,223 | 106,756 | 142,031 | \$401,321 |
| Hardware | \$8,981 | \$10,478 | \$11,227 | \$12,723 | \$14,969 | \$36,507 | \$57,427 | \$22,312 |
| Foundation | \$31,854 | \$37,038 | \$37,780 | \$42,224 | \$50,372 | \$71,855 | 142,228 | \$237,043 |
| Angled deadend structure |  |  |  |  |  |  |  |  |
| Voltage class | 69kV line | $\begin{aligned} & \text { 115kV } \\ & \text { line } \end{aligned}$ | $138 \mathrm{kV}$ <br> line | $\begin{aligned} & 161 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{aligned} & 230 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{gathered} 345 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{aligned} & 500 \mathrm{kV} \\ & \text { line } \end{aligned}$ | $\begin{gathered} 765 \mathrm{kV} \\ \text { line } \end{gathered}$ |
| Steel weight (lbs.) | 13,400 | 15,200 | 16,100 | 17,800 | 22,200 | 44,700 | 59,400 | 108,273 |
| Foundation size (Cu. Yd) | 33.5 | 38.0 | 39.0 | 43.0 | 52.0 | 90.0 | 176.0 | 180.0 |
| Material | \$27,643 | \$31,356 | \$33,213 | \$36,720 | \$45,796 | \$92,212 | \$122,536 | 267,552 |
| Installation | \$41,464 | \$47,034 | \$49,820 | \$55,079 | \$68,695 | \$138,318 | \$183,805 | \$401,321 |
| Hardware | \$8,981 | \$10,478 | \$11,227 | \$12,723 | \$14,969 | \$36,507 | \$57,427 | \$22,312 |
| Foundation | \$49,632 | \$56,298 | \$57,780 | \$63,706 | \$77,040 | \$133,338 | \$260,751 | \$237,043 |

## Table 2.2.3 A/C Transmission - Steel Pole - Double circuit

| Tangent structure |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | 69 kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345kV line |
| Steel weight (lbs.) | 11,300 | 12,700 | 13,500 | 14,900 | 18,600 | 36,000 |
| Foundation size (Cu. Yd) | 8.0 | 10.0 | 14.5 | 17.5 | 23.0 | 46.5 |
| Material | \$27,923 | \$31,383 | \$33,359 | \$36,819 | \$45,962 | \$88,959 |
| Installation | \$41,885 | \$47,074 | \$50,039 | \$55,228 | \$68,943 | \$133,438 |
| Hardware | \$8,867 | \$10,345 | \$11,083 | \$12,562 | \$14,779 | \$19,887 |
| Foundation | \$11,852 | \$14,815 | \$21,483 | \$25,927 | \$34,075 | \$68,892 |
| Running angle structure |  |  |  |  |  |  |
| Voltage class | 69kV line | 115kV line | 138 kV line | 161kV line | 230kV line | 345 kV line |
| Steel weight (lbs.) | 15,000 | 16,800 | 17,900 | 19,700 | 24,600 | 47,700 |
| Foundation size (Cu. Yd) | 13.0 | 15.5 | 21.5 | 25.5 | 32.5 | 61.0 |
| Material | \$37,066 | \$41,514 | \$44,232 | \$48,680 | \$60,788 | \$117,870 |
| Installation | \$55,599 | \$62,271 | \$66,348 | \$73,020 | \$91,182 | \$176,805 |
| Hardware | \$8,867 | \$10,345 | \$11,083 | \$12,562 | \$14,779 | \$19,887 |
| Foundation | \$19,260 | \$22,964 | \$31,854 | \$37,780 | \$48,151 | \$90,374 |
| Non-angled deadend structure |  |  |  |  |  |  |
| Voltage class | 69kV line | 115kV line | 138 kV line | 161kV line | 230kV line | 345 kV line |
| Steel weight (lbs.) | 16,700 | 18,700 | 19,900 | 22,000 | 27,400 | 54,000 |
| Foundation size (Cu. Yd) | 15.5 | 18.5 | 25.0 | 29.5 | 37.0 | 68.5 |
| Material | \$41,267 | \$46,209 | \$49,174 | \$54,364 | \$67,707 | \$133,438 |
| Installation | \$61,900 | \$69,314 | \$73,761 | \$81,545 | \$101,561 | \$200,157 |
| Hardware | \$17,712 | \$20,665 | \$22,141 | \$25,093 | \$29,522 | \$72,610 |
| Foundation | \$22,964 | \$27,409 | \$37,038 | \$43,706 | \$54,817 | \$101,486 |
| Angled deadend structure |  |  |  |  |  |  |
| Voltage class | 69kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345kV line |
| Steel weight (lbs.) | 26,000 | 29,200 | 31,100 | 34,300 | 42,800 | 84,600 |
| Foundation size (Cu. Yd) | 20.0 | 24.0 | 32.0 | 37.0 | 46.0 | 81.5 |
| Material | \$64,248 | \$72,155 | \$76,850 | \$84,758 | \$105,762 | \$209,053 |
| Installation | \$96,372 | \$108,233 | \$115,275 | \$127,137 | \$158,643 | \$313,579 |
| Hardware | \$17,712 | \$20,665 | \$22,141 | \$25,093 | \$29,522 | \$72,610 |
| Foundation | \$29,631 | \$35,557 | \$47,409 | \$54,817 | \$68,151 | \$120,746 |

## Table 2.2.4 A/C Transmission - Steel Tower - Double circuit

| Tangent structure |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | 69kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345 kV line |
| Steel weight (lbs.) | 9,200 | 10,400 | 11,000 | 12,200 | 15,200 | 36,000 |
| Foundation size (Cu. Yd) | 13.0 | 17.0 | 19.5 | 21.0 | 22.0 | 31.5 |
| Material | \$18,979 | \$21,454 | \$22,692 | \$25,167 | \$31,356 | \$74,264 |
| Installation | \$28,468 | \$32,181 | \$34,038 | \$37,751 | \$47,034 | \$111,397 |
| Hardware | \$8,867 | \$10,345 | \$11,083 | \$12,562 | \$14,779 | \$19,887 |
| Foundation | \$19,260 | \$25,186 | \$28,891 | \$31,112 | \$32,594 | \$46,669 |
| Running angle structure |  |  |  |  |  |  |
| Voltage class | 69 kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345 kV line |
| Steel weight (lbs.) | 13,800 | 15,600 | 16,500 | 18,300 | 22,800 | 53,100 |
| Foundation size (Cu. Yd) | 22.5 | 28.0 | 34.5 | 37.5 | 46.5 | 59.0 |
| Material | \$28,358 | \$32,181 | \$34,038 | \$37,751 | \$47,034 | \$109,540 |
| Installation | \$42,702 | \$48,272 | \$51,057 | \$56,627 | \$70,551 | \$164,311 |
| Hardware | \$8,867 | \$10,345 | \$11,083 | \$12,562 | \$14,779 | \$19,887 |
| Foundation | \$33,335 | \$41,483 | \$51,114 | \$55,558 | \$68,892 | \$87,411 |
| Non-angled deadend structure |  |  |  |  |  |  |
| Voltage class | 69 kV line | 115kV line | 138kV line | 161kV line | 230 kV line | 345 kV line |
| Steel weight (lbs.) | 16,100 | 18,200 | 19,300 | 21,400 | 26,600 | 61,200 |
| Foundation size (Cu. Yd) | 28.5 | 34.5 | 43.0 | 48.5 | 70.5 | 86.5 |
| Material | \$33,213 | \$37,545 | \$39,814 | \$44,146 | \$54,873 | \$126,250 |
| Installation | \$49,820 | \$56,317 | \$59,722 | \$66,219 | \$82,310 | \$189,374 |
| Hardware | \$17,712 | \$20,665 | \$22,141 | \$25,093 | \$29,522 | \$72,610 |
| Foundation | \$42,224 | \$51,114 | \$63,706 | \$71,855 | \$104,449 | \$128,154 |
| Angled deadend structure |  |  |  |  |  |  |
| Voltage class | 69 kV line | 115kV line | 138kV line | 161 kV line | 230 kV line | 345 kV line |
| Steel weight (lbs.) | 21,200 | 23,900 | 25,300 | 28,100 | 35,000 | 79,200 |
| Foundation size (Cu. Yd) | 43.0 | 50.5 | 61.5 | 68.5 | 99.0 | 125.0 |
| Material | \$43,734 | \$49,303 | \$52,191 | \$57,968 | \$72,202 | \$163,382 |
| Installation | \$65,600 | \$73,956 | \$78,288 | \$86,952 | \$108,302 | \$245,073 |
| Hardware | \$17,712 | \$20,665 | \$22,141 | \$25,093 | \$29,522 | \$72,610 |
| Foundation | \$63,706 | \$74,818 | \$91,115 | \$101,453 | \$146,672 | \$185,192 |

## Table 2.2.5 A/C Transmission - Wood Pole - Single circuit

| Tangent structure |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | 69kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345kV line | 500kV line |
| Material | \$4,863 | \$9,102 | \$9,216 | \$12,268 | \$13,286 | N/A | N/A |
| Installation | \$13,569 | \$14,135 | \$15,830 | \$22,615 | \$33,922 | N/A | N/A |
| Hardware | \$4,749 | \$5,371 | \$5,880 | \$6,502 | \$8,481 | N/A | N/A |
| Running angle structure |  |  |  |  |  |  |  |
| Voltage class | 69kV line | 115kV line | 138 kV line | 161kV line | 230kV line | 345kV line | 500kV line |
| Material | \$8,537 | \$15,944 | \$16,113 | \$21,484 | \$23,237 | N/A | N/A |
| Installation | \$23,745 | \$24,764 | \$27,704 | \$39,576 | \$59,364 | N/A | N/A |
| Hardware | \$8,311 | \$9,386 | \$10,290 | \$11,364 | \$14,869 | N/A | N/A |
| Angled deadend structure |  |  |  |  |  |  |  |
| Voltage class | 69kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345kV line | 500kV line |
| Material | \$9,724 | \$18,262 | \$18,432 | \$24,538 | \$26,573 | N/A | N/A |
| Installation | \$27,138 | \$28,268 | \$31,661 | \$45,229 | \$67,844 | N/A | N/A |
| Hardware | \$9,498 | \$10,743 | \$11,760 | \$13,004 | \$16,961 | N/A | N/A |

## Table 2.2.6 A/C Transmission - Wood Pole - Double circuit

| Tangent structure |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | 69kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345kV line | 500kV line |
| Material | \$8,029 | \$15,039 | N/A | N/A | N/A | N/A | N/A |
| Installation | \$22,389 | \$23,349 | N/A | N/A | N/A | N/A | N/A |
| Hardware | \$7,859 | \$8,876 | N/A | N/A | N/A | N/A | N/A |
| Running angle structure |  |  |  |  |  |  |  |
| Voltage class | 69kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345kV line | 500kV line |
| Material | \$14,077 | \$26,289 | N/A | N/A | N/A | N/A | N/A |
| Installation | \$39,180 | \$40,876 | N/A | N/A | N/A | N/A | N/A |
| Hardware | \$13,739 | \$15,492 | N/A | N/A | N/A | N/A | N/A |
| Angled deadend structure |  |  |  |  |  |  |  |
| Voltage class | 69kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345kV line | 500kV line |
| Material | \$16,056 | \$30,134 | N/A | N/A | N/A | N/A | N/A |
| Installation | \$44,777 | \$46,643 | N/A | N/A | N/A | N/A | N/A |
| Hardware | \$15,991 | \$17,753 | N/A | N/A | N/A | N/A | N/A |

## Table 2.2.7 HVDC Transmission - Steel Pole - Single circuit

| Tangent structure |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| Steel weight (lbs.) | 14,773 | 19,943 | 21,938 | 26,325 | 54,550 |
| Foundation size (Cu. Yd) | 17.0 | 23.0 | 26.0 | 31.0 | 63.0 |
| Material | \$36,582 | \$49,385 | \$54,324 | \$65,189 | \$134,797 |
| Installation | \$54,873 | \$74,078 | \$81,486 | \$97,784 | \$202,195 |
| Hardware | \$4,937 | \$6,288 | \$6,840 | \$7,171 | \$27,891 |
| Foundation | \$25,236 | \$34,069 | \$37,957 | \$45,549 | \$93,336 |
| Running angle structure |  |  |  |  |  |
| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| Steel weight (lbs.) | 25,126 | 33,920 | 37,313 | 44,775 | 156,450 |
| Foundation size <br> (Cu. Yd) | 23.0 | 31.0 | 34.0 | 41.0 | 90.0 |
| Material | \$62,220 | \$83,998 | \$92,397 | \$110,877 | \$386,599 |
| Installation | \$93,330 | \$125,996 | \$138,596 | \$166,315 | \$579,898 |
| Hardware | \$6,171 | \$7,860 | \$8,549 | \$8,963 | \$27,891 |
| Foundation | \$33,977 | \$45,868 | \$50,455 | \$60,547 | \$133,359 |
| Non-angled deadend structure |  |  |  |  |  |
| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| Steel weight (lbs.) | 28,072 | 37,898 | 41,688 | 50,025 | 162,409 |
| Foundation size (Cu. Yd) | 25.0 | 34.0 | 38.0 | 45.0 | 168.0 |
| Material | \$69,515 | \$93,847 | \$103,231 | \$123,878 | \$401,324 |
| Installation | \$104,274 | \$140,769 | \$154,847 | \$185,816 | \$601,985 |
| Hardware | \$9,735 | \$23,580 | \$25,648 | \$26,889 | \$111,562 |
| Foundation | \$37,406 | \$50,498 | \$55,547 | \$66,657 | \$248,896 |
| Angled deadend structure |  |  |  |  |  |
| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| Steel weight (lbs.) | 33,965 | 45,852 | 50,438 | 60,525 | 162,409 |
| Foundation size (Cu. Yd) | 30.0 | 41.0 | 45.0 | 54.0 | 168.0 |
| Material | \$84,107 | \$113,545 | \$124,899 | \$149,878 | \$401,324 |
| Installation | \$126,160 | \$170,316 | \$187,348 | \$224,818 | \$601,985 |
| Hardware | \$9,735 | \$23,580 | \$25,648 | \$26,889 | \$111,562 |
| Foundation | \$44,886 | \$60,597 | \$66,657 | \$79,989 | \$248,896 |

## Table 2.2.8 HVDC Transmission - Steel Tower - Single circuit

| Tangent structure |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| Steel weight (lbs.) | 10,227 | 15,341 | 16,875 | 20,250 | 36,036 |
| Foundation size <br> (Cu. Yd) | 13.0 | 19.0 | 21.0 | 25.0 | 43.0 |
| Material | \$21,047 | \$31,570 | \$34,727 | \$41,673 | \$127,290 |
| Installation | \$31,570 | \$47,356 | \$52,091 | \$62,510 | \$190,935 |
| Hardware | \$4,937 | \$6,288 | \$6,840 | \$7,171 | \$18,296 |
| Foundation | \$18,797 | \$28,194 | \$31,014 | \$37,217 | \$75,619 |
| Running angle structure |  |  |  |  |  |
| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| Steel weight (lbs.) | 16,751 | 22,614 | 24,875 | 29,850 | 93,870 |
| Foundation size (Cu. Yd) | 31.0 | 41.0 | 45.0 | 54.0 | 90.0 |
| Material | \$34,473 | \$46,538 | \$51,191 | \$61,429 | \$226,307 |
| Installation | \$51,708 | \$69,807 | \$76,786 | \$92,144 | \$339,454 |
| Hardware | \$6,171 | \$7,860 | \$8,549 | \$8,963 | \$19,373 |
| Foundation | \$45,199 | \$61,018 | \$67,119 | \$80,544 | \$159,915 |
| Non-angled deadend structure |  |  |  |  |  |
| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| Steel weight (lbs.) | 19,318 | 26,080 | 28,688 | 34,425 | 113,687 |
| Foundation size <br> (Cu. Yd) | 40.0 | 55.0 | 60.0 | 72.0 | 176.0 |
| Material | \$39,756 | \$53,670 | \$59,038 | \$70,845 | \$274,076 |
| Installation | \$59,633 | \$80,505 | \$88,556 | \$106,267 | \$411,113 |
| Hardware | \$9,735 | \$23,580 | \$25,648 | \$26,889 | \$95,141 |
| Foundation | \$59,850 | \$80,796 | \$88,876 | \$106,651 | \$310,233 |
| Angled deadend structure |  |  |  |  |  |
| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| Steel weight (lbs.) | 25,000 | 33,750 | 37,125 | 44,550 | 113,687 |
| Foundation size (Cu. Yd) | 74.0 | 100.0 | 110.0 | 132.0 | 176.0 |
| Material | \$51,449 | \$69,456 | \$76,401 | \$91,681 | \$274,076 |
| Installation | \$77,172 | \$104,183 | \$114,601 | \$137,522 | \$411,113 |
| Hardware | \$9,735 | \$23,580 | \$25,648 | \$26,889 | \$95,141 |
| Foundation | \$109,723 | \$148,126 | \$162,939 | \$195,527 | \$310,233 |

Project specific environmental circumstances of an individual project may lead to additional installation costs. Where a new transmission line traverses a forested area, wetland area, or mountainous terrain, the following additional costs are considered.

## Table 2.2.9 Additional structure installation costs

| Voltage class | $69 \mathrm{kV}-765 \mathrm{kV}$ line |
| ---: | :---: |
| Forested clearing cost (per acre) | $\$ 5,710$ |
| Wetland (per acre) | Matting \& construction difficulties: $\$ 66,643$ |
|  | Wetland mitigation credits: $\$ 53,459$ |
| Mountainous terrain (per acre) | $\$ 7,423$ |

Removal cost of existing transmission line and/or substation involves complete removal or retirement of existing transmission line or substation equipment. The removal costs include all plant, tools, equipment, machinery, skill, supervision and labor.

## Table 2.2.10 Transmission line removal/retirement \$/mile

| Voltage class | 69 kV line | 115 kV line | 138 kV line | 161 kV line | 230 kV line | 345 kV line | 500 kV line |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wood pole - <br> single circuit | $\$ 209,186$ | $\$ 243,439$ | $\$ 254,415$ | $\$ 268,550$ | $\$ 299,645$ | $\mathrm{~N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ |
| Wood pole - <br> double circuit | 339,221 | $\$ 390,104$ | $\mathrm{~N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ |

## Conductor

Costs estimated to procure and install conductor required for transmission line projects typically charged to FERC plant account 356. Conductor costs are based upon the conductor selected and the length of the transmission line. MISO assumes conductor length adder of $4 \%$ for sag and wastage per conductor. Conductor type and size are based on economic planning model considerations for the required ampacity and based on Business Practice Manual 029 to assign appropriate conductor type. See initial assumptions to see MISO's indicative conductor selection and ratings for different voltage classes.

Potential projects may involve re-conductoring or upgrading existing conductor size to allow more power transfer by increasing ampacity of the existing circuit. In providing cost estimates for re-conductoring project scope, MISO assumes that the existing structures including foundations, insulators and hardware are adequate to support the new conductor size and configuration and discusses this assumption with the Transmission Owner. The costs of new conductor and installation are considered for the estimate of the retrofit projects.

MISO primarily considers ACSR (Aluminum Conductor Steel Reinforce), ACSS (Aluminum Conductor Steel Supported) conductor types in its cost estimates. However, at stakeholder's request MISO added costs for representative Aluminum Conductor Composite Core (ACCC), conductor sizes in this guide for any project with specific needs. Where required, MISO would consider the cost for T 2 to be equivalent to two conductors of that size to the same cost when creating its cost estimate.

Conductors have the following unit costs as shown in the tables below:

- Material cost is the cost of manufacturing and deliver conductor to site (laydown yard).
- Installation cost is the cost to haul conductor reels, install, and sag and clip conductor on transmission structures.
- Accessories are the sleeves, spacers, and dampers material and installation cost required for a transmission line.


## Table 2.2.11 Conductor costs (<1000 kcmil)

| Conductor | Material cost per 1000 feet |  | Installation cost per 1000 feet | Accessories cost per 1000 feet |
| :---: | :---: | :---: | :---: | :---: |
|  | ACSR | ACSS |  |  |
| 266.8 kcmil "Waxwing" | \$609 | \$594 | \$828 | \$263 |
| 266.8 kcmil "Partridge" | \$735 | \$760 | \$1,027 | \$263 |
| 336.4 kcmil "Merlin" | \$650 | \$725 | \$942 | \$263 |
| 336.4 kcmil "Linnet" | \$749 | \$867 | \$1,106 | \$263 |
| 336.4 kcmil "Oriole" | \$934 | \$962 | \$1,302 | \$263 |
| 397.5 kcmil "Chickadee" | \$802 | \$844 | \$1,130 | \$263 |
| 397.5 kcmil "lbis" | \$963 | \$1,028 | \$1,366 | \$263 |
| 397.5 kcmil "Lark" | \$951 | \$1,141 | \$1,430 | \$263 |
| 477 kcmil "Pelican" | \$940 | \$1,033 | \$1,353 | \$263 |
| 477 kcmil "Flicker" | \$902 | \$1,081 | \$1,357 | \$263 |
| 477 kcmil "Hawk" | \$1,123 | \$1,200 | \$1,594 | \$263 |
| 477 kcmil "Hen" | \$1,251 | \$1,283 | \$1,741 | \$263 |
| 556.5 kcmil "Osprey" | \$1,128 | \$1,141 | \$1,559 | \$263 |
| 556.5 kcmil "Parakeet" | \$1,324 | \$1,318 | \$1,818 | \$263 |
| 556.5 kcmil "Dove" | \$1,252 | \$1,378 | \$1,804 | \$263 |
| 636 kcmil "Kingbird" | \$1,090 | \$1,283 | \$1,624 | \$263 |
| 636 kcmil "Rook" | \$1,236 | \$1,485 | \$1,861 | \$263 |
| 636 kcmil "Grosbeak" | \$1,416 | \$1,545 | \$2,031 | \$263 |
| 666.6 kcmil "Flamingo" | \$1,460 | \$1,711 | \$2,146 | \$263 |
| 795 kcmil "Coot" | \$1,445 | \$1,603 | \$2,090 | \$263 |
| 795 kcmil "Tern" | \$1,366 | \$1,627 | \$2,048 | \$263 |
| 795 kcmil "Cuckoo" | \$1,521 | \$1,830 | \$2,291 | \$263 |
| 795 kcmil "Condor" | \$1,580 | \$1,830 | \$2,334 | \$263 |
| 795 kcmil "Drake" | \$1,711 | \$1,721 | \$2,359 | \$263 |
| 900 kcmil "Canary" | \$1,937 | \$1,888 | \$2,632 | \$263 |
| 954 kcmil "Rail" | \$1,805 | \$1,836 | \$2,502 | \$263 |
| 954 kcmil "Cardinal" | \$1,977 | \$2,036 | \$2,757 | \$263 |

### 2.2.12 Conductor costs (>1000 kcmil)

| Conductor | Material cost per 1000 feet |  | Installation cost per 1000 feet | Accessories cost per 1000 feet |
| :---: | :---: | :---: | :---: | :---: |
|  | ACSR | ACSS |  |  |
| 1033.5 kcmil "Ortolan" | \$1,979 | \$2,447 | \$3,026 | \$263 |
| 1033.5 kcmil "Curlew" | \$2,182 | \$2,067 | \$2,926 | \$263 |
| 1113 kcmil "Bluejay" | \$2,103 | \$2,626 | \$3,231 | \$263 |
| 1192.5 kcmil "Bunting" | \$1,961 | \$2,198 | \$2,850 | \$263 |
| 1272 kcmil "Bittern" | \$2,272 | \$2,352 | \$3,176 | \$263 |
| 1272 kcmil "Pheasant" | \$2,483 | \$2,719 | \$3,567 | \$263 |
| 1351.5 kcmil "Dipper" | \$2,457 | \$2,982 | \$3,719 | \$263 |
| 1351.5 kcmil "Martin" | \$3,045 | \$2,649 | \$3,929 | \$263 |
| 1431 kcmil "Bobolink" | \$2,785 | \$3,100 | \$4,034 | \$263 |
| 1590 kcmil "Lapwing" | \$2,872 | \$3,042 | \$4,059 | \$263 |
| 1590 kcmil "Falcon" | \$3,390 | \$3,393 | \$4,664 | \$263 |
| 1780 kcmil "Chukar" | \$3,694 | \$3,956 | \$5,250 | \$263 |
| 2156 kcmil "Bluebird" | \$4,351 | \$4,835 | \$6,298 | \$263 |
| 2167 kcmil "Kiwi" | \$3,941 | \$5,762 | \$6,602 | \$263 |
| 2312 kcmil "Thrasher" | \$4,514 | \$5,167 | \$6,632 | \$263 |
| 2515 kcmil "Joree" | \$4,798 | \$5,417 | \$7,000 | \$263 |

## Aluminum Conductor Composite Core (ACCC)

ACCC is similar in construction as ACSS and ACSR conductor except the steel core is replaced by composite core - hybrid carbon and glass fibers and the conductor is in a trapezoidal configuration. This trapezoidal configuration allows for up to one third less losses and up to two times the power flow versus the eqivalant size of ACSR and ACSS conductors. MISO would emphasis that the ACCC conductor information is intended in this guide for retrofitting/reconductoring projects. The structure and foundation data provided in previous tables are based on conventional ACSR and ACSS conductors. The ACCC condutors used in new projects have potential for a fewer structures and foundations compare to conventional conductors, such optimization is out of scope for this cost guide. Costs for representative ACCC conductor sizes commonly used in projects are provided below.

## Table 2.2.13 ACCC Conductor costs

| ACCC conductor size | Equivlant ACSR/ACSS <br> conductor size | Material cost <br> per 1000 feet | Installation <br> cost per 1000 <br> feet | Accessories <br> cost per 1000 <br> feet |
| ---: | :---: | :---: | :---: | :---: |
| 1026 kcmil | 795 kcmil "Drake" | $\$ 6,059$ | $\$ 2,483$ | $\$ 263$ |
| 1222 kcmil | 954 kcmil "Cardinal" | $\$ 6,389$ | $\$ 3,197$ | $\$ 263$ |
| 1582 kcmil | 1272 kcmil "Bittern" | $\$ 7,061$ | $\$ 3,297$ | $\$ 263$ |
| 2741 kcmil | 2156 kcmil "Bluebird" | $\$ 11,099$ | $\$ 7,575$ | $\$ 263$ |

## OPGW and shieldwire

Costs estimated to procure and install Optical Groundwire (OPGW) and/or shieldwire required for transmission line projects typically charged to FERC plant account 356. Unless otherwise specified by the solution idea, MISO assumes one OPGW and one steel shieldwire per transmission circuit. MISO assumes conductor and shieldwire length adder of $4 \%$ for sag and wastage per conductor, OPGW, and shieldwire. Optical Groundwire (OPGW) and shieldwire are installed at the top of structures to protect the conductors below from direct lightning strikes and includes fiber optic cable. OPGW and shield wires have the following unit costs as shown in the tables below:

- Material cost is the cost of manufacturing and delivery of the OPGW or shieldwire to site (laydown yard).
- Installation cost is the cost to haul the OPGW and shieldwire reels, install, and sag and clip conductor on transmission structures.

| Table 2.14 OPGW and shieldwire costs |  |  |
| ---: | :---: | :---: |
| Wire | Material cost per 1000 feet | Installation cost per 1000 feet |
| Shieldwire | $\$ 593$ | $\$ 891$ |
| OPGW | $\$ 2,685$ | $\$ 4,028$ |

### 2.3 A/C Substations

Substation cost estimates are sub-divided in to the cost categories as shown in the table below. MISO provides cost estimates for both substation upgrades and for new substation sites. For planning cost estimates, MISO assumes size (acreage) requirements and equipment quantities based on general assumptions for the project area - see section for initial assumptions in this guide. Both the size of the substation facilities and the equipment quantities are dependent upon the voltage class of the facility and the number of new line/transformer positions being considered. For scoping cost estimates that are upgrades of existing substations, MISO discusses its scope of work assumptions with the existing substation owner. If the substation is a new facility, MISO follows requirements in its Business Practice Manual 029 (BPM-029).

## Site work

Costs estimated to prepare the land for a substation including clearing, grading, grounding and physical security. Depending on the terrain encountered for a specific substation site (e.g., forested area, or wetlands), additional costs may be required. Where specialized site components are required (e.g. specialized gates, access protection, import/export of soil) MISO will add those costs to its cost estimate and will call them out separately.

| Table 2.4.1 | work unit costs |
| :---: | :---: |
| Voltage class | 69kV - 765kV |
| Level ground with light vegetation (per acre) | \$384,323 |
| Forested land (per acre) | +\$5,710 |
| Wetland (per acre) | $+\$ 66,643$ for matting and construction difficulties |
|  | +\$53,459 for wetland mitigation credits |

## Access Road

Access roads are estimated based on the length of the road. Access roads allow entry to the substation site from the nearest drivable public road. For the access road into a substation, MISO uses Google Earth to estimate the length of the access road required. Access road costs are estimated to be \$593,636 per mile.

## Electrical Equipment Material, Electrical Equipment Installation, Steel Structure Material, Steel Structure Installation, and Substation Foundation

Costs estimated to procure and install material and steel structures. Costs are divided into the following subcategories:

- Material cost is the cost to procure and deliver electrical equipment materials to site (laydown yard).
- Installation cost is the cost to assemble and place on foundation or steel structure.
- As applicable, Jumpers, conduit, wiring, and grounding cost includes material and installation of the electrical jumpers and fittings to connect to adjacent electrical equipment, above grade conduit, landing control cables on terminal block in equipment, and the above grade ground grid connection.
- Steel structure material cost includes the cost of design, manufacture (material, labor, equipment) and delivery of the structure to site (laydown yard) and is based on the estimated steel weight.
- Steel structure installation cost is the cost to place the steel stand on the foundation.
- Foundation cost includes material and installation of the foundations including the cost to procure and install anchor bolts and is based on the estimated foundation size.

Table 2.4.2 Circuit breaker unit costs

| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Foundation size <br> $($ Cu. Yd) | 3.6 | 4.5 | 5.3 | 6.7 | 8.0 | 8.8 | 19.8 | 39.6 |
| Material cost | $\$ 45,229$ | $\$ 56,537$ | $\$ 59,364$ | $\$ 62,190$ | $\$ 107,420$ | $\$ 355,617$ | $\$ 468,124$ | $\$ 1,365,000$ |
| Installation cost | $\$ 8,481$ | $\$ 9,046$ | $\$ 9,612$ | $\$ 10,177$ | $\$ 11,307$ | $\$ 16,961$ | $\$ 22,615$ | $\$ 68,250$ |
| Jumpers, conduit, <br> wiring, grounding | $\$ 9,046$ | $\$ 10,177$ | $\$ 11,307$ | $\$ 13,569$ | $\$ 16,961$ | $\$ 22,615$ | $\$ 28,268$ | $\$ 81,901$ |
| Foundation cost | $\$ 5,334$ | $\$ 6,667$ | $\$ 7,852$ | $\$ 9,926$ | $\$ 11,852$ | $\$ 13,037$ | $\$ 29,334$ | $\$ 58,668$ |

## Table 2.4.3 Disconnect switch (3-phase) unit costs

| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Foundation size <br> $($ Cu. Yd) | 3.4 | 4.2 | 5.2 | 6.5 | 7.8 | 8.0 | 18.0 | 27.0 |
| Steel stand weight <br> (pounds) | 1500 | 1750 | 2000 | 2500 | 3500 | 4000 | 5000 | 7500 |
| Material cost | $\$ 11,307$ | $\$ 14,135$ | $\$ 16,961$ | $\$ 19,788$ | $\$ 22,615$ | $\$ 39,576$ | $\$ 56,537$ | $\$ 169,610$ |
| Installation cost | $\$ 6,784$ | $\$ 7,915$ | $\$ 9,046$ | $\$ 10,177$ | $\$ 11,307$ | $\$ 16,961$ | $\$ 22,615$ | $\$ 68,250$ |
| Jumpers, and <br> grounding | $\$ 4,523$ | $\$ 5,089$ | $\$ 5,654$ | $\$ 6,784$ | $\$ 8,481$ | $\$ 11,307$ | $\$ 14,135$ | $\$ 40,950$ |
| Steel stand <br> material cost | $\$ 3,707$ | $\$ 4,324$ | $\$ 4,942$ | $\$ 6,178$ | $\$ 8,649$ | $\$ 9,884$ | $\$ 12,355$ | $\$ 18,533$ |
| Steel stand <br> installation cost | $\$ 4,263$ | $\$ 4,973$ | $\$ 5,683$ | $\$ 7,104$ | $\$ 9,946$ | $\$ 11,407$ | $\$ 14,209$ | $\$ 21,313$ |
| Foundation cost | $\$ 5,037$ | $\$ 6,223$ | $\$ 7,704$ | $\$ 9,631$ | $\$ 11,556$ | $\$ 11,852$ | $\$ 26,668$ | $\$ 40,002$ |

# Table 2.4.4 Bus support, bus, and fittings (3-phase) unit costs 

| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Foundation size <br> (Cu. Yd) | 3.1 | 3.9 | 4.8 | 6.0 | 7.2 | 9.6 | 14.4 | 21.6 |
| Steel stand weight <br> (pounds) | 1000 | 1250 | 1500 | 1750 | 2000 | 3000 | 4500 | 6750 |
| Material cost | $\$ 6,502$ | $\$ 8,141$ | $\$ 9,386$ | $\$ 9,866$ | $\$ 10,347$ | $\$ 12,241$ | $\$ 14,106$ | $\$ 21,160$ |
| Installation cost | $\$ 7,803$ | $\$ 9,770$ | $\$ 11,262$ | $\$ 11,839$ | $\$ 12,416$ | $\$ 14,689$ | $\$ 16,927$ | $\$ 25,390$ |
| Steel stand <br> material cost | $\$ 2,471$ | $\$ 3,089$ | $\$ 3,707$ | $\$ 4,324$ | $\$ 4,942$ | $\$ 7,413$ | $\$ 11,120$ | $\$ 16,680$ |
| Steel stand <br> installation cost | $\$ 2,842$ | $\$ 3,552$ | $\$ 4,263$ | $\$ 4,973$ | $\$ 5,683$ | $\$ 8,525$ | $\$ 12,788$ | $\$ 19,182$ |
| Foundation cost | $\$ 4,592$ | $\$ 5,778$ | $\$ 7,111$ | $\$ 8,889$ | $\$ 10,668$ | $\$ 14,223$ | $\$ 21,334$ | $\$ 32,001$ |

## Table 2.4.5 Voltage Transformer (set of 3) unit costs

| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Foundation size <br> (Cu. Yd) | 1.8 | 2.3 | 2.7 | 3.4 | 4.0 | 8.0 | 12.1 | 18.2 |
| Steel stand weight <br> (pounds) | 1250 | 1350 | 1425 | 1500 | 1750 | 2000 | 2500 | 3750 |
| Material cost | $\$ 22,615$ | $\$ 25,442$ | $\$ 28,268$ | $\$ 31,096$ | $\$ 39,576$ | $\$ 47,491$ | $\$ 90,459$ | 135,688 |
| Installation cost | $\$ 2,261$ | $\$ 2,544$ | $\$ 2,827$ | $\$ 3,110$ | $\$ 3,392$ | $\$ 4,523$ | $\$ 5,654$ | $\$ 8,481$ |
| Jumpers, conduit, <br> wiring, grounding | $\$ 6,784$ | $\$ 7,633$ | $\$ 8,481$ | $\$ 10,177$ | $\$ 12,720$ | $\$ 16,961$ | $\$ 21,198$ | $\$ 31,797$ |
| Steel stand <br> material cost | $\$ 3,089$ | $\$ 3,336$ | $\$ 3,521$ | $\$ 3,707$ | $\$ 4,324$ | $\$ 4,942$ | $\$ 6,178$ | $\$ 9,267$ |
| Steel stand <br> installation cost | $\$ 3,552$ | $\$ 3,837$ | $\$ 4,050$ | $\$ 4,263$ | $\$ 4,973$ | $\$ 5,683$ | $\$ 7,104$ | $\$ 10,656$ |
| Foundation cost | $\$ 2,666$ | $\$ 3,408$ | $\$ 4,000$ | $\$ 5,037$ | $\$ 5,926$ | $\$ 11,852$ | $\$ 17,926$ | $\$ 26,889$ |


| Table 2.4.6 Current Transformer (set of 3) unit costs |  |  |  |  |  |  |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| Foundation size <br> (Cu. Yd) | 1.8 | 2.3 | 2.7 | 3.4 | 4.0 | 8.0 | 12.1 | 18.2 |
| Steel stand weight <br> (pounds) | 1250 | 1350 | 1425 | 1500 | 1750 | 2000 | 2500 | 3750 |
| Material cost | $\$ 69,794$ | $\$ 87,236$ | 118,841 | 130,713 | $\$ 142,643$ | $\$ 237,709$ | $\$ 415,998$ | 623,997 |
| Installation cost | $\$ 2,261$ | $\$ 2,544$ | $\$ 2,827$ | $\$ 3,110$ | $\$ 3,392$ | $\$ 4,523$ | $\$ 5,654$ | $\$ 8,481$ |
| Jumpers, conduit, <br> wiring, grounding | $\$ 6,784$ | $\$ 7,633$ | $\$ 8,481$ | $\$ 10,177$ | $\$ 12,720$ | $\$ 16,961$ | $\$ 21,198$ | $\$ 31,797$ |
| Steel stand <br> material cost | $\$ 3,089$ | $\$ 3,336$ | $\$ 3,521$ | $\$ 3,707$ | $\$ 4,324$ | $\$ 4,942$ | $\$ 6,178$ | $\$ 9,267$ |
| Steel stand <br> installation cost | $\$ 3,552$ | $\$ 3,837$ | $\$ 4,050$ | $\$ 4,263$ | $\$ 4,973$ | $\$ 5,683$ | $\$ 7,104$ | $\$ 10,656$ |
| Foundation cost | $\$ 2,666$ | $\$ 3,408$ | $\$ 4,000$ | $\$ 5,037$ | $\$ 5,926$ | $\$ 11,852$ | $\$ 17,926$ | $\$ 26,889$ |

Deadend structure unit cost is the cost associated with one angled deadend structure. The unit cost utilized for a deadend structure installed in a substation is same unit cost is used for transmission line estimates.

Removal cost of existing substation equipment includes all plant, tools, equipment, machinery, skill, supervision and labor. For any substation equipment that is required to be removed, MISO will utilize its installation cost for that item and consider it equivalent as the cost of removal.

Power transformer unit cost is the cost associated with one power transformer. Power transformer cost varies based on the low side voltage winding and high side voltage winding. Unit cost includes all material, shipping, foundation, and installation costs with that transformer. For a scoping cost estimate, MISO will discuss power transformer pricing with vendors.

Table 2.4.7 Power transformer (\$/MVA)

| Voltage <br> class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{6 9 k V}$ | $\$ 5,339$ | $\$ 4,346$ | $\$ 4,810$ | $\$ 5,063$ | $\$ 5,615$ | $\$ 6,895$ | $\$ 8,891$ | $\$ 12,510$ |
| $\mathbf{1 1 5 k V}$ | $\$ 4,346$ | $\$ 5,913$ | $\$ 4,810$ | $\$ 5,063$ | $\$ 5,615$ | $\$ 6,553$ | $\$ 8,042$ | $\$ 10,292$ |
| $\mathbf{1 3 8 k V}$ | $\$ 4,810$ | $\$ 4,810$ | $\$ 6,553$ | $\$ 5,339$ | $\$ 5,615$ | $\$ 6,553$ | $\$ 8,042$ | $\$ 10,292$ |
| $\mathbf{1 6 1 k V}$ | $\$ 5,063$ | $\$ 5,063$ | $\$ 5,339$ | $\$ 7,259$ | $\$ 5,913$ | $\$ 6,895$ | $\$ 8,461$ | $\$ 10,292$ |
| $\mathbf{2 3 0 k V}$ | $\$ 5,615$ | $\$ 5,615$ | $\$ 5,615$ | $\$ 5,913$ | $\$ 8,042$ | $\$ 6,895$ | $\$ 8,461$ | $\$ 10,292$ |
| $\mathbf{3 4 5 k V}$ | $\$ 6,895$ | $\$ 6,553$ | $\$ 6,553$ | $\$ 6,895$ | $\$ 6,895$ | $\$ 9,796$ | $\$ 8,891$ | $\$ 10,800$ |
| $\mathbf{5 0 0 k V}$ | $\$ 8,891$ | $\$ 8,042$ | $\$ 8,042$ | $\$ 8,461$ | $\$ 8,461$ | $\$ 8,891$ | $\$ 13,128$ | $\$ 11,914$ |
| $\mathbf{7 6 5 k V}$ | $\$ 12,510$ | $\$ 10,292$ | $\$ 10,292$ | $\$ 10,292$ | $\$ 10,292$ | $\$ 10,800$ | $\$ 11,914$ | $\$ 17,595$ |

Grid supporting devices unit costs are the costs associated to procure and install devices to support the grid. Unit costs include all material, shipping, foundation, and installation costs. Additional substation upgrades to add a bus position for interconnection of grid supporting devices are not included in the costs shown in the table below and will be included in a cost estimate if needed. Certain grid supporting devices

| Voltage class | 69 kV | 115kV | 138kV | 161kV | 230kV | 345 kV | 500kV | 765kV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reactor (\$/MVAr) | \$15,349 | \$15,349 | \$15,349 | \$15,349 | \$15,349 | \$19,000 | \$23,625 | \$34,125 |
| Capacitor bank (\$/MVAr) | \$11,307 | \$11,307 | \$11,307 | \$11,307 | \$11,307 | \$11,307 | \$11,307 | \$11,307 |
| Static VAr <br> Compensator <br> (\$/MVAr) | \$108,748 | \$108,748 | \$108,748 | \$108,748 | \$108,748 | \$108,748 | \$108,748 | \$108,748 |
| STATCOM (\$/MVAr) | \$215,250 | \$215,250 | \$215,250 | \$215,250 | \$215,250 | \$215,250 | \$215,250 | \$215,250 |
| Synchronous condenser (\$/MVAr) | $\$ 161,400 / \mathrm{MVAr}+$$\$ 161,400 / \mathrm{MW}(\$ 161.4 / \mathrm{kw})$ (step-up to 69 kV ) |  |  |  |  |  |  |  |
| Energy storage (lithium ion) | Battery system: $\$ 224,000 / \mathrm{MWh}(\$ 224 / \mathrm{kwh})+$ Inverter: $\$ 68,000 / \mathrm{MW}$ ( $\$ 65 / \mathrm{kw}$ ) + <br> $\$ 161,400 / \mathrm{MW}$ ( $\$ 161.4 / \mathrm{kw}$ ) (step-up to 69 kV ) |  |  |  |  |  |  |  |

## Control Enclosure and communication system

Cost estimated for one control enclosure of approximately 500 square feet. Material and installation cost are the cost to procure and deliver one control enclosure to site (laydown yard), offload and placement of the control enclosure on the foundation and wiring of the AC/DC systems to field equipment. Control enclosure includes AC panels, DC panels, cable tray, and all other typical components. Relay panels are considered separately. Battery and battery charger costs is the material and installation cost for the batteries in the control enclosure and their associated battery charger. Communication equipment costs are the cost to account for communication equipment placed inside the substation (e.g. fiber patch panel, remote terminal unit, human machine interface). Station service power is the cost to provide station service power to the control enclosure. Foundation size is the amount of cubic yards of concrete required for the foundation. Foundation cost is the combination of the material and installation cost for the foundation and is based on the estimated foundation size.

Table 2.4.9 Control enclosure unit costs

| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Foundation size <br> (Cu. Yd) | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| Material and <br> installation cost | 339,221 | $\$ 339,221$ | $\$ 339,221$ | $\$ 339,221$ | 339,221 | $\$ 339,221$ | $\$ 339,221$ | $\$ 339,221$ |
| Battery and <br> battery charger | 113,074 | 113,074 | $\$ 113,074$ | $\$ 113,074$ | 113,074 | 113,074 | $\$ 113,074$ | $\$ 113,074$ |
| Communication <br> equipment | 113,074 | $\$ 113,074$ | $\$ 113,074$ | $\$ 113,074$ | $\$ 113,074$ | $\$ 169,610$ | $\$ 169,610$ | $\$ 169,610$ |
| Station service <br> power | 124,381 | 124,381 | $\$ 124,381$ | 124,381 | 124,381 | 146,996 | $\$ 146,996$ | $\$ 146,996$ |
| Foundation cost | $\$ 26,668$ | $\$ 26,668$ | $\$ 26,668$ | $\$ 26,668$ | $\$ 26,668$ | $\$ 26,668$ | $\$ 26,668$ | $\$ 26,668$ |

## Relay Panels

Costs estimated for one relay panel per voltage class. Material cost is the cost to procure and deliver one relay panel to site (laydown yard). Procurement of the relay panel includes all the relays and devices in the panel, and all the internal wiring for the devices in each individual relay panel. Installation cost includes: placement of relay panel in control enclosure; wiring from field equipment; inter-panel wiring to other relay panels inside control enclosure.

## Table 2.4.10 Relay panel unit costs

| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Material cost | $\$ 21,202$ | $\$ 26,431$ | $\$ 33,074$ | $\$ 37,314$ | $\$ 41,272$ | $\$ 55,124$ | $\$ 68,975$ | $\$ 86,218$ |
| Installation cost | $\$ 42,403$ | $\$ 52,862$ | $\$ 66,149$ | $\$ 74,629$ | $\$ 82,544$ | 110,247 | 137,950 | $\$ 172,438$ |

Control Cable, Conduit, and Cable Trench
Control cable unit cost is the cost associated with 1000 feet of control cable. Material cost is the cost to procure and deliver 1000 feet of control cable to site (laydown yard). Installation cost includes placing and pulling control cable in conduit and/or cable trench and bringing the control cable to its end point where it will be landed. Final wiring of landing on terminal blocks is included in other unit costs.

| Table 2.4.11 Control cable unit costs |  |  |  |  |  |  |  |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |  |
| Material cost per <br> 1000 feet | $\$ 3,392$ | $\$ 3,392$ | $\$ 3,392$ | $\$ 3,392$ | $\$ 3,392$ | $\$ 4,523$ | $\$ 4,523$ | $\$ 4,523$ |  |
| Installation cost <br> per 1000 feet | $\$ 5,654$ | $\$ 5,654$ | $\$ 5,654$ | $\$ 5,654$ | $\$ 5,654$ | $\$ 5,654$ | $\$ 5,654$ | $\$ 5,654$ |  |

Conduit unit cost is the cost associated with 1000 feet of conduit. Material cost is the cost to procure and deliver 1000 feet of conduit to site (laydown yard). Included in the material cost is the conduit along with applicable fittings and connectors. Installation cost includes excavation, placement of conduit, and utilizing all applicable fittings and connectors.

## Table 2.4.12 Conduit unit costs

| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Material cost per <br> 1000 feet | $\$ 3,392$ | $\$ 3,392$ | $\$ 3,392$ | $\$ 3,392$ | $\$ 3,392$ | $\$ 3,392$ | $\$ 3,392$ | $\$ 3,392$ |
| Installation cost <br> per 1000 feet | $\$ 45,229$ | $\$ 45,229$ | $\$ 45,229$ | $\$ 45,229$ | $\$ 45,229$ | $\$ 45,229$ | $\$ 45,229$ | $\$ 45,229$ |

Cable trench unit cost is the cost associated with 1 foot of cable trench inclusive of lid/cover. Material cost is the cost to procure and deliver 1 foot of cable trench to site (laydown yard). Installation cost includes excavation, and placement of cable trench. Placement of control cables in cable trench is included in the control cable installation cost.

| Table 2.4.13 Cable trench unit costs |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |  |  |  |  |  |
| Material cost per <br> 1 foot | $\$ 56$ | $\$ 56$ | $\$ 56$ | $\$ 56$ | $\$ 56$ | $\$ 56$ | $\$ 56$ | $\$ 56$ |  |  |  |  |  |
| Installation cost <br> per 1 foot | $\$ 226$ | $\$ 226$ | $\$ 226$ | $\$ 226$ | $\$ 226$ | $\$ 226$ | $\$ 226$ | $\$ 226$ |  |  |  |  |  |

### 2.4 HVDC Converter Stations

Converter stations are required at each endpoint of an HVDC transmission line in order to interconnection with the A/C transmission system. MISO includes in its guide two converter station design types - linecommutated thyristor valve technology (LCC) and Voltage-Source transistor technology (VSC).

In addition to only a converter station, there would also be A/C substation equipment needed to interconnect. Typical interconnection voltages would be 230 kV A/C for a $\pm 250 \mathrm{kV}$ HVDC transmission line, 345 kV A/C for a $\pm 400 \mathrm{kV}$ HVDC transmission line, 500 kV A/C for a $\pm 500 \mathrm{kV}$ and $\pm 600 \mathrm{kV}$ HVDC, and 765 kV A/C for a $\pm 640 \mathrm{kV}$ HVDC transmission line. For the purposes of creating a cost estimate, in the tables below, MISO assumes its exploratory costs for a new 4-position, breaker-and-a-half substation for the $\mathrm{A} / \mathrm{C}$ substation costs connected with a new converter station.

At each converter station, MISO assumes a ground electrode is installed except the interchangeable transmission line. Historically, HVDC electrodes have been installed to provide a low resistance path during both monopolar and bipolar operations, using earth as a conductive medium. Although this option of return path in HVDC is less expensive, there are environmental and regulatory implications. For the purpose of the cost estimate, MISO assumes that those concerns are permitted by respective authorities and addressed by the developer.

The ground electrode is a structure with a conductor, or a group of conductors embedded in the soil directly or surrounded by conductive medium providing an electric path to ground. The electrodes are generally located relatively close to the converter stations. MISO's unit cost of a ground electrode includes engineering study, permitting, material, labor and land. In addition to the ground electrode, there is also the ground electrode line which is an electrical connection between conversions and ground electrode. The cost of overhead ground electrode line includes supporting structures, foundations, conductor material and labor. MISO assumes 20 miles of ground electrode line at each of the HVDC transmission line.

Line Commutated Converter (LCC) Stations are composed of thyristor valves and are located indoors to provide safe, clean and controlled operating environment. The cost of bipolar converter station valve hall includes land and land acquisition, building, DC switching station equipment including DC filters, converter transformer, insulation, control devices and services. LCC stations require A/C filters which are included in the converter station costs. Reactive power compensation is assumed to be a Static Var Compensator, which the costs are shown in section 3.2.

# Table 2.5.1 Converter Station Line Commutated Converter (LCC) - one end 

| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| ---: | :---: | :---: | :---: | :---: | :---: |
| Power Transfer | 500 MW | 1500 MW | 2000 MW | 2400 MW | 3000 MW |
| Assumed Reactive Power | 167 MVAR | 500 MVAR | 667 MVAR | 800 MVAR | 1000 MVAR |
| Need |  |  |  |  |  |
| Ground electrode line length | 20 miles | 20 miles | 20 miles | 20 miles | 20 miles |
| Valve hall | $\$ 33.1 \mathrm{M}$ | $\$ 121.3 \mathrm{M}$ | $\$ 165.5 \mathrm{M}$ | $\$ 204.1 \mathrm{M}$ | $\$ 255.1 \mathrm{M}$ |
| A/C filters | $\$ 3.3 \mathrm{M}$ | $\$ 12.1 \mathrm{M}$ | $\$ 16.5 \mathrm{M}$ | $\$ 20.4 \mathrm{M}$ | $\$ 25.5 \mathrm{M}$ |
| Reactive power | $\$ 18.2 \mathrm{M}$ | $\$ 54.4 \mathrm{M}$ | $\$ 72.6 \mathrm{M}$ | $\$ 87.0 \mathrm{M}$ | $\$ 108.7 \mathrm{M}$ |
| A/C Substation | $\$ 11.8 \mathrm{M}$ | $\$ 17.3 \mathrm{M}$ | $\$ 25.2 \mathrm{M}$ | $\$ 25.2 \mathrm{M}$ | $\$ 33.6 \mathrm{M}$ |
| Ground electrode | $\$ 3.0 \mathrm{M}$ | $\$ 4.0 \mathrm{M}$ | $\$ 4.1 \mathrm{M}$ | $\$ 4.3 \mathrm{M}$ | $\$ 4.5 \mathrm{M}$ |
| Ground electrode line | $\$ 4.4 \mathrm{M}$ | $\$ 11.0 \mathrm{M}$ | $\$ 13.2 \mathrm{M}$ | $\$ 16.5 \mathrm{M}$ | $\$ 17.9 \mathrm{M}$ |

Voltage Source Converter (VSC) Stations are composed of IGBT valves and are located indoors to provide safe, clean and controlled operating environment. The cost of bipolar converter station valve hall includes land and land acquisition, building, DC switching station equipment including DC filters, converter transformer, insulation, control devices and services. It is assumed that VSC converter stations do not require any additional reactive power support and they can inherently provide power with a 0.95 leading to a 0.95 lagging power factor.

| Table 2.5.2 Converter Station |  |  |  |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: |
| Voltage Source Converter | CVSC) - one end |  |  |  |  |
| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| Power Transfer | 500 MW | 1500 MW | 2000 MW | 2400 MW | 3000 MW |
| Ground electrode line length | 20 miles | 20 miles | 20 miles | 20 miles | 20 miles |
| Valve hall | $\$ 79.4 \mathrm{M}$ | $\$ 253.7 \mathrm{M}$ | $\$ 342.0 \mathrm{M}$ | $\$ 419.2 \mathrm{M}$ | $\$ 510.2 \mathrm{M}$ |
| A/C Substation | $\$ 11.8 \mathrm{M}$ | $\$ 17.3 \mathrm{M}$ | $\$ 25.2 \mathrm{M}$ | $\$ 25.2 \mathrm{M}$ | $\$ 33.6 \mathrm{M}$ |
| Ground electrode | $\$ 3.0 \mathrm{M}$ | $\$ 4.0 \mathrm{M}$ | $\$ 4.1 \mathrm{M}$ | $\$ 4.3 \mathrm{M}$ | $\$ 4.5 \mathrm{M}$ |
| Ground electrode line | $\$ 4.4 \mathrm{M}$ | $\$ 11.0 \mathrm{M}$ | $\$ 13.2 \mathrm{M}$ | $\$ 16.5 \mathrm{M}$ | $\$ 17.9 \mathrm{M}$ |

## 3. Initial assumptions

To create a cost estimate, MISO must make initial assumptions about the scopes of work for potential projects. This section lists out all the initial assumptions MISO makes. As more information becomes known, scope of work assumptions is refined. The assumptions are not an indication of how a potential project should be built, but merely an instrument to provide a cost estimate.

### 3.1 A/C and HVDC Transmission Lines

## Line length

The line length for a transmission line is a consideration for determining its cost estimate for a potential project. For exploratory and planning cost estimates, the line length is determined by the straight-line distance between the two substations plus a $30 \%$-line length adder. This $30 \%$-line length adder is intended to account for routing constraints that will be determined upon further development of the potential transmission line project. For scoping cost estimates, the line length is determined by a MISOcreated proxy route based upon a desktop study. For new potential projects, MISO considers new right-of-way. For retrofit/re-conductor projects, MISO assumes that the existing right-of-way is adequate. MISO does not share its assumed proxy route information with stakeholders, as the route could be perceived as a MISO endorsed/preferred route. MISO's proxy route is merely an instrument to support the MISO's transmission line cost estimate. MISO utilizes Google Earth to determine route length, land types, and terrain types encountered.

## Right-of-Way width

The right-of-way widths that MISO considers are intended to be indicative of right-of-way widths for transmission lines in each voltage class. Different project conditions in different locations may have a wider or narrower right-of-way width than the indicative value MISO assumes. MISO's assumptions for right-of-way width are in the tables below:

## Table 3.1.1 Right-of-Way width

| A/C Transmission (single and double circuit) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage class | $\begin{gathered} \text { 69kV } \\ \text { line } \end{gathered}$ | $\begin{gathered} \text { 115kV } \\ \text { line } \end{gathered}$ | $\begin{gathered} 138 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} \text { 161kV } \\ \text { line } \end{gathered}$ | $\begin{gathered} 230 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} 345 \mathrm{kV} \\ \text { line } \end{gathered}$ | $\begin{gathered} \text { 500kV } \\ \text { line } \end{gathered}$ | $\begin{gathered} 765 \mathrm{kV} \\ \text { line } \end{gathered}$ |
| Feet | 80 | 90 | 95 | 100 | 125 | 175 | 200 | 225 |
| HVDC transmission (single circuit) |  |  |  |  |  |  |  |  |
| Voltage class | $\pm 250 \mathrm{kV}$ line |  | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line |  | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |  |
| Feet | 130 |  | 180 | 200 |  | 215 | 225 |  |

## Structures per mile

In order to create a cost estimate for transmission lines, MISO makes indicative assumptions about the quantity of structures per mile required. The indicative assumptions are not connected to any specific project. For A/C Transmission, MISO assumes steel pole structure type for $69 \mathrm{kV}-765 \mathrm{kV}$. For HVDC, MISO assumes steel pole structure type for 250 kV , and steel tower structure for $400 \mathrm{kV}-600 \mathrm{kV}$. The quantity of structures per mile that MISO assumes for its cost estimates are shown in the tables below:

# Table 3.1.2 Structures per mile - A/C transmission Steel tower \& steel pole (single circuit / double circuit) 

$\left.\begin{array}{|r|c|c|c|c|c|c|c|c|}\hline \text { Voltage class } & \begin{array}{c}69 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}115 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}138 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}161 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}230 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}345 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}500 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}765 \mathrm{kV} \\ \text { line }\end{array} \\ \hline \text { Tangent structures } & 9 / 9.5 & 8.5 / 9 & 8 / 8.5 & 7 / 7.5 & 5 / 7 & 4.5 / 6 & 3.0 / \mathrm{N} / \mathrm{A} & 3.5 / \mathrm{N} / \mathrm{A} \\ \hline \text { Running angle structures } & 1 / 1 & 1 / 1 & 1 / 1 & 1 / 1 & 1 / 1 & 1 / 1 & 1 / \mathrm{N} / \mathrm{A} & 0.25 / \\ \mathrm{N} / \mathrm{A}\end{array}\right]$

## Table 3.1.3 Structures per mile - A/C transmission Wood pole (single circuit / double circuit)

$\left.\begin{array}{|r|c|c|c|c|c|c|c|c|}\hline \text { Voltage class } & \begin{array}{c}69 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}115 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}138 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}161 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}230 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}345 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}500 \mathrm{kV} \\ \text { line }\end{array} & \begin{array}{c}765 \mathrm{kV} \\ \text { line }\end{array} \\ \hline \text { Tangent structures } & 15.5 / & 13.5 / & 13.5 / & 10.5 / \\ 18.5 \\ 16.5 & \mathrm{~N} / \mathrm{A}\end{array}\right)$

## Table 3.1.4 Structures per mile - HVDC transmission Steel tower \& steel pole (single circuit)

| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| ---: | :---: | :---: | :---: | :---: | :---: |
| Tangent structures | 4.5 | 4.0 | 3.5 | 3.0 | 3.5 |
| Running angle structures | 0.5 | 0.5 | 0.5 | 0.5 | 0.25 |
| Non-angled structures | 0.25 | 0.25 | 0.25 | 0.25 | 0.125 |
| Angled structures | 0.25 | 0.25 | 0.25 | 0.25 | 0.125 |

## Conductor selection

Conductor selection for MISO's exploratory cost estimates are shown in the table below. The conductor selected is intended to be typical for a circuit in the voltage class. Specific solution ideas may necessitate different conductors than as shown below.

## Table 3.1.6 Conductor selection per circuit - HVDC Transmission

| Voltage class | $\pm 250 \mathrm{kV}$ line | $\pm 400 \mathrm{kV}$ line | $\pm 500 \mathrm{kV}$ line | $\pm 600 \mathrm{kV}$ line | $\pm 640 \mathrm{kV}$ line |
| ---: | :---: | :---: | :---: | :---: | :---: |
| Conductor size | 1590 kcmil | 1590 kcmil | 1590 kcmil | 1590 kcmil | 795 kcmil |
| Conductor type | ACSR | ACSR | ACSR | ACSR | ACSR |
| Conductor <br> quantity per pole | 1 | 2 | 2 | 2 | 6 |
| Power transfer | 500 MW | 1500 MW | 2000 MW | 2400 MW | 6000 MW |

## Land and Terrain type

A significant cost driver for transmission line projects is the land and terrain types encountered. MISO recognizes that different States present different environments to be accounted for in its cost estimates. In order to provide exploratory cost estimates on a State-by-State basis, MISO makes different assumptions on the land and terrain encountered unique to each State in the MISO footprint. The indicative assumptions in the tables below are not tied to any specific project and are intended for the sole purpose of providing MISO's exploratory cost estimate.

| State | Land type <br> (pasture, crop, and suburban/urban land sum to $100 \%$ per State) |  |  | Terrain type <br> (level ground, forested, and wetland terrain sum to $100 \%$ per State) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pasture land | Crop land | Suburban/ Urban | Level ground | Forested | Wetland |
| Arkansas | 25\% | 65\% | 10\% | 40\% | 55\% | 5\% |
| Illinois | 25\% | 65\% | 10\% | 55\% | 40\% | 5\% |
| Indiana | 25\% | 65\% | 10\% | 80\% | 15\% | 5\% |
| lowa | 10\% | 80\% | 10\% | 80\% | 15\% | 5\% |
| Kentucky | 25\% | 65\% | 10\% | 65\% | 25\% | 10\% |
| Louisiana | 25\% | 65\% | 10\% | 55\% | 25\% | 20\% |
| Michigan | 25\% | 65\% | 10\% | 50\% | 40\% | 10\% |
| Minnesota | 10\% | 80\% | 10\% | 70\% | 25\% | 5\% |
| Mississippi | 25\% | 65\% | 10\% | 55\% | 25\% | 20\% |
| Missouri | 25\% | 65\% | 10\% | 40\% | 55\% | 5\% |
| Montana | 70\% | 20\% | 10\% | 85\% | 10\% | 5\% |
| North Dakota | 70\% | 20\% | 10\% | 90\% | 5\% | 5\% |
| South Dakota | 50\% | 40\% | 10\% | 90\% | 5\% | 5\% |
| Texas | 65\% | 25\% | 10\% | 50\% | 30\% | 20\% |
| Wisconsin | 25\% | 65\% | 10\% | 70\% | 25\% | 5\% |

### 3.2 A/C Substations

In order to provide exploratory cost estimates for substations, MISO makes indicative assumptions for the quantity of equipment required for substation upgrades and for new substations. The indicative assumptions for substation equipment tables below are not tied to any specific project and are intended for the sole purpose of providing MISO's exploratory cost estimate.

## Table 3.2.1 Initial assumptions - bus ratings

| Voltage class | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Amp rating | 1200 | 2000 | 2000 | 2000 | 2000 | 3000 | 3000 | 4000 |
| Power rating <br> $(M V A)$ | 143 | 398 | 478 | 558 | 797 | 1792 | 2598 | 5300 |

# Table 3.2.2 Substation upgrade - add 1 position (ring / breaker-and-a-half / double-breaker bus) 

| Scope of work | 69 kV | 115kV | 138kV | 161kV | 230kV | 345 kV | 500kV | 765 kV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land required (acre) | 0.4 / 0.5 / | 0.5 / 0.6 / | 0.5 / 0.6 / | 0.6 / 0.7 / | 0.6 / 0.8 / | 0.8 / 0.9 / | 1.3/1.6 / | 1.6 / 2.0 / |
| Land required (acre) | 0.6 | 0.7 | 0.8 | 0.8 | 0.9 | 1.1 | 1.9 | 2.3 |
| Access road (mile) | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 |
| Circuit breakers (each) | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 |
| Disconnect switches (each) | 2/4/4 | 2/4/4 | 2/4/4 | 2/4/4 | 2/4/4 | 2/4/4 | 2/4/4 | 2/4/4 |
| Voltage transformers (set of 3) | 1/1/2 | 1/1/2 | 1/1/2 | 1/1/2 | 1/1/2 | 1/1/2 | 1/1/2 | 1/1/2 |
| Bus support, bus, and fittings (3-phase) | 4/4/6 | 4 / 4 / 6 | 4 / 4 / 6 | 4 / 4 / 6 | 4 / 4 / 6 | 6/6/8 | 8/8/10 | $\begin{gathered} 12 / 12 / \\ 14 \end{gathered}$ |
| Deadend structure | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 |
| Control enclosure | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 |
| Relay panel(s) | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 | 1/2/2 |
| Cable trench (foot), conduit (10 feet), control cable (100 feet) | $\begin{gathered} 50 / \\ 70 / \\ 90 \end{gathered}$ | $\begin{aligned} & 50 / \\ & 70 / \\ & 100 \end{aligned}$ | $\begin{aligned} & 50 / \\ & 80 / \\ & 100 \end{aligned}$ | $\begin{aligned} & 50 / \\ & 80 / \\ & 110 \end{aligned}$ | $\begin{aligned} & 60 / \\ & 80 / \\ & 110 \end{aligned}$ | $\begin{aligned} & 60 / \\ & 90 / \\ & 120 \end{aligned}$ | $\begin{gathered} 70 / \\ 110 / \\ 140 \end{gathered}$ | $\begin{gathered} 88 / \\ 131 / \\ 175 \end{gathered}$ |

## Table 3.2.3 Substation upgrade - add 2 positions (ring / breaker-and-a-half / double-breaker bus)

| Scope of work | 69 kV | 115kV | 138kV | 161kV | 230kV | 345kV | 500kV | 765kV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land required | 0.8 / 1.0 / | 0.9/1.1/ | 1.0 / 1.3 / | 1.1 / 1.4 / | 1.2 / 1.5 / | 1.5 / 1.9 / | 2.5 / 3.1 / | 3.1 / 3.9 / |
| Land required | 1.2 | 1.4 | 1.5 | 1.7 | 1.8 | 2.3 | 3.8 | 4.7 |
| Access road (mile) | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 |
| Circuit breakers (each) | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 |
| Disconnect switches (each) | 4/6/8 | 4/6/8 | 4/6/8 | 4/6/8 | 4/6/8 | 4/6/8 | 4/6/8 | 4/6/8 |
| Voltage transformers (set of 3) | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 |
| Bus support, bus, and fittings (3-phase) | $8 / 8 / 12$ | 8/8/12 | 8/8/12 | 8/8/12 | 8/8/12 | $\begin{gathered} 12 / 12 / \\ 16 \end{gathered}$ | $\begin{gathered} 16 / 16 / \\ 20 \end{gathered}$ | $\begin{gathered} 20 / 20 / \\ 24 \end{gathered}$ |
| Deadend structure | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 | 2/2/2 |
| Control enclosure | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 | 0/0/0 |
| Relay panel(s) | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 | 2/3/4 |
| Cable trench (foot), conduit (10 feet), control cable (100 feet) | $\begin{gathered} 90 / \\ 135 / \\ 180 \end{gathered}$ | $\begin{gathered} 95 / \\ 143 / \\ 190 \end{gathered}$ | $\begin{aligned} & 100 / \\ & 150 / \\ & 200 \end{aligned}$ | $\begin{gathered} 105 / \\ 158 / \\ 210 \end{gathered}$ | $\begin{aligned} & 110 / \\ & 165 \text { / } \\ & 220 \end{aligned}$ | $\begin{gathered} 120 / \\ 180 / \\ 240 \end{gathered}$ | $\begin{gathered} 140 / \\ 210 / \\ 280 \end{gathered}$ | $\begin{gathered} 175 / \\ 263 / \\ 350 \end{gathered}$ |

# Table 3.2.4 New substation - 4 positions (ring / breaker-and-a-half / double-breaker bus) 

| Scope of work | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land required (acre) | $1.6 / 2.0 /$ | $1.8 / 2.3 /$ | $2.0 / 2.5 /$ | $2.2 / 2.8 /$ | $2.4 / 3.0 /$ | $3.0 / 3.8 /$ | $5.0 / 6.3 /$ | $6.2 / 7.8 / 1$ |
| Access road (mile) | $1 / 1 / 1$ | $2 / 7$ | $3 / 1 / 1$ | $1 / 1 / 1$ | $3 / 1 / 1$ | 3.6 | 4.5 | 7.5 |$⿻ 9.4$

# Table 3.2.5 New substation - 6 positions (ring / breaker-and-a-half / double-breaker bus) 

| Scope of work | 69 kV | 115kV | 138kV | 161kV | 230 kV | 345 kV | 500 kV | 765 kV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land required (acre) | $\begin{gathered} 2.0 / 2.5 / \\ 3.0 \end{gathered}$ | $\begin{array}{\|c\|} \hline 2.3 / 2.8 / \\ 3.4 \end{array}$ | $\begin{gathered} 2.5 / 3.1 / \\ 3.8 \end{gathered}$ | $\begin{gathered} 2.8 / 3.4 \text { / } \\ 4.1 \end{gathered}$ | $\begin{gathered} 3.0 / 3.8 / \\ 4.5 \end{gathered}$ | $\begin{gathered} 3.8 / 4.7 / \\ 5.6 \end{gathered}$ | $\begin{gathered} 6.3 / 7.8 / \\ 9.4 \end{gathered}$ | $\begin{gathered} 7.8 / 9.8 / \\ 11.7 \end{gathered}$ |
| Access road (mile) | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 |
| Circuit breakers | 6/9/12 | 6/9/12 | 6/9/12 | 6/9/12 | 6/9/12 | 6/9/12 | 6/9/12 | 6/9/12 |
| Disconnect switches (each) | $\begin{gathered} 12 / 18 / \\ 24 \end{gathered}$ | $\begin{gathered} 12 / 18 / \\ 24 \end{gathered}$ | $\begin{gathered} 12 / 18 / \\ 24 \end{gathered}$ | $\begin{gathered} 12 / 18 / \\ 24 \end{gathered}$ | $\begin{gathered} 12 / 18 / \\ 24 \end{gathered}$ | $\begin{gathered} 12 / 18 / \\ 24 \end{gathered}$ | $\begin{gathered} 12 / 18 / \\ 24 \end{gathered}$ | $\begin{gathered} 12 / 18 / \\ 24 \end{gathered}$ |
| Voltage transformers (set of 3) | 6/8/8 | 6/8/8 | 6 / 8 / 8 | 6/8/8 | 6 / 8 / 8 | 6/8/8 | 6/8/8 | 6/6/8 |
| Bus support, bus, and fittings (3-phase) | $\begin{gathered} 14 / 16 / \\ 20 \end{gathered}$ | $\begin{gathered} 14 / 16 / \\ 20 \end{gathered}$ | $\begin{gathered} 14 / 16 / \\ 20 \end{gathered}$ | $\begin{gathered} 14 / 16 / \\ 20 \end{gathered}$ | $\begin{gathered} 14 / 16 / \\ 20 \end{gathered}$ | $\begin{gathered} 16 / 20 / \\ 24 \end{gathered}$ | $\begin{gathered} 24 \text { / } 32 \text { / } \\ 40 \end{gathered}$ | $\begin{gathered} 32 / 48 / \\ 60 \end{gathered}$ |
| Deadend structure | 6/6/6 | 6/6/6 | 6/6/6 | 6/6/6 | 6/6/6 | 6/6/6 | 6/6/6 | 6/6/6 |
| Control enclosure | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 | 1/1/1 |
| Relay panel(s) | 8/11/14 | 8/11/14 | 8/11/14 | 8/11/14 | 8/11/14 | 8/11/14 | 8/11/14 | 8/11/14 |
| Cable trench (foot), conduit (10 feet), control cable (100 feet) | $\begin{gathered} 270 / \\ 410 / \\ 540 \end{gathered}$ | $\begin{gathered} 290 / \\ 430 / \\ 570 \end{gathered}$ | $\begin{gathered} 300 / \\ 450 / \\ 600 \end{gathered}$ | $\begin{gathered} 320 / \\ 470 / \\ 630 \end{gathered}$ | $\begin{gathered} 330 / \\ 500 / \\ 600 \end{gathered}$ | $\begin{gathered} 360 / \\ 540 / \\ 720 \end{gathered}$ | $\begin{gathered} 420 / \\ 630 / \\ 840 \end{gathered}$ | $\begin{aligned} & 525 / \\ & 788 / \\ & 1050 \end{aligned}$ |

## 4. Exploratory Costs

In the planning process it can be helpful to explore many different project ideas quickly to assess broadly if they would be viable. MISO provides exploratory cost estimates which are intended for projects with low levels of scope definition. Exploratory cost estimates are high-level cost estimates which MISO does not recommend using for any solution idea in the regular planning cycle due to the breadth of the assumptions used to derive the unit costs and lower level of granularity regarding specific project components. The exploratory cost estimates provided below are based on the assumptions and cost data as shown in this guide. Before a potential project is recommended for approval to MISO's Board of Directors, MISO completes a thorough scoping cost estimate, all the details of which are shared with stakeholders for their review and comment. In the tables below, MISO is providing its exploratory cost estimate in a $\$ /$ mile cost as defined by its voltage class and by the State where the potential project would be developed.

### 4.1 A/C and HVDC Transmission Lines

## Table 4.1.1 Exploratory cost estimate - A/C Transmission New single circuit transmission line $\$ /$ mile

| Location - <br> State | 69 kV line | 115 kV line | 138 kV line | 161 kV line | 230 kV line | 345 kV line | 500 kV line | 765 kV line |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arkansas | $\$ 1.7 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 3.4 \mathrm{M}$ | $\$ 4.2 \mathrm{M}$ | $\$ 5.3 \mathrm{M}$ |
| Illinois | $\$ 1.7 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 3.4 \mathrm{M}$ | $\$ 4.3 \mathrm{M}$ | $\$ 5.4 \mathrm{M}$ |
| Indiana | $\$ 1.6 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 3.3 \mathrm{M}$ | $\$ 4.1 \mathrm{M}$ | $\$ 5.2 \mathrm{M}$ |
| lowa | $\$ 1.7 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 3.4 \mathrm{M}$ | $\$ 4.2 \mathrm{M}$ | $\$ 5.3 \mathrm{M}$ |
| Kentucky | $\$ 1.7 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 3.5 \mathrm{M}$ | $\$ 4.4 \mathrm{M}$ | $\$ 5.5 \mathrm{M}$ |
| Louisiana | $\$ 1.9 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 2.3 \mathrm{M}$ | $\$ 2.5 \mathrm{M}$ | $\$ 3.9 \mathrm{M}$ | $\$ 4.8 \mathrm{M}$ | $\$ 6.0 \mathrm{M}$ |
| Michigan | $\$ 1.7 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 3.5 \mathrm{M}$ | $\$ 4.4 \mathrm{M}$ | $\$ 5.5 \mathrm{M}$ |
| Minnesota | $\$ 1.7 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 3.5 \mathrm{M}$ | $\$ 4.3 \mathrm{M}$ | $\$ 5.4 \mathrm{M}$ |
| Mississippi | $\$ 1.9 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 2.3 \mathrm{M}$ | $\$ 2.5 \mathrm{M}$ | $\$ 3.9 \mathrm{M}$ | $\$ 4.8 \mathrm{M}$ | $\$ 6.0 \mathrm{M}$ |
| Missouri | $\$ 1.6 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 3.3 \mathrm{M}$ | $\$ 4.2 \mathrm{M}$ | $\$ 5.2 \mathrm{M}$ |
| Montana | $\$ 1.5 \mathrm{M}$ | $\$ 1.7 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 3.1 \mathrm{M}$ | $\$ 3.9 \mathrm{M}$ | $\$ 4.9 \mathrm{M}$ |
| North Dakota | $\$ 1.6 \mathrm{M}$ | $\$ 1.7 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 3.1 \mathrm{M}$ | $\$ 3.9 \mathrm{M}$ | $\$ 5.0 \mathrm{M}$ |
| South Dakota | $\$ 1.6 \mathrm{M}$ | $\$ 1.7 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 3.1 \mathrm{M}$ | $\$ 3.9 \mathrm{M}$ | $\$ 5.0 \mathrm{M}$ |
| Texas | $\$ 1.9 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 2.4 \mathrm{M}$ | $\$ 3.8 \mathrm{M}$ | $\$ 4.7 \mathrm{M}$ | $\$ 5.8 \mathrm{M}$ |
| Wisconsin | $\$ 1.7 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.0 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 3.5 \mathrm{M}$ | $\$ 4.4 \mathrm{M}$ | $\$ 5.5 \mathrm{M}$ |

Includes contingency (30\%) and AFUDC (7.5\%)

# Table 4.1.2 Exploratory cost estimate - A/C Transmission New double circuit transmission line \$/mile 

| Location - State | 69 kV line | 115kV line | 138kV line | 161kV line | 230kV line | 345 kV line |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arkansas | \$2.4M | \$2.7M | \$2.8M | \$2.9M | \$3.4M | \$5.6M |
| Illinois | \$2.4M | \$2.7M | \$2.8M | \$2.9M | \$3.4M | \$5.6M |
| Indiana | \$2.3M | \$2.6M | \$2.8M | \$2.8M | \$3.3M | \$5.5M |
| lowa | \$2.4M | \$2.7M | \$2.8M | \$2.9M | \$3.4M | \$5.6M |
| Kentucky | \$2.4M | \$2.7M | \$2.9M | \$3.0M | \$3.5M | \$5.7M |
| Louisiana | \$2.6M | \$2.9M | \$3.1M | \$3.2M | \$3.8M | \$6.1M |
| Michigan | \$2.4M | \$2.7M | \$2.9M | \$3.0M | \$3.5M | \$5.7M |
| Minnesota | \$2.4M | \$2.7M | \$2.9M | \$2.9M | \$3.5M | \$5.7M |
| Mississippi | \$2.6M | \$2.9M | \$3.1M | \$3.2M | \$3.8M | \$6.1M |
| Missouri | \$2.3M | \$2.6M | \$2.8M | \$2.9M | \$3.4M | \$5.5M |
| Montana | \$2.2M | \$2.5M | \$2.6M | \$2.7M | \$3.2M | \$5.3M |
| North Dakota | \$2.3M | \$2.5M | \$2.7M | \$2.7M | \$3.2M | \$5.3M |
| South Dakota | \$2.3M | \$2.5M | \$2.7M | \$2.7M | \$3.2M | \$5.3M |
| Texas | \$2.6M | \$2.9M | \$3.0M | \$3.1M | \$3.7M | \$6.0M |
| Wisconsin | \$2.4M | \$2.7M | \$2.9M | \$3.0M | \$3.5M | \$5.7M |

## Table 4.1.3 Exploratory cost estimate - A/C Transmission Rebuild and reconductor transmission line \$/mile

| Location - <br> All States | 69 kV <br> line | 115 kV <br> line | 138 kV <br> line | 161 kV <br> line | 230 kV <br> line | 345 kV <br> line | 500 kV <br> line | 765 kV <br> line |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rebuild - <br> single circuit | $\$ 1.5 \mathrm{M}$ | $\$ 1.6 \mathrm{M}$ | $\$ 1.7 \mathrm{M}$ | $\$ 1.7 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ |
| Rebuild - <br> double circuit | $\$ 2.2 \mathrm{M}$ | $\$ 2.4 \mathrm{M}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ | $\mathrm{N} / \mathrm{A}$ |
| Reconductor - <br> per circuit | $\$ .32 \mathrm{M}$ | $\$ .37 \mathrm{M}$ | $\$ .37 \mathrm{M}$ | $\$ .37 \mathrm{M}$ | $\$ .37 \mathrm{M}$ | $\$ .59 \mathrm{M}$ | $\$ .79 \mathrm{M}$ | $\$ 1.09 \mathrm{M}$ |

Includes contingency (30\%) and AFUDC (7.5\%)

# Table 4.1.4 Exploratory cost estimate - HVDC Transmission New bipole transmission line $\$ /$ mile 

| Location - State | 250 kV line | 400 kV line | 500 kV line | 600 kV line | 640 kV line |
| ---: | :---: | :---: | :---: | :---: | :---: |
| Arkansas | $\$ 2.2 \mathrm{M}$ | $\$ 2.5 \mathrm{M}$ | $\$ 2.7 \mathrm{M}$ | $\$ 2.9 \mathrm{M}$ | $\$ 5.3 \mathrm{M}$ |
| Illinois | $\$ 2.2 \mathrm{M}$ | $\$ 2.6 \mathrm{M}$ | $\$ 2.7 \mathrm{M}$ | $\$ 2.9 \mathrm{M}$ | $\$ 5.3 \mathrm{M}$ |
| Indiana | $\$ 2.1 \mathrm{M}$ | $\$ 2.5 \mathrm{M}$ | $\$ 2.6 \mathrm{M}$ | $\$ 2.8 \mathrm{M}$ | $\$ 5.2 \mathrm{M}$ |
| lowa | $\$ 2.2 \mathrm{M}$ | $\$ 2.5 \mathrm{M}$ | $\$ 2.7 \mathrm{M}$ | $\$ 2.9 \mathrm{M}$ | $\$ 5.3 \mathrm{M}$ |
| Kentucky | $\$ 2.3 \mathrm{M}$ | $\$ 2.7 \mathrm{M}$ | $\$ 2.9 \mathrm{M}$ | $\$ 3.1 \mathrm{M}$ | $\$ 5.5 \mathrm{M}$ |
| Louisiana | $\$ 2.6 \mathrm{M}$ | $\$ 3.1 \mathrm{M}$ | $\$ 3.3 \mathrm{M}$ | $\$ 3.5 \mathrm{M}$ | $\$ 6.0 \mathrm{M}$ |
| Michigan | $\$ 2.3 \mathrm{M}$ | $\$ 2.7 \mathrm{M}$ | $\$ 2.9 \mathrm{M}$ | $\$ 3.1 \mathrm{M}$ | $\$ 5.5 \mathrm{M}$ |
| Minnesota | $\$ 2.3 \mathrm{M}$ | $\$ 2.6 \mathrm{M}$ | $\$ 2.8 \mathrm{M}$ | $\$ 3.0 \mathrm{M}$ | $\$ 5.4 \mathrm{M}$ |
| Mississippi | $\$ 2.6 \mathrm{M}$ | $\$ 3.1 \mathrm{M}$ | $\$ 3.3 \mathrm{M}$ | $\$ 3.5 \mathrm{M}$ | $\$ 5.9 \mathrm{M}$ |
| Missouri | $\$ 2.2 \mathrm{M}$ | $\$ 2.5 \mathrm{M}$ | $\$ 2.6 \mathrm{M}$ | $\$ 2.8 \mathrm{M}$ | $\$ 5.2 \mathrm{M}$ |
| Montana | $\$ 2.0 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 2.3 \mathrm{M}$ | $\$ 2.5 \mathrm{M}$ | $\$ 4.9 \mathrm{M}$ |
| North Dakota | $\$ 2.0 \mathrm{M}$ | $\$ 2.3 \mathrm{M}$ | $\$ 2.4 \mathrm{M}$ | $\$ 2.6 \mathrm{M}$ | $\$ 5.0 \mathrm{M}$ |
| South Dakota | $\$ 2.0 \mathrm{M}$ | $\$ 2.3 \mathrm{M}$ | $\$ 2.4 \mathrm{M}$ | $\$ 2.6 \mathrm{M}$ | $\$ 5.0 \mathrm{M}$ |
| Texas | $\$ 2.5 \mathrm{M}$ | $\$ 3.0 \mathrm{M}$ | $\$ 3.1 \mathrm{M}$ | $\$ 3.4 \mathrm{M}$ | $\$ 5.8 \mathrm{M}$ |
| Wisconsin | $\$ 2.3 \mathrm{M}$ | $\$ 2.7 \mathrm{M}$ | $\$ 2.9 \mathrm{M}$ | $\$ 3.1 \mathrm{M}$ | $\$ 5.5 \mathrm{M}$ |
|  |  | Includes contingency $(30 \%)$ and AFUDC $(7.5 \%)$ |  |  |  |

### 4.2 A/C Substations

In the planning process it can be helpful to explore many different project ideas quickly to assess broadly if they would be viable. MISO provides exploratory cost estimates which are intended for projects with low levels of scope definition. Exploratory cost estimates are high-level cost estimates which MISO does not recommend using for any solution idea in the regular planning cycle due to the breadth of the assumptions used to derive the unit costs and lower level of granularity regarding specific project components. The exploratory cost estimates provided below are based on the assumptions and cost data as shown in this guide. Before a potential project is recommended for approval to MISO's Board of Directors, MISO completes a thorough scoping cost estimate, all the details of which are shared with stakeholders for their review and comment.

Substations have a variety of layouts and arrangements. MISO's exploratory cost estimates for substations are intended to capture the most common substation arrangements that are estimated in MISO's planning process. The arrangements selected for the exploratory indicative cost estimates in this section are not an all-inclusive list for substation arrangements. Exploratory cost estimates are provided for both substation upgrades and new substations. Bus ratings per voltage class are included in the indicative assumptions and are aligned line ratings assumed by MISO for its transmission line project cost estimates. 765 kV substations include shunt reactors for every line position.

## Table 4.2.1 Exploratory cost estimate - substation upgrade

| Scope of work | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Add 1 position <br> (ring bus) | $\$ 1.2 \mathrm{M}$ | $\$ 1.4 \mathrm{M}$ | $\$ 1.6 \mathrm{M}$ | $\$ 1.8 \mathrm{M}$ | $\$ 2.1 \mathrm{M}$ | $\$ 3.3 \mathrm{M}$ | $\$ 5.0 \mathrm{M}$ | $\$ 16.2 \mathrm{M}$ |
| Add 1 position <br> (breaker-and-a-half bus) | $\$ 1.7 \mathrm{M}$ | $\$ 1.9 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 2.4 \mathrm{M}$ | $\$ 2.9 \mathrm{M}$ | $\$ 4.7 \mathrm{M}$ | $\$ 7.0 \mathrm{M}$ | $\$ 20.5 \mathrm{M}$ |
| Add 1 position <br> (double-breaker bus) | $\$ 1.9 \mathrm{M}$ | $\$ 2.2 \mathrm{M}$ | $\$ 2.5 \mathrm{M}$ | $\$ 2.7 \mathrm{M}$ | $\$ 3.2 \mathrm{M}$ | $\$ 5.1 \mathrm{M}$ | $\$ 7.6 \mathrm{M}$ | $\$ 21.2 \mathrm{M}$ |
| Add 2 positions <br> (ring bus) | $\$ 2.4 \mathrm{M}$ | $\$ 2.8 \mathrm{M}$ | $\$ 3.2 \mathrm{M}$ | $\$ 3.5 \mathrm{M}$ | $\$ 4.1 \mathrm{M}$ | $\$ 6.5 \mathrm{M}$ | $\$ 10.1 \mathrm{M}$ | $\$ 25.1 \mathrm{M}$ |
| Add 2 positions | $\$ 3.0 \mathrm{M}$ | $\$ 3.5 \mathrm{M}$ | $\$ 3.9 \mathrm{M}$ | $\$ 4.4 \mathrm{M}$ | $\$ 5.1 \mathrm{M}$ | $\$ 8.2 \mathrm{M}$ | $\$ 12.4 \mathrm{M}$ | $\$ 29.8 \mathrm{M}$ |
| (breaker-and-a-half bus) | $\$ 4.2 \mathrm{M}$ |  |  |  |  |  |  |  |
| Add 2 positions <br> (double-breaker bus) | $\$ 3.8 \mathrm{M}$ | $\$ 4.4 \mathrm{M}$ | $\$ 4.9 \mathrm{M}$ | $\$ 5.5 \mathrm{M}$ | $\$ 6.4 \mathrm{M}$ | $\$ 10.2 \mathrm{M}$ | $\$ 15.2 \mathrm{M}$ | $\$ 35.2 \mathrm{M}$ |

Table 4.2.2 Exploratory cost estimate - new substation

| Scope of work | 69 kV | 115 kV | 138 kV | 161 kV | 230 kV | 345 kV | 500 kV | 765 kV |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 positions <br> (ring bus) | $\$ 7.1 \mathrm{M}$ | $\$ 7.9 \mathrm{M}$ | $\$ 8.6 \mathrm{M}$ | $\$ 9.3 \mathrm{M}$ | $\$ 10.6 \mathrm{M}$ | $\$ 15.1 \mathrm{M}$ | $\$ 21.8 \mathrm{M}$ | $\$ 44.9 \mathrm{M}$ |
| 4 positions | $\$ 8.5 \mathrm{M}$ | $\$ 9.5 \mathrm{M}$ | $\$ 10.5 \mathrm{M}$ | $\$ 11.4 \mathrm{M}$ | $\$ 13.0 \mathrm{M}$ | $\$ 18.9 \mathrm{M}$ | $\$ 27.3 \mathrm{M}$ | $\$ 55.7 \mathrm{M}$ |
| (breaker-and-a-half bus) |  |  |  |  |  |  |  |  |
| 4 positions <br> (double-breaker bus) | $\$ 9.8 \mathrm{M}$ | $\$ 11.0 \mathrm{M}$ | $\$ 12.1 \mathrm{M}$ | $\$ 13.2 \mathrm{M}$ | $\$ 15.2 \mathrm{M}$ | $\$ 22.6 \mathrm{M}$ | $\$ 32.9 \mathrm{M}$ | $\$ 67.6 \mathrm{M}$ |
| 6 positions <br> (ring bus) | $\$ 9.0 \mathrm{M}$ | $\$ 10.1 \mathrm{M}$ | $\$ 11.0 \mathrm{M}$ | $\$ 12.0 \mathrm{M}$ | $\$ 13.8 \mathrm{M}$ | $\$ 20.1 \mathrm{M}$ | $\$ 29.4 \mathrm{M}$ | $\$ 59.6 \mathrm{M}$ |
| 6 positions | $\$ 10.9 \mathrm{M}$ | $\$ 12.3 \mathrm{M}$ | $\$ 13.5 \mathrm{M}$ | $\$ 14.8 \mathrm{M}$ | $\$ 17.1 \mathrm{M}$ | $\$ 25.6 \mathrm{M}$ | $\$ 37.5 \mathrm{M}$ | $\$ 76.7 \mathrm{M}$ |
| (breaker-and-a-half bus) | $\$ 12 \mathrm{M}$ |  |  |  |  |  |  |  |
| 6 positions <br> (double-breaker bus) | $\$ 12.7 \mathrm{M}$ | $\$ 14.5 \mathrm{M}$ | $\$ 16.0 \mathrm{M}$ | $\$ 17.5 \mathrm{M}$ | $\$ 20.3 \mathrm{M}$ | $\$ 30.8 \mathrm{M}$ | $\$ 45.2 \mathrm{M}$ | $\$ 92.3 \mathrm{M}$ |

Incudes contingency (30\%) and AFUDC (7.5\%)

### 4.3 HVDC Converter Stations

## Table 4.2.3 Exploratory cost estimate - HVDC Transmission Converter Station (one end)

| Location - All States | 250 kV line | 400 kV line | 500 kV line | 600 kV line | 640 kV line |
| ---: | :---: | :---: | :---: | :---: | :---: |
| Line Commutated <br> Converter | $\$ 113 \mathrm{M}$ | $\$ 338 \mathrm{M}$ | $\$ 457 \mathrm{M}$ | $\$ 550 \mathrm{M}$ | $\$ 685 \mathrm{M}$ |
| Voltage Source Converter | $\$ 152 \mathrm{M}$ | $\$ 440 \mathrm{M}$ | $\$ 591 \mathrm{M}$ | $\$ 715 \mathrm{M}$ | $\$ 870 \mathrm{M}$ |
| Includes contingency $(30 \%)$ and AFUDC $(7.5 \%)$ |  |  |  |  |  |

## 5. Costs Over Time

In MISO's yearly MTEP, certain types of projects may be identified to be recommended to our Board that are justified on a benefit-to-cost ratio requirement. In order to evaluate alternatives in the planning process, MISO estimates the net present value of costs over time of differing solution ideas that may also be differing technology types (e.g., energy storage project vs. transmission line project).

In order to estimate costs over time, MISO estimates depreciation costs, expense factors, and return factors for transmission projects. Expense factors and return factors vary by State to account for state-level differences in taxes (e.g., income taxes and property taxes).



In its estimate of costs over time, MISO makes assumptions about the following cost inputs:

| Year \# | Gross Plant Project Cost ISD Yr.\$ (PI) | Net Plant Project Cost ISD Yr.\$ (PI) | $\qquad$ | Return Factor subject to decrease in net plant | Expense Factor | Annual Cost to be Recovered | Present Value Discount Rate | Net Present Value Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Year(s)
MISO defines the Project Costs to be used in the benefit-to-cost ratio as the present value of the annual revenue requirements projected for the first 20 years of the project's life (Attachment FF Section II.C.7). An example of the years used in the calculation for a project that will take 5 years to construct is that years 6 through 25 will be the first 20 annual revenue requirement years. The present value cost calculation is over the same period for which the project benefits are determined.

## Gross Plant (nominal cost estimate)

The nominal cost to construct the project is also the amount used for the annual revenue requirements calculation. The present year project cost estimate is converted to nominal cost by factoring a construction spend per year and an annual inflation rate of $2.5 \%$. The graph and table below show how an example $\$ 100 \mathrm{M}$ project is expressed as a nominal cost estimate at an assumed 5-year project development time span.

## Net Plant and Annual Depreciation Factor

The Gross plant less depreciation based on a $40-$ Year asset life, which is $2.5 \%$ depreciation per year.

## Return Factor and Expense Factor (by State)

The Return Factor accounts for the cost of equity and income taxes. The return factor changes annually as it is a factor of net gross plant which is reduced annually as a result of depreciation. The Expense Factor accounts for property taxes, the cost of debt, and operations and maintenance. For energy storage installations, in addition to the Expense Factor below, MISO will assume replacement of the inverters every 10 years after project is in service, and replacement of the battery system every 15 years after the project is in service. Both factors are based on Attachment O's and GG's provided by MISO Transmission Owners and vary by State as shown in the table below:

| Table 5.1 Expense Factor and Return Factor (by State) |  |  |
| :---: | :---: | :---: |
| State | Expense Factor | Return Factor (adjusted for the first year of depreciation) |
| Arkansas | 2.96\% | 8.10\% |
| Illinois | 3.69\% | 8.29\% |
| Indiana | 3.16\% | 8.23\% |
| lowa | 3.42\% | 8.44\% |
| Kentucky | 3.08\% | 8.07\% |
| Louisiana | 2.76\% | 8.19\% |
| Michigan | 3.62\% | 8.07\% |
| Minnesota | 3.28\% | 8.31\% |
| Mississippi | 2.96\% | 8.01\% |
| Missouri | 3.20\% | 8.08\% |
| Montana | 3.15\% | 8.12\% |
| North Dakota | 3.50\% | 8.02\% |
| South Dakota | 3.42\% | 7.70\% |
| Texas | 3.74\% | 7.70\% |
| Wisconsin | 3.71\% | 8.19\% |

## Present Value Discount Rate

Calculated by MISO annually as the after-tax weighted average cost of capital of the Transmission owners that make up the Transmission Provider Transmission System. MISO's estimated costs over time will use the same discount rate as used to determine benefits.

## Net Present Value Cost

Appling the discount rate to the first 20 years of the annual revenue requirement results in the NPV cost to be used in the benefit-to-cost ratio. Net Present Value Cost is calculated per year by multiplying the annual cost to be recovered by the Present Value Discount Rate for their respective years.

## Example

For example, if we were estimating the costs over time for a project that had a nominal cost estimate of $\$ 100 \mathrm{M}$, and we used a discount rate of $6.9 \%$, based on the approach we described above, the net present value of cost over the first 20 years of in-service life would be $\$ 96.2 \mathrm{M}$ as shown in the table below:

| Year \# | Gross Plant Project Cost ISD Yr.\$ (PI) | Net Plant Project Cost ISD Yr.\$ (PI) | $\qquad$ | Return Factor subject to decrease in net plant | Expense Factor | Annual Cost to be Recovered | Present Value Discount Rate | Net Present Value Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MTEP Year |  |  |  |  |  |  | 1.000 |  |
| 1 |  |  |  |  |  |  | 0.935 |  |
| 2 |  |  |  |  |  |  | 0.875 |  |
| 3 |  |  |  |  |  |  | 0.819 |  |
| 4 |  |  |  |  |  |  | 0.766 |  |
| 5 |  |  |  | 8.42\% |  |  | 0.716 |  |
| 6 | \$100,000,000 | \$97,500,000 | 2.50\% | 8.21\% | 3.41\% | \$14,123,772 | 0.670 | \$9,464,212 |
| 7 | \$100,000,000 | \$95,000,000 | 2.50\% | 8.00\% | 3.41\% | \$13,913,259 | 0.627 | \$8,721,374 |
| 8 | \$100,000,000 | \$92,500,000 | 2.50\% | 7.79\% | 3.41\% | \$13,702,746 | 0.586 | \$8,035,001 |
| 9 | \$100,000,000 | \$90,000,000 | 2.50\% | 7.58\% | 3.41\% | \$13,492,232 | 0.549 | \$7,400,899 |
| 10 | \$100,000,000 | \$87,500,000 | 2.50\% | 7.37\% | 3.41\% | \$13,281,719 | 0.513 | \$6,815,179 |
| 11 | \$100,000,000 | \$85,000,000 | 2.50\% | 7.16\% | 3.41\% | \$13,071,206 | 0.480 | \$6,274,237 |
| 12 | \$100,000,000 | \$82,500,000 | 2.50\% | 6.95\% | 3.41\% | \$12,860,693 | 0.449 | \$5,774,733 |
| 13 | \$100,000,000 | \$80,000,000 | 2.50\% | 6.74\% | 3.41\% | \$12,650,179 | 0.420 | \$5,313,571 |
| 14 | \$100,000,000 | \$77,500,000 | 2.50\% | 6.53\% | 3.41\% | \$12,439,666 | 0.393 | \$4,887,884 |
| 15 | \$100,000,000 | \$75,000,000 | 2.50\% | 6.32\% | 3.41\% | \$12,229,153 | 0.368 | \$4,495,011 |
| 16 | \$100,000,000 | \$72,500,000 | 2.50\% | 6.10\% | 3.41\% | \$12,018,640 | 0.344 | \$4,132,492 |
| 17 | \$100,000,000 | \$70,000,000 | 2.50\% | 5.89\% | 3.41\% | \$11,808,126 | 0.322 | \$3,798,044 |
| 18 | \$100,000,000 | \$67,500,000 | 2.50\% | 5.68\% | 3.41\% | \$11,597,613 | 0.301 | \$3,489,554 |
| 19 | \$100,000,000 | \$65,000,000 | 2.50\% | 5.47\% | 3.41\% | \$11,387,100 | 0.281 | \$3,205,064 |
| 20 | \$100,000,000 | \$62,500,000 | 2.50\% | 5.26\% | 3.41\% | \$11,176,587 | 0.263 | \$2,942,762 |
| 21 | \$100,000,000 | \$60,000,000 | 2.50\% | 5.05\% | 3.41\% | \$10,966,073 | 0.246 | \$2,700,967 |
| 22 | \$100,000,000 | \$57,500,000 | 2.50\% | 4.84\% | 3.41\% | \$10,755,560 | 0.230 | \$2,478,127 |
| 23 | \$100,000,000 | \$55,000,000 | 2.50\% | 4.63\% | 3.41\% | \$10,545,047 | 0.216 | \$2,272,800 |
| 24 | \$100,000,000 | \$52,500,000 | 2.50\% | 4.42\% | 3.41\% | \$10,334,533 | 0.202 | \$2,083,656 |
| 25 | \$100,000,000 | \$50,000,000 | 2.50\% | 4.21\% | 3.41\% | \$10,124,020 | 0.189 | \$1,909,459 |
|  |  |  |  |  |  |  |  | \$96,195,027 |

## Goggin Exhibit 1

## Michael Goggin

## Education:

Harvard University class of 2004, B.A. cum laude in Social Studies

- Wrote thesis "Is it Time for a Change? Science, Policy, and Climate Change"


## Experience:

Grid Strategies
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- Serve as a consultant on electricity transmission, grid integration, reliability, market, and public policy issues for consumer, grid operator, non-profit, and industry clients
- Have testified before FERC and in over 25 state regulatory commission cases

AWEA Senior Director of Research, other titles February 2008-February 2018

- Led team responsible for all American Wind Energy Association (now American Clean Power Association) analysis
- Served as primary technical and economic expert for market design, transmission, grid integration, carbon policy, and other topics
- Authored regulatory filings at state (IRP and transmission siting cases), regional (ISO transmission and market design), and federal levels (FERC transmission, interconnection standard, grid integration, and market design cases; EPA carbon policy)
- Directed economic and power sector modeling to inform AWEA's policy strategy and support advocacy positions
- Communicated with the press and policy makers about wind energy
- Authored reports to promote AWEA's policy agenda, rebut misconceptions about wind energy, and explain complex energy topics to lay audiences
- Other titles included Electric Industry Analyst, Senior Analyst, Manager of Transmission Policy, Director of Research

Sentech, Inc. $\quad$ Research Analyst October 2005-February 2008

- Conducted economic analyses of solar, wind, geothermal, and energy storage technologies for U.S. Department of Energy officials
- Provided analytical support for DOE's renewable energy R\&D funding decisions

Union of Concerned Scientists Clean Energy Intern May 2005-October 2005

- Worked with the legislative and field staff to promote the inclusion of pro-renewable energy measures in the Energy Policy Act of 2005

State Public Interest Research Groups Policy Analyst August 2004-May 2005

- Analyzed and advocated for clean energy policies at the state and federal level

Publications available at https://gridstrategiesllc.com/articles-2/

## Goggin Exhibit 2

# Duke Energy Carolinas <br> Response to <br> NC Public Staff Data Request <br> Data Request No. NCPS 56 

## Docket No. E-7, Sub 1276

Date of Request: March 28, 2023
Date of Response: April 10, 2023


## X NOT CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to NC Public Staff Data Request No. 56-5, was provided to me by the following individual(s): Alisa Ewald, Developmental Assignment, and was provided to NC Public Staff under my supervision.

Jack Jirak
Deputy General Counsel
Duke Energy Carolinas

North Carolina Public Staff
Data Request No. 56
DEC Docket No. E-7, Sub 1276
Item No. 56-5
Page 1 of 1

## Request:

5. Please provide the DEC Transmission investment list for all non-MYRP projects with forecasted in-service dates during the MYRP period.
This spreadsheet was provided in the DEP rate case (E-2, Sub 1300) as a supplemental response to PS DR 75-2.

## Response:

Please reference file "DEC PS DR 56-5 - Non-MYRP Investment List w Scoring" which includes the scoring for projects that are not included in the MYRP. A column has been included to clarify why projects were not scored. The reasons for not scoring a project can include compliance to regulatory standards, reactive work/equipment failures, customer commitments/obligations including new delivery points and interconnections, budget placeholder categories that will later be replaced with discrete scored projects, and reimbursable projects.

Goggin Exhibit 2

Investment List- CBA information for all non-MYRP
projects with In-Service Dates in 2023-2026

| Investment Code | Investment Name | Planned In-Service Date | Grouping | Reliability Benefit | Reliability Scored | Reason for Not Scoring | Financial NPV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| W220036 | Emergent Project - Parkwood Tie (ST | 3/14/2024 | ASSET MANAGEMENT | 371,288,050 | Yes | Scored | 28,017,095 |
| 23WOODPOLEDEC | Wood Pole Program | 12/30/2023 | PLACEHOLDER |  | No | Placeholder- Discrete | 21,586,110 |
| 23VEGDEC | Vegetation Management | 12/30/2023 | PLACEHOLDER |  | No | Placeholder- Discrete | 21,116,847 |
| W210356 | Toyota Battery Manufacturing New C | 3/13/2025 | BUSINESS EXPANSION- | - | No | Customer Commitments- | 30,395,108 |
| $23 C A P F A I L D E C$ | Capital Failures (Emergent \& Emergency) | 12/30/2023 | CAPITAL FAILURES |  | No | Base-Failures, Reactive | 14,077,898 |
| 23FALLENGDEC | Emergent with Engineering | 12/30/2023 | PLACEHOLDER | - | No | Base-Failures, Reactive | 14,077,898 |
| W220203 | Emergency Project - Parkwood Tie (S | 21712024 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 13,105, 201 |
| NP09177 | Durham Main SPCC and Reliability Up | 2/29/2024 | ASSET MANAGEMENT |  | No | Prescriptive Compliance | 20,017,382 |
| W170128 | Belfast 44 kV Line Rebuild | 11/17/2023 | ASSET MANAGEMENT | 652,745,044 | Yes | Scored | 17,467,051 |
| W200205 | PWRUP South Region Vanquish Fences | 12/28/2023 | ASSET MANAGEMENT | 58,267,218 | Yes | Scored | 9,122,765 |
| W170241 | Winecoff Tie Replace 5 Overduty Bre | 5/12/2025 | CAPACITY MAJOR | 53,545,414 | Yes | Scored | 13,116,214 |
| W170216 | Pickens Tie Ribty Upg | 6/3/2024 | ASSET MANAGEMENT | 127,189,026 | Yes | Scored | 13,234,943 |
| W200202 | PWRUP North Region Vanquish Fences | 12/29/2023 | ASSET MANAGEMENT | 47,993,946 | Yes | Scored | 6,811,900 |
| W170127 | Rockford Line Rebuild Chatham MFG | 8/21/2023 | ASSET MANAGEMENT | 275,136,401 | Yes | Scored | 10,267,179 |
| W200465 | Site and Acquire Property for New B | 10/31/2023 | CAPACITY MAJOR |  | No | Customer Commitments- | 4,897,433 |
| W210469 | 100 kV Delta Line Rebuild | 9/19/2023 | CAPACITY MAJOR |  | No | Customer Commitments- | 5,374,804 |
| NP08855 | Reidsville Ret Repl 100kV Brk | 11/21/2023 | ASSET MANAGEMENT | 44,831,455 | Yes | Scored | 7,214,887 |
| W190286 | 6 -wire Wateree Line | 10/11/2024 | CAPACITY MAJOR | 19,398,446 | Yes | Scored | 8,751,729 |
| W220210 | SRP1084 Cathodic Protect Cent 2023 | 12/28/2023 | ASSET MANAGEMENT | 17,737,294 | Yes | Scored | 4,227,614 |
| W200176 | Arcadia 100kV Lines Structure Repla | 10/11/2023 | CAPACITY MAJOR | 54,794,719 | Yes | Scored | 4,290,800 |
| W220224 | Buckhorn 44kV Piedmont EMC Tap Line | 5/29/2024 | CAPACITY MAJOR |  | No | Customer Commitments- | 7,256,298 |
| NP09078 | Longview Tie (8) 230KV BRK Repl | 7/21/2023 | ASSET MANAGEMENT | 540,408,021 | Yes | Scored | 9,532,899 |
| W170192 | Oakvale Tie Bk 1 Transformer Repl | 915/2023 | ASSET MANAGEMENT | 40,343,717 | Yes | Scored | 4,631,586 |
| W220212 | SRP1084 Cathodic Protect South 2023 | 12/6/2023 | ASSET MANAGEMENT | 11,824,863 | Yes | Scored | 3,642,536 |
| W190140 | Carolina West CBM Program 2021 - Ce | 10/30/2023 | ASSET MANAGEMENT | 6,206,024 | Yes | Scored | 4,667,689 |
| W200506 | SRP 1008 Bush River Tie Cap Bk Rela | 12/27/2023 | ASSET MANAGEMENT | 51,038,983 | Yes | Scored | 3,848,876 |
| W180168 | Oconee 230kV Swyd Load Cntrs Repl | 11/30/2023 | ASSET MANAGEMENT | 19,999,146 | Yes | Scored | 4,193,993 |
| W170199 | Anderson Tie Ribty Upg | 8/22/2023 | ASSET MANAGEMENT | 212,126,517 | Yes | Scored | 27,403,049 |
| W180308 | Distribution Breaker Replacements ( | 12/22/2023 | ASSET MANAGEMENT | 87,106,291 | Yes | Scored | 3,803,138 |
| W180351 | Mayodan Ret (STA 4239) - Replace 44 | 1/8/2024 | ASSET MANAGEMENT | 14,300,009 | Yes | Scored | 3,328,012 |
| W200267 | PWRUP Central Region Vanquish Fence | 12/29/2023 | ASSET MANAGEMENT | 82,951,256 | Yes | Scored | 3,257,578 |
| W180388 | Mebane 44 kV - Switch Rebuild | $1211 / 2023$ | ASSET MANAGEMENT | 6,276,548 | Yes | Scored | 2,910,009 |
| NP09054 | Reedy River Tie P+C Repl | 7/28/2023 | ASSET MANAGEMENT | 57,750,036 | Yes | Scored | 5,918,489 |
| W170037 | Wylie Series 100 kV BJB | 11/17/2023 | CAPACITY MAJOR | 666,575,898 | Yes | Scored | 7,824,499 |
| W180345 | Distribution Breaker Replacements ( | 12/11/2023 | ASSET MANAGEMENT | 74,808,726 | Yes | Scored | 2,969,212 |
| W170210 | Oak Ridge Ret R1bty Upg | 10/26/2023 | ASSET MANAGEMENT | 46,941,218 | Yes | Scored | 2,908,047 |
| W180362 | Bethania and Shattalon Line AEUs | 4/9/2024 | CAPACITY MAJOR | 210,680,421 | Yes | Scored | 2,491,792 |
| W200379 | Oakboro Tie Station Reconfiguration | 1/13/2025 | CAPACITY MAJOR |  | No | Customer Commitments- | 12,511,336 |
| W170017 | Bear Swamp 44kV Network Relaying | 10/20/2023 | CAPACITY MAJOR | 51,769,338 | Yes | Scored | 2,513,284 |
| W210398 | CPRE - Misenheimer Solar on Albemar | 8/30/2023 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 2,677,470 |
| W220404 | E1 Emergent Work Replace Crest St | 9/25/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 2,229,574 |
| W180315 | McAdenville JCT Tie Bank 3 HT Gang | 1/4/2024 | ASSET MANAGEMENT | 57,586,479 | Yes | Scored | 2,460,220 |
| W170224 | Valmead RET 44/12.5KV - Replace Ban | 10/30/2023 | ASSET MANAGEMENT | 3,948,001 | Yes | Scored | 2,289,945 |
| W180225 | Parkway SS Transformer Bank Replace | 9/22/1023 | ASSET MANAGEMENT | 93,426,188 | Yes | Scored | 2,146,139 |
| W200286 | Purchase 6 New 100KV Portable Break | 8/1012023 | ASSET MANAGEMENT | 169,178,075 | Yes | Scored | 2,651,541 |
| W190401 | Jocassee Tie 230 kv Drainage Repair | 10/30/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 2,184,180 |
| W200288 | PWRUP Portable 44kv LT/HT Breakers | 8/10/2023 | ASSET MANAGEMENT |  | No | In-Filight | 2,276,929 |
| NP09216 | Sugar Hill Tie 44kV Radial TUs | 10/10/2023 | ASSET MANAGEMENT | 22,216,488 | Yes | Scored | 2,470,009 |
| W200462 | Carolina West CBM Program 2020 - No | 9/20/2023 | ASSET MANAGEMENT | 7.476,317 | Yes | Scored | 1,987,131 |
| 23 TOOLSTESTDEC | Tools \& Test Equipment | 12/30/2023 | PLACEHOLDER |  | No | Base-Failures, Reactive | 1,501,642 |
| W220116 | CPRE - Hunters Cove Solar LLC | 8/15/2024 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 4,418,044 |
| W210480 | CPRE - Brookcliff Solar LLC | 5/2212024 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 4,704,879 |
| W210476 | CPRE - Aquadale Solar LLC | 8/12/1224 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 7,157,847 |
| W180322 | Distribution Breaker Replacements ( | 8/2/2023 | ASSET MANAGEMENT | 51,089,162 | Yes | Scored | 1,604,743 |
| W170069 | Riverview Sw Sta Gang Replacement | 8/24/2023 | ASSET MANAGEMENT | 4,045,159 | Yes | Scored | 1,583,494 |
| W190369 | Buck Tie Relay Mis Op | 12/14/2023 | ASSET MANAGEMENT | 774,279,434 | Yes | Scored | 2,793,843 |
| W210462 | Bear Branch Solar Interconnection | 8/6/12024 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 2,955,411 |
| DP18DBKN | Distribution Breaker Replacements | 11/29/2023 | ASSET MANAGEMENT |  | No | Other | 3,063,351 |
| W220164 | E0-Grey Ret - Replace Timber Reta | 10120/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 1,416,221 |
| W210291 | EMERGENT Buck Tie (STA3237) SPCC SY | 2/21/2024 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 1,578,636 |
| W200309 | Sharon Retail HT Upgrade: Transmiss | 11/6/2023 | ASSET MANAGEMENT | 363,764,927 | Yes | Scored | 2,166,553 |
| W220330 | Cathodic Protect Kitting South | 12131/2023 | ASSET MANAGEMENT | 9,501,071 | Yes | Scored | 1,117,721 |
| W220471 | Emergent - 3 transformer bank repla | 517/2024 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 2,459,406 |
| W200002 | PWRUP Throwing Bent Replace GOAB | 9/20/2023 | ASSET MANAGEMENT | 5,658,939 | Yes | Scored | 1,346,083 |
| W210479 | CPRE - Hornet Solar LLC | 7/30/2024 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 4,057,977 |
| NP08976 | Boyds to Trinity Ridge | 5/6/2024 | CAPACITY MAJOR | - | No | In -Fight | 1,226,295 |
| W220011 | York EC Delivery \#37 India Hook | 12/27/2023 | BUSINESS EXPANSION- | - | No | Customer Commitments- | 1,239,782 |
| W220012 | York E C Delivery \#38 Allison Creek | 10/9/2023 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 1,158,523 |
| W180309 | Distribution Breaker Replacements ( | 71712023 | ASSET MANAGEMENT | 64,521,594 | Yes | Scored | 1,398,940 |
| W220225 | CPRE - Healing Springs Solar, LLC | 2117/2025 | BUSINESS EXPANSION- |  | No | Prescriptive Compliance | 4,472,629 |
| W190212 | EMERGENT - Oconee 525 Switch Yard S | 9/27/2024 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 4,616,442 |
| DP18CVTN | Sub Inst Tff Replacements | 4/30/2024 | ASSET MANAGEMENT | 282,627,271 | Yes | Scored | 1,146,702 |
| W200463 | Carolina West CBM Program 2021 - We | 8177/2023 | ASSET MANAGEMENT | 11,922,086 | Yes | Scored | 1,156,147 |
| W210313 | EAST DURHAM TIE NEW REMEDIAL ACTIO | 1/191/2024 | OTHER-T-PM | - | No | Prescriptive Compliance | 1,251,213 |
| W210241 | Union P C C Delivery \#20 Parkwood Rev | 7/3/2023 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 1,257,235 |
| W190388 | Clover Line Rebuild RW Acquisition | 11/10/2023 | CAPACITY MAJOR | - | No | In-Flight | 1,042,887 |
| W210315 | Dacian Ave Ret (STA1511) Emergent | 10/10/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 989,008 |
| W170152 | Oakboro Ret R Rbty Upg | 7/10/2023 | ASSET MANAGEMENT | 43,552,332 | Yes | Scored | 1,186,330 |
| W210428 | Walmart Cold Storage new customer | 9/19/2024 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 9,899,967 |
| W180305 | 2021 Nitrolee Ret Air Break | 10130/2023 | ASSET MANAGEMENT | 3,605,760 | Yes | Scored | 1,207,145 |
| W200006 | PWRUP Triangle Retail Tap GOAB Repl | 1/19/2024 | ASSET MANAGEMENT | 5,093,046 | Yes | Scored | 1,055,199 |
| W220478 | Emergent Allen Steam Station Site P | 1016/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 768,344 |
| W200214 | Acquire Right of Way for Cel-River | 7117/2023 | CAPACITY MAJOR |  | No | Land | 838,893 |
| W200204 | PWRUP West Region Vanquish Fences | 12/28/2023 | ASSET MANAGEMENT | 17,053,329 | Yes | Scored | 768,419 |
| W180348 | Pleasant Garden Ret (STA 4557) - Re | 10/10/2023 | ASSET MANAGEMENT | 14,300,009 | Yes | Scored | 791,070 |
| W180301 | 2020 Great Falls Ret Air Break | 7/21/2023 | ASSET MANAGEMENT | 14,176,134 | Yes | Scored | 792,840 |
| W180317 | Distribution Breaker Replacements ( | 8/16/2023 | ASSET MANAGEMENT | 67,171,257 | Yes | Scored | 1,175,119 |
| W220177 | Emergent-Catawba SS: Replace Switch | 8/28/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 694,422 |
| W220477 | Enbridge - ROW Accuusisition | 7/25/2023 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 579,933 |
| W220505 | BMW Manufacturing - Battery Assembl | 11/21/2024 | OTH_FIELDWORK |  | No | Customer Commitments- | 7,882,599 |
| W200247 | 115kV Hook Stick Disc Switch Traile | 10/9/2023 | ASSET MANAGEMENT | 1,690,811 | Yes | Scored | 585,240 |
| W220367 | Project Whale (Boyd) - New Customer | 10/16/2026 | BUSINESS EXPANSION- |  | No | Prescripitive Compliance | 34,818,921 |
| W170135 | Rosman SS - Quebec 44kV OCB Replmt | 7/20/2023 | ASSET MANAGEMENT | 16,516,718 | Yes | Scored | 642,787 |
| W220412 | Nucor Corp - New Customer Deilivery | 11/15/2024 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 7,205,579 |
| W220363 | USPS Customer Station | 2/20/2025 | BUSINESS EXPANSION- | . | No | Customer Commitments- | 8,047,388 |


| 717/2023 | ASS |
| :---: | :---: |
| 9/19/2023 | ASS |
| 3/11/2024 | ASS |
| 10/11/2023 | ASS |
| 6/19/2025 | BUS |
| 8/28/2023 | ASS |
| 11/22/2024 | ASS |
| 12/21/2023 | ASS |
| 11/1/2024 | CAP |
| 3/22/2024 | ASS |
| 9/30/2025 | CAP |
| 12/4/2023 | ASS |
| 11/22/2024 | ASS |
| 5/16/2024 | ASS |
| 1/3/2025 | BUS |
| 11/14/2023 | ASS |
| 8/28/2023 | ASS |
| 8/24/2023 | ASS |
| 11/28/2023 | ASS |
| 3/12/2025 | ASS |
| 4/29/2026 | ASS |
| 9/12/2023 | ASS |
| 10/30/2026 | CAP |
| 9/15/2025 | BUS |
| 7/2/2024 | ASS |
| 6/11/2026 | CAP |
| 3/7/2024 | ASS |
| 10/22/2025 | ASS |
| 9/27/2023 | ASS |
| 5/13/2025 | ASS |
| 12/1/2023 | BUS |
| 9/27/2023 | ASS |
| 11/30/2023 | ASS |
| 10/18/2024 | ASS |
| 7/15/2026 | ASS |
| 12/22/2023 | ASS |
| 3/22/2024 | ASS |
| 7/23/2024 | ASS |
| 8/6/2026 | CAP |
| 12/13/2023 | ASS |
| 9/13/2023 | ASS |
| 8/25/2023 | ASS |
| 9/22/2025 | ASS |
| 9/13/2023 | ASS |
| 2/27/2024 | ASS |

Base- Failure
Scored
Base- Failures, Reactive
Base- Failures, Reactive
Customer Commitments
Scored
Base-Failures, Reactive
Base-Failures, Reactive

| Cuse Failures, Reactive | $6,223,679$ |
| :--- | ---: |
| Customer Commitments- | 465,720 |
| $, 541,43$ |  |

Scored
Base- Failures, Reactive
$\begin{array}{lr}\text { Base- Failures, Reactive } & 371,276 \\ \text { Scored } & 3,140,406\end{array}$
Scored
$\begin{array}{lc}\text { Customer Commitments- } & 8,651,695 \\ \text { Scored } & 880,236 \\ \text { Scored } & 598,942 \\ \text { Other } & 426,782\end{array}$
Scored
Scored

|  | EMERGENT Beckerdite SVC FTS/AVS and | 5/31/2023 | ASSET MANAGEMENT |  |  | Pase Failures Reactive |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| W180483 | Dacian Ave Ret (STA1511) Replace | 4/11/2023 | ASSET MANAGEMENT | 122,439,894 | Yes | Scored | ${ }_{3,889,127}^{24872}$ |
| W180523 | 2019 Transformer Temp Monitors - Ce | 5/10/2023 | ASSET MANAGEMENT |  | No | In-Fight | 270,330 |
| W180531 | 2019 Transformer Bushing Replacemen | 3/27/2023 | ASSET MANAGEMENT |  | No | In-Fight | 308,350 |
| W210366 | MNS 525kV Gang Sw 62Y Repl | 215/2025 | ASSET MANAGEMENT | 7,547,707 | Yes | Scored | 131,726 |
| W200293 | ONS Replace MOD 62 Yello | 5/1012024 | ASSET MANAGEMENT | 4,347,260 | Yes | Scored | 549,515 |
| W190025 | EMERGENT Cliffside Unit 5 Swyd Fail | 1/27/2023 | ASSET MANAGEMENT | - | No | Base-Failures, Reactive | 6,137,570 |
| W220182 | Emergent - Replace Failed Capacitor | 6/11/2024 | ASSET MANAGEMENT | - | No | Base-Failures, Reactive | 522,288 |
| W192077 | SRP 1015 MNS Westport WH CCVT Repl | 4/26/2024 | ASSET MANAGEMENT |  | No | In-Flight | 335,680 |
| W220281 | SRP 1016 Acrerock Tie Capacitor Rep | 5/2/2025 | ASSET MANAGEMENT | 2,243,141 | Yes | Scored | 456,807 |
| W200071 | Bell St Ret Land Acquisition1 | 12/11/2026 | ASSET MANAGEMENT |  | No | Land | 1,498,161 |
| W200579 | Replace Oconee Asbury Reactor Gang | 8/22/2025 | ASSET MANAGEMENT | 3,804,313 | Yes | Scored | 121,760 |
| W200580 | Replace Oconee Katoma Reactor Gang | 8/22/2025 | ASSET MANAGEMENT | 3,804,313 | Yes | Scored | 121,760 |
| W210427 | Piedmont Lithium Construct Tap Line | 6/10/2026 | BUSINESS EXPANSION- |  | No | Customer Commitments- | 2,229,664 |
| W200040 | Purchase land to convert Huffman Ta | 12/31/2024 | CAPACITY MAJOR | 6,558,828 | Yes | Scored | 381,284 |
| NP03832 | TU Jocassee Ln | 4/17/12024 | ASSET MANAGEMENT |  | No | In-Fight | 187,937 |
| W190341 | Riverbend Steam Sta Relay Mis Op | 5/22/2023 | ASSET MANAGEMENT | 633,307,372 | Yes | Scored | 3,961,797 |
| W192018 | PWRUP West Region Vanquish Fence | 3/11/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 921,039 |
| W200007 | PWRUP Byrum Cr Retail Tap GOAB Repl | 5/11/2023 | ASSET MANAGEMENT | 8,488,409 | Yes | Scored | 1,753,053 |
| W200026 | PWRUP North Region Vanquish Fence 2 | 2/28/2023 | ASSET MANAGEMENT |  | No | Other | 1,083,814 |
| W200029 | Silas Lines Rebuild' | 6/28/2023 | CAPACITY MAJOR | 76,383,381 | Yes | Scored | 25,225,135 |
| W200033 | Coronaca Tie RAS | 2/21/2023 | OTHER-T-PM | - | No | Prescriptive Compliance | 512,225 |
| W200129 | Emergent - Murdock Rd RET - Replace | 3/16/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 607,514 |
| W200188 | PWRUP - Portable Transformer replac | 1/4/2023 | ASSET MANAGEMENT | 6,180,215 | Yes | Scored | 1,507,637 |
| W200194 | New 44KV Portable Capacitor and Zer | 3/21/2023 | ASSET MANAGEMENT | 3,362,030 | Yes | Scored | 759,176 |
| W200199 | PWRUP - MNS South Mountain | 4/28/2023 | ASSET MANAGEMENT | - | No | In-Flight | 802,531 |
| W200200 | PWRUP - MNS Woodchuck 525k | 3/13/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 815,546 |
| W200203 | PWRUP Central Region Vanquish Fence | 4/26/2023 | ASSET MANAGEMENT | 54,587,564 | Yes | Scored | 2,826,318 |
| W200211 | Lake Lure Ret Transformer Repl | 4/28/2023 | ASSET MANAGEMENT | 33,599,191 | Yes | Scored | 1,867,111 |
| 24BATTERYDEC | 1011 - End of Life Station Battery and Charger Replacements | 12/30/2024 | PLACEHOLDER |  | No | Placeholder- Discrete | 440,416 |
| W200219 | PWRUP Fairplains Ret Transformer Re | 6/1912023 | ASSET MANAGEMENT | 8,139,761 | Yes | Scored | 9,617,789 |
| 24BUSHINGDEC | 1032 - Replace GE Type U Bushings | 12/30/2024 | PLACEHOLDER |  | No | Placeholder- Discrete | 673,836 |
| W200241 | Two New 100kV Portable Capacitors a | 3/8/2023 | ASSET MANAGEMENT | 4,649,833 | Yes | Scored | 792,497 |
| W200273 | PWRUP - Portable Regulators | 3/14/2023 | ASSET MANAGEMENT | 8,562,710 | Yes | Scored | 1,682,397 |
| W200287 | PWRUP Portable 24kv LT Breakers | 3/9/2023 | ASSET MANAGEMENT | - | No | In-Flight | 500,047 |
| 24CUSTOMERDEC | Customer Requested Projects | 12/30/2024 | PLACEHOLDER | - | No | Customer Commitments- | 17,616,640 |
| 24DIGRELDEC | 1009 - Replace First Generation Digital Relays | 12/30/2024 | PLACEHOLDER | - | No | Placeholder- Discrete | 1,761,664 |
| 24ELECSOLIDDEC | 1008 - Replace Electromechanical and Solid State Protection | 12/30/2024 | PLACEHOLDER |  | No | Placeholder- Discrete | 3,523,328 |
| 24FAILENGDEC | Emergent with Engineering | 12/30/2024 | PLACEHOLDER | - | No | Base-Failures, Reactive | 25,544,128 |
| 24FAILNONENGDEC | Capital Failure without Engineering | 12/30/2024 | PLACEHOLDER |  | No | Base-Failures, Reactive | 11,010,400 |
| W200381 | Central/Broad River Delivery \#20 Fl | 3/1/2023 | BUSINESS EXPANSION- | - | No | Customer Commitments- | 1,761,067 |
| 24INSTRADEC | 1015 - End of Life Instrument Transformer Replacements | 12/30/2024 | PLACEHOLDER | - | No | Placeholder- Discrete | 649,173 |
| 24INSULHRDDEC | Replace Insulator and Hardware | 12/30/2024 | PLACEHOLDER |  | No | Placeholder- Discrete | 880,832 |
| W200484 | CNS - CCVT Red Bus Repl | 4/14/2023 | ASSET MANAGEMENT | 26,838,036 | Yes | Scored | 153,861 |
| 24PROGRAMSDEC | Capital Non Program Work (Condition Based) | 12/30/2024 | PLACEHOLDER | - | No | Placeholder- Discrete | 880,832 |
| 24SPCCDEC | Program - SPCC Sites | 12/30/2024 | PLACEHOLDER | . | No | Prescripitive Compliance | 3,082,912 |
| 24TOOLSTESTDEC | Tools \& Test Equipment | 12/30/2024 | PLACEHOLDER | - | No | Base-Failures, Reactive | 1,409,331 |
| 24TOWERSDEC | 1004 - Replace Aged Lattice Steel Towers | 12/30/2024 | PLACEHOLDER | . | No | Placeholder- Discrete | 757,516 |
| 24 VEGDEC | Vegetation Management | 12/30/2024 | VEGETATION | 74,756,059 | Yes | Scored | 20,413,282 |
| 24WDXARMDEC | 1041 - Wood Cross Arm Replacements | 12/30/2024 | PLACEHOLDER | - | No | Placeholder- Discrete | 264,250 |
| 24WOODPOLEDEC | Wood Pole Program | 12/30/2024 | PLACEHOLDER |  | No | Placeholder- Discrete | 11,450,816 |
| W210265 | Valdese Ret - SRP 1024 - Breaker Re | 1/13/2023 | ASSET MANAGEMENT | 5,272,347 | Yes | Scored | 39,011 |
| W210267 | Pelzer Ret - SRP 1024 - Breaker Rep | 1/3/2023 | ASSET MANAGEMENT | 5,272,347 | Yes | Scored | 125,818 |
| W210269 | Rutherford College Ret - SRP 1024- | 1/13/2023 | ASSET MANAGEMENT | 5,272,347 | Yes | Scored | 76,222 |
| W210302 | West Region Vanquish Fences NPL | 4/27/2023 | ASSET MANAGEMENT | 34,469,546 | Yes | Scored | 1,389,945 |
| 25 CPREDEC | Placenolder - CPRE | 12/30/2025 | PLACEHOLDER | - | No | Customer Commitments- | 9,920,210 |
| 25CUSTOMERDEC | Customer Requested Projects | 12/30/2025 | PLACEHOLDER |  | No | Customer Commitments- | 16,533,684 |
| 25DIGRELDEC | 1009 - Replace First Generation Digital Relays | 12/30/2025 | PLACEHOLDER | - | No | Placeholder- Discrete | 2,480,053 |
| W210316 | SRP10XX Cathodic Protect West 2022 | 6/28/2023 | ASSET MANAGEMENT |  | No | In-Flight | 4,249,239 |
| W210338 | EMERGENT: Mooresville Tie Add Nesbi | 1/1/12023 | ASSET MANAGEMENT | - | No | Base-Failures, Reactive | 1,136,116 |
| W210350 | Eden Real Estate - SRP 1060 - Ferro | 5/30/2023 | ASSET MANAGEMENT | - | No | In-Flight | 274,734 |
| W210351 | A\&E Plant 9 - SRP 1060 - Ferrous Me | 6/15/2023 | ASSET MANAGEMENT | - | No | In-Flight | 151,633 |
| W210352 | Weil McLain Co. - SRP 1060-Ferrou | 6/23/2023 | ASSET MANAGEMENT | - | No | In-Flight | 356,718 |
| W210355 | 500kV Parkwood Line Relocation | 5/26/2023 | RELOCATIONS-T | - | No | Customer Commitments- | 11,791,340 |
| 25FAILENGDEC | Emergent with Engineering | 12/30/2025 | PLACEHOLDER | - | No | Base-Failures, Reactive | 23,973,842 |
| 25FAILNONENGDEC | Capital Failure without Engineering | 12/30/2025 | PLACEHOLDER | . | No | Base-Failures, Reactive | 10,333,553 |
| 25PROGRAMSDEC | Capital Non Program Work (Condition Based) | 12/30/2025 | PLACEHOLDER | - | No | Placeholder- Discrete | 826,684 |
| W210393 | Greenidge Generation - Transformer | 6/9/2023 | CAPACITY MAJOR | . | No | Customer Commitments- | 2,001,929 |
| 25SPCCDEC | Program - SPCC Sites | 12/30/2025 | PLACEHOLDER | - | No | Prescriptive Compliance | 1,653,368 |
| W210452 | Emergent - Marble Tie - Emergency S | 4/19/2023 | ASSET MANAGEMENT | - | No | Base-Failures, Reactive | 614,613 |
| 25TOOLSTESTDEC | Tools \& Test Equipment | 12/30/2025 | PLACEHOLDER | . | No | Base-Failures, Reactive | 1,322,695 |
| 25 VEGDEC | Vegetation Management | 12/30/2025 | VEGETATION |  | No | Vegetation | 19,732,952 |
| 25WDXARMDEC | 1041 - Wood Cross Arm Replacements | 12/30/2025 | PLACEHOLDER | - | No | Placeholder- Discrete | 248,005 |
| 25WOODPOLEDEC | Wood Pole Program | 12/30/2025 | PLACEHOLDER | - | No | Placeholder- Discrete | 4,880,316 |
| W220058 | EMERGENCY: Shattalon Sw Sta (STA137 | 3/14/2023 | ASSET MANAGEMENT | - | No | Base-Failures, Reactive | 236,090 |
| W220062 | Emergent Burton Center for Disabil | 1/31/2023 | ASSET MANAGEMENT | - | No | Base-Failures, Reactive | 1,788 |
| W220064 | SPCC Berms North Crew 90 Pleasant G | 1/3/2023 | ASSET MANAGEMENT | . | No | Prescriptive Compliance | 152 |
| 26CUSTOMERDEC | Customer Requested Projects | 12/30/2026 | PLACEHOLDER | - | No | Customer Commitments- | 15,517,301 |
| 26ELECSOLIDDEC | 1008 - Replace Electromechanical and Solid State Protection | 12/30/2026 | PLACEHOLDER | - | No | Placeholder- Discrete | 1,086,211 |
| 26 FAILENGDEC | Emergent with Engineering | 12/30/2026 | PLACEHOLDER | - | No | Base-Failures, Reactive | 22,500,086 |
| 26FAILNONENGDEC | Capital Failure without Engineering | 12/30/2026 | PLACEHOLDER | - | No | Base-Failures, Reactive | 9,698,313 |
| W220166 | Emergency Stony Knoll Solar (STA 1 | 5/26/2023 | ASSET MANAGEMENT | - | No | Base- Failures, Reactive | 839,793 |
| 260BSRTUDEC | 1010 - Replace Obsolete RTUs | 12/30/2026 | PLACEHOLDER | - | No | Placeholder- Discrete | 310,346 |
| 26PROGRAMSDEC | Capital Non Program Work (Condition Based) | 12/30/2026 | PLACEHOLDER | - | No | Placeholder- Discrete | 775,865 |
| W220199 | Emergent-Rhodhiss Tie: Replace Fail | 1/4/2023 | ASSET MANAGEMENT |  | No | Base-Failures, Reactive | 18,988 |
| 26PWTRANSDEC | 1083 - Power Transformer Replacement | 12/30/2026 | PLACEHOLDER | - | No | Placeholder- Discrete | 2,948,287 |
| 26SFABKRDEC | 1022 - Westinghouse - SF SFA LWER Breaker Replacement | 12/30/2026 | PLACEHOLDER |  | No | Placeholder- Discrete | 3,103,460 |
| 26SPCCDEC | Program - SPCC Sites | 12/30/2026 | PLACEHOLDER |  | No | Prescripitive Compliance | 775,865 |
| W220205 | Emergent Remove Foundry Tap Substat | 4/12/2023 | ASSET MANAGEMENT | - | No | Base-Failures, Reactive | 545,170 |
| 26TOOLSTESTDEC | Tools \& Test Equipment | 12/30/2026 | PLACEHOLDER | - | No | Base-Failures, Reactive | 1,241,384 |
| 26TOWERSDEC | 1004 - Replace Aged Lattice Steel Towers | 12/30/2026 | PLACEHOLDER |  | No | Placeholder- Discrete | 149,742 |
| W220211 | SRP1084 Cathodic Protect North 2023 | 6/30/2023 | ASSET MANAGEMENT | 10,346,755 | Yes | Scored | 1,253,990 |
| 26VEGDEC | Vegetation Management | 12/30/2026 | VEGETATION |  | No | Vegetation | 19,075,418 |
| 26WDXARMDEC | 1041 - Wood Cross Arm Replacements | 12/30/2026 | PLACEHOLDER | - | No | Placeholder- Discrete | 232,760 |
| 26WOODPOLEDEC | Wood Pole Program | 12/30/2026 | PLACEHOLDER |  | No | Placeholder- Discrete | 13,965,571 |
| CP16TLDN | T-Line 44kV Disconnect Retrofits | 3/13/2024 | ASSET MANAGEMENT | 1,101,485 | Yes | Scored | 51,717 |
| W220226 | Sew-Eurodrive Inc Tap - 44kV Line R | 3/11/2023 | BUSINESS EXPANSION- |  | No | Project created in | 118,357 |
| NP08841 | Auriga Polymers Inc. | 4/29/2025 | ASSET MANAGEMENT | 40,045,634 | Yes | Scored | 2,459,515 |
| W170249 | Shilho Sw Sta - Replace Station Ser | 12/30/2026 | ASSET MANAGEMENT | 26,967,726 | Yes | Scored | 638,131 |
| W180382 | Thorpe-Cashiers-Thorpe Hydro - Ligh | 3/27/2026 | ASSET MANAGEMENT | 11,481,304 | Yes | Scored | 307,497 |
| W190162 | Johnson St Dist Exit Relay Upgrade | 9/8/2025 | ASSET MANAGEMENT | 20,898,596 | Yes | Scored | 483,865 |
| W190222 | MNS PCB-8 Ext Cap Repl | 4/14/2025 | ASSET MANAGEMENT | 10,806,823 | Yes | Scored | 73,812 |
| W192057 | SRP 1015 MNS Craighead BL CCVT Repl | 4/28/2025 | ASSET MANAGEMENT | - | No | Other | 192,353 |
| W192060 | MNS Replace Arresters Woodchuck | 6/24/2026 | ASSET MANAGEMENT | . | No | Other | 495,903 |
| W192063 | MNS Replace Arresters AT1 | 6/24/2026 | ASSET MANAGEMENT | - | No | Other | 621,085 |
| W192065 | ONS Replace Arresters Dacus WH | 6/24/2026 | ASSET MANAGEMENT | . | No | Other | 315,557 |
| W192068 | ONS Replace Arresters Keowee | 6/25/2026 | ASSET MANAGEMENT | - | No | Other | 469,362 |
| W192073 | SRP 1015 MNS Craighead Wh CCVT Repl | 9/24/2026 | ASSET MANAGEMENT | . | No | Other | 79,661 |
| W220348 | SPCC Berms West Crew 99 Cherokee Re | 3/31/2023 | ASSET MANAGEMENT | - | No | Prescripitive Compliance | 57,158 |
| W220354 | SPCC Berms Central Crew 2 Mooresvil | 2/13/2023 | ASSET MANAGEMENT | - | No | Prescriptive Compliance | 84,019 |
| W220355 | SPCC Berms North Crew 90 Swepsonvil | 2/22/2023 | ASSET MANAGEMENT | - | No | Prescripitive Compliance | 55,102 |

## Docket No. E-7, Sub 1276

Goggin Exhibit 2

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## Goggin Exhibit 3

# Duke Energy Carolina's <br> Response to <br> Sierra Club Data Request <br> Data Request No. 1 

Docket No. E-2, Sub 1276

Date of Request: May 9, 2023
Date of Response: May 26, 2023


CONFIDENTIAL
$X$ NOT CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to Sierra Club Data Request No. 1-12, was provided to me by the following individual(s): Alisa Ewald, Developmental Assignment, and was provided to Sierra Club under my supervision.

Jack Jirak<br>Deputy General Counsel<br>Duke Energy Carolina

## Sierra Club

Data Request No. 1
DEC Docket No. E-2, Sub 1276
Item No. 1-12
Page 1 of 2

## Request:

12. Please see the statement at page 32 of Maley's testimony that "our quantitative benefit calculation is only measuring the reliability benefits to customers."
a. Why does Duke not quantify the impact of proposed upgrades on production costs? Is that benefit accounted for in Duke's qualitative analysis? If not, why not.
b. Please confirm that transmission planners typically use production cost modeling to evaluate the benefits of proposed grid upgrades.
c. Why does Duke not quantify the value of proposed upgrades for reducing the need for generating capacity in particular locations, enabling retirement of higher cost existing resources or deferring the need for generating capacity additions. Is that benefit accounted for in Duke's qualitative analysis? If not, why not.

## Response:

Duke Energy Transmission uses Copperleaf Product Suite (CPS) to help inform capital investment decisions. Copperleaf is a decision analytics software tool used to quantify benefits associated with critical infrastructure investments. Value models are developed for each investment type with specific value measures that quantify the reliability benefits of each investment. We use the reliability measure for the quantitative measure due to inputs from ICE calculator, probability curves and other direct investment inputs. We feel this is the best way to quantitatively measure benefits for customers. While CPS has other scoring measures (ex: Health \& Safety, Environmental, Compliance), we measure those qualitatively from a benefit analysis. CPS does not have a value measure to quantify the benefits of reducing the need for generating capacity.

With respect to production cost benefits:
a. Production cost modeling occurs within the integrated resource planning (IRP) process, not within the Transmission planning process. The selection of new generation resources incorporates a transmission upgrade cost proxy for consideration of the cost of transmission system network upgrades as part of the decision making for new resources.
Transmission planning analysis ensures the safe and reliable operation of the grid based on possible future configuration and resources on the grid. The integrated resource planning process uses detailed production cost models to identify resources that may be able to overall lower the cost of the system. Because detailed production cost modeling in integrated resource planning necessitates the transmission analysis, the quantitative production benefit has been evaluated. As stated in the next sentence of the testimony, qualitative factors such as compliance risk and renewable enablement are also considered in the selection and prioritization of projects, founded on the identification of resources in the integrated resource planning process.

Sierra Club
Data Request No. 1
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Page 2 of 2
b. As stated in response to 2-9.a., transmission network upgrade cost proxies, developed from past transmission planning generator interconnection studies are used in the integrated resource planning process for selection of new resources in a least cost manner that includes production cost modeling. Thus, the transmission planning process is utilized to inform least cost integrated resource planning, including consideration of production costs.
c. Transmission projects studied may reduce the need for generating capacity in particular locations. The transmission analysis identifies the necessary operation of the proposed grid and resources to reliably operate the system. To the extent that the prospective transmission project would also be able to reduce the need for generation from otherwise less economic generation resource options to ensure safe and reliable grid operation, that would be identified and captured in transmission analysis. Overall, the retirement of an asset must not only be determined to be safe and reliable through transmission planning, but also through integrated resource planning, which factors in cost effectiveness of new resources along with the retirement of older resources.

## Goggin <br> Exhibit 4

# Duke Energy Carolina's <br> Response to <br> Sierra Club Data Request <br> Data Request No. 2 

Docket No. E-2, Sub 1276

Date of Request: June 22, 2023
Date of Response: July 3, 2023


CONFIDENTIAL
$X$ NOT CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to Sierra Club Data Request No. 2-6, was provided to me by the following individual(s): Alisa Ewald, Developmental Assignment, and was provided to Sierra Club under my supervision.

Jack Jirak
Deputy General Counsel
Duke Energy Carolina

Sierra Club
Data Request No. 2
DEC Docket No. E-2, Sub 1276
Item No. 2-6
Page 1 of 1

## Request:

6. Please list all transmission projects that have been completed in the last five (5) years that were identified through NCTPC planning.

## Response:

All completed projects reported up through the NCTPC in the last five years were first identified through DEC's internal NERC TPL Standard analysis for reliability or generator interconnection. Therefore, there are no projects completed in the last five years that were identified by NCTPC analysis, without first being identified through DEC's bottom-up internal analysis.

## Goggin Exhibit 5

# Duke Energy Carolina's <br> Response to <br> Sierra Club Data Request <br> Data Request No. 2 

Docket No. E-2, Sub 1276

Date of Request: June 22, 2023
Date of Response: July 3, 2023


CONFIDENTIAL
$X$ NOT CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to Sierra Club Data Request No. 2-7, was provided to me by the following individual(s): Alisa Ewald, Developmental Assignment, and was provided to Sierra Club under my supervision.

Jack Jirak
Deputy General Counsel
Duke Energy Carolina

Sierra Club
Data Request No. 2
DEC Docket No. E-2, Sub 1276
Item No. 2-7
Page 1 of 1

## Request:

7. Please list all transmission projects that have been completed in the last five (5) years that were identified through SERTP planning.

## Response:

All completed projects reported up through the SERTP in the last five years were first identified through DEC's internal NERC TPL Standard analysis for reliability or generator interconnection. Therefore, there are no projects completed in the last five years that were identified by SERTP analysis, without first being identified through DEC's bottom-up internal analysis.

## Goggin Exhibit 6

# Duke Energy Carolina's <br> Response to <br> Sierra Club Data Request <br> Data Request No. 1 

Docket No. E-2, Sub 1276

Date of Request: May 9, 2023
Date of Response: May 24, 2023


CONFIDENTIAL
X NOT CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to Sierra Club Data Request No. 1-6, was provided to me by the following individual(s): Alisa Ewald, Developmental Assignment, and was provided to Sierra Club under my supervision.

Jack Jirak
Deputy General Counsel
Duke Energy Carolina

## Sierra Club

Data Request No. 1
DEC Docket No. E-2, Sub 1276
Item No. 1-6
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## Request:

6. For each of the "Capacity and Customer Planning" upgrades listed on page 14 of Maley Exhibit 3, please:
a. List the resulting steady state and emergency rating of that facility in MVA or MW once the upgrade is complete.
b. For upgrades to existing lines or equipment, please also provide the current steady state and emergency rating of that facility in MVA or MW.

## Response:

Summer MVA ratings for a. (future ratings) and b. (existing ratings) are shown in the table on attachment "Sierra Club 1-6 table.docx" for the capacity and customer planning upgrades. DEP generally uses the same rating for continuous and emergency ratings, so the numbers below represent both. (This may change in the future as DEP develops plans to comply with FERC (Federal Energy Regulatory Commission) Order 881.) Projects showing " $\mathrm{n} / \mathrm{a}$ " (not applicable) are eliminating critical contingencies rather than increasing capacity. Capacitor projects list the future Mvar rating of the capacitor.

Sierra Club
Duke Energy Carolinas, LLC
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| Project Name | Existing Rating <br> (MVA) <br> Cont/emer | Future Rating (MVA) Cont/emer |
| :---: | :---: | :---: |
| Wilkes Tie 230kV Capacity Expansion - adding new autotransformer | 0 since the future is a new 230-100 kV transformer | 448/448 |
| Stamey Tie - Add Redundant Bus Protection | n/a | n/a |
| Shady Grove Tie - Add Redundant Bus Protection | n/a | n/a |
| Winecoff Tie - Overduty Breakers | n/a | n/a |
| N Greenville Tie - Bus Junction Breakers | n/a | n/a |
| Ripp Switching Station - Overduty Breakers | n/a | n/a |
| Pleasant Garden Tie - Add Redundant Bus Protection | n/a | n/a |
| Cokesbury 100kV - Line Rebuild (double circuit) | 117/129 (twice) | 242/282 (twice) |
| Eno Tie 230kV - Bus Junction Breakers | n/a | n/a |
| Rural Hall Tie - Overduty Breakers | n/a | n/a |
| Monroe 100kV - Line Rebuild (going back with double circuit) | 58/65 | 242/282 (twice) |
| Coronaca 100kV Line - Add 2nd Circuit | 109/120 | 109/120 (twice) |
| Sevier 100kV - Line Rebuild (double circuit) | 120/132 | 288/288 (twice) |
| Page and Guilford 100kV - Line Rebuild (two double circuits) | 183/234 (four) | 368/368 (four) |
| Lee and Piedmont 100kV - Line Uprate for Capacity RZEP (two double circuits) | 112/120 (four) | 368/368 (four) |
| Indianland Retail Tap - Line Rebuild (the 44 kV line has been inactive for years. Indianland Ret was previously converted to 100 kV . However, that 100 kV source was actually a 230 kV line energized at 100 kV . This project is part of a larger project to extend 100 kV so that Duke can use the 230 kV line (energized at 100 kV ) as a 230 kV line. | See explanation to left |  |
| Cel-River to Indianland 44 kV - New Line (new line is misleading, this is really an extension of an existing line - no new capacity). Part of the bigger project mentioned in the row above. | See explanation to left |  |
| Pisgah Tie - Bus Junction Breakers | n/a | n/a |
| Newport Tie - Reliability Upgrade | n/a | n/a |

## Goggin Exhibit 6

Sierra Club
Duke Energy Carolinas, LLC
Sierra Club Data Request No. 1
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| Oakboro Tie - Reliability Upgrade | n/a | n/a |
| :---: | :---: | :---: |
| Union Delivery 16 Station - Breaker Station | n/a | n/a |
| RRB Beverage Operations - New Customer Substation | 0 since the future is new banks | Unclear, customer has not settled on initial load |
| Toyota Battery Manufacturing - New Customer Substation | 0 since the future is new banks | 56/56 (twice) |
| Charlotte Water Stowe WWTF - New Customer Substation | 0 since the future is new banks | $\begin{aligned} & \text { 1) 11.2/14MVA, } \\ & 44 / 12.47 \mathrm{kV} \\ & \hline \end{aligned}$ |
| Kennedy Lines - Remedial Action Scheme (RAS) | n/a | $\mathrm{n} / \mathrm{a}$ |
| Walmart Cold Storage - New Customer Substation | 0 since the future is new banks | 22.4/29.86/37.33 MVA, 101.25-24.94 kV |
| Bethania Lines - Remedial Action Scheme (RAS) | n/a | n/a |
| Clinton 100kV - Line Uprate for Capacity - RZEP | 58/65 (twice) | 368/368 (twice) |
| Newberry 115kV - Line Uprate for Capacity - RZEP | 79/79 (twice) | 278/324 (twice) |
| Enbridge - New Customer Substation | 0 since the future is new banks | No transformers, taking 100 kV |
| Buckhorn 44kV Piedmont EMC Tap Line - Line Rebuild | Since there was no 100 kV tap line before this is 0 MVA | 143/165 |

## Goggin Exhibit 7

# Duke Energy Carolina's <br> Response to <br> Sierra Club Data Request <br> Data Request No. 2 

Docket No. E-2, Sub 1276

Date of Request: June 22, 2023
Date of Response: July 3, 2023


CONFIDENTIAL
$X$ NOT CONFIDENTIAL

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to Sierra Club Data Request No. 2-1, was provided to me by the following individual(s): Alisa Ewald, Developmental Assignment, and was provided to Sierra Club under my supervision.

Jack Jirak
Deputy General Counsel
Duke Energy Carolina

Sierra Club
Data Request No. 2
DEC Docket No. E-2, Sub 1276
Item No. 2-1
Page 1 of 1

## Request:

1. For the period January 1, 2021, to the date of your response, please provide a copy of all reports, evaluations, memoranda, studies, analyses, or other written documents of any kind prepared or relied on to assess Duke's engineering capabilities and/or limitations in implementing the transmission upgrades and expansion required to achieve HB 951's carbon mandates.

## Response:

The Company is not aware of any reports, evaluations, memoranda, studies, analyses, or correspondences prepared or relied on to assess Duke's engineering capabilities or limitations in implementing the transmission upgrades in the carbon plan, and more specifically for the projects included in the MYRP.
The type of work we the Company is executing in the MYRP is consistent with the work that Transmission has always executed, including new and upgraded transmission lines, substations, and generation interconnections.

## Goggin Exhibit 8

# Duke Energy Carolina's <br> Response to <br> Sierra Club Data Request <br> Data Request No. 1 

Docket No. E-2, Sub 1276

Date of Request: May 9, 2023
Date of Response: May 24, 2023


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$X$ NOT CONFIDENTIAL

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The attached response to Sierra Club Data Request No. 1-16, was provided to me by the following individual(s): Alisa Ewald, Developmental Assignment, and was provided to Sierra Club under my supervision.

Jack Jirak<br>Deputy General Counsel<br>Duke Energy Carolina

Sierra Club
Data Request No. 1
DEC Docket No. E-2, Sub 1276
Item No. 1-16
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## Request:

16. When selecting projects for inclusion in the MYRP plan, does Duke account for interactions among the projects that can change the calculated benefits for each project and the total portfolio of projects? If so, how does Duke account for that interaction. If not, why not?

## Response:

From a quantitative standpoint, projects are scored individually. The benefits of each project are based on the specific inputs for the investment as well as the planned in-service date. The selection of the MYRP projects was generated by the Subject Matter Experts (SME) from Transmission Asset Management and Transmission Planning sponsors who identify work based on a variety of inputs. Transmission uses reliability metrics of SAIDI (Outage duration) and OHMY-SA (Outage frequency) as one input shaping capital investment needs. Other considerations are public safety, environmental threats, security risk, financial risk, etc. Each project scope is quantitatively evaluated in Copperleaf Product Suite to help inform capital investment decisions, develop a Cost Benefit Analysis (Maley Exhibit 3), and aid with prioritization against other projects. These SMEs, in conjunction with the Project Management team, are ultimately responsible for prioritizing all projects to be included in the MYRP, based on identifiable, discrete projects within the MYRP timeframe.

Duke is not aware of a means of or a substantial benefit to calculating revised benefit scores based on the interaction of various projects. Qualitatively though, the entire project portfolio is reviewed to ensure it complements and balances the needs of the Transmission system.

## Goggin Exhibit 9

# Duke Energy Carolina's <br> Response to <br> Sierra Club Data Request <br> Data Request No. 1 

Docket No. E-2, Sub 1276

Date of Request: May 9, 2023
Date of Response: May 24, 2023


CONFIDENTIAL
X NOT CONFIDENTIAL

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The attached response to Sierra Club Data Request No. 1-15, was provided to me by the following individual(s): Alisa Ewald, Developmental Assignment, and was provided to Sierra Club under my supervision.

Jack Jirak<br>Deputy General Counsel<br>Duke Energy Carolina

Sierra Club
Data Request No. 1
DEC Docket No. E-2, Sub 1276
Item No. 1-15
Page 1 of 1

## Request:

15. Please describe Duke's process for evaluating the costs and benefits of upgrades to transmission ties with other Balancing Authorities for potential inclusion of those projects in the MYRP? If Duke does not have a process for including transmission ties with other Balancing Authorities in the MYRP, why not?

## Response:

Tie line projects would be identified through transmission planning studies. These projects, if identified, will be included in future MYRPs and an associated cost/benefit analysis will be provided. There are none of these types of projects included in the current MYRP.

CURRICULUM VITAE<br>LANCE KAUFMAN<br>Western Economics, LLC<br>2623 NW Bluebell Place<br>Corvallis OR, 97330<br>(541) 515-0380<br>lance@westernecon.com

## EDUCATION:

University of Oregon
University of Oregon
University of Anchorage Alaska

| Ph.D. | Economics | $2008-2013$ |
| :--- | :--- | :--- |
| M.S. | Economics | $2006-2008$ |
| B.B.A. | Economics | $2001-2004$ |

## CERTIFICATIONS:

Certified Depreciation Professional
Society of Depreciation Professionals
2018

## PROFESSIONAL EXPERIENCE:

Consultant
Senior Economist
Public Utility Advocate
Senior Economist
Instructor
Research Assistant

| Lance Kaufman Consulting | $2014-$ Present |
| :--- | :--- |
| Oregon Public Utility Commission | $2015-2018$ |
| Alaska Department of Law | $2014-2015$ |
| Oregon Public Utility Commission | $2013-2014$ |
| University of Oregon | $2008-2012$ |
| University of Alaska Anchorage | $2003-2008$ |

## PROFESSIONAL MEMBERSHIPS:

Society of Depreciation Professionals
2015 - Present
American Economics Association
RESEARCH, CONSULTING, AND ECONOMETRIC ANALYSIS:

- Davison Van Cleve, PC, Portland, OR 2022

Retained as an expert witness for Alliance of Western Energy Consumers regarding revenue requirement, rate spread, and rate design in Portland General Electric Company, Request for a General Rate Revision, Public Utility Commission of Oregon, Docket No. UE 394.

- Davison Van Cleve, PC, Portland, OR 2022

Retained as an expert witness for Alliance of Western Energy Consumers regarding depreciation rates in Portland General Electric Company Detailed Depreciation Study of Electric Utility Properties, Public Utility Commission of Oregon, Docket No. UM 2152.

- Davison Van Cleve, PC, Portland, OR 2022

Retained as an expert witness for Alliance of Western Energy Consumers regarding revenue requirement, rate spread, and rate design in Pacific Power Request for a General Rate Revision, Public Utility Commission of Oregon, Docket No. UE 399.

- Davison Van Cleve, PC, Portland, OR 2022

Retained as an expert witness for Alliance of Western Energy Consumers regarding revenue requirement, rate spread, and rate design in Puget Sound Energy General Rate Case to Update Base Rates, Washington Utility and Transportation Commission, Docket No. UE-220066, UG-220067, UE-210918.

- Davison Van Cleve, PC, Portland, OR 2022

Retained as an expert witness for Alliance of Western Energy Consumers competitive energy service in AWEC's Investigation into Long-Term Direct Access Programs, Public Utility Commission of Oregon, Docket No. UM 2024.

- Davison Van Cleve, PC, Portland, OR 2021

Retained as an expert witness for Alliance of Western Energy Consumers competitive energy service in Direct Access Rulemaking, Public Utility Commission of Oregon, Docket No. AR 651.

- Davison Van Cleve, PC, Portland, OR 2022

Retained as an expert witness for Smart Energy Alliance regarding revenue requirement, rate spread, and rate design in Sierra Pacific General Rate Case to Update Base Rates, Public Utility Commission of Nevada, Docket No. 22-06014.

- Davison Van Cleve, PC, Portland, OR 2022

Retained as an expert witness for Alliance of Western Energy Consumers regarding revenue requirement, rate spread, and rate design in Avista Corp General Rate Case to Update Base Rates, Washington Utility and Transportation Commission, Docket No. UE-220053 \& UG-220054.

- Georgia Public Service Commission, OR 2022

Retained as an expert witness for Georgia Public Service Commission depreciation rates and decommissioning costs in Georgia Power Company's 2022 General Rate Case, Georgia Public Service Commission, Docket No. 44280.

- Cable Huston, LLP, Portland, OR 2020

Retained as an expert witness for Alliance of Western Energy Consumers regarding revenue requirement, rate spread and rate design in Cascade Natural Gas Corporation Request for General Rate Revision, Public Utility Commission of Oregon, Docket No. UG 390 .

- Davison Van Cleve, PC, Portland, OR 2020

Retained as an expert witness for Alliance of Western Energy Consumers regarding net power costs in Portland General Electric Company 2021 Annual Power Cost Update Tariff, Public Utility Commission of Oregon, Docket No. UE 377.

- Davison Van Cleve, PC, Portland, OR 2020

Retained as an expert witness for Alliance of Western Energy Consumers regarding net power costs in Portland General Electric Company 2021 Annual Update Tariff, Public Utility Commission of Oregon, Docket No. UE 381.

- Davison Van Cleve, PC, Portland, OR 2020

Retained as an expert witness for Alliance of Western Energy Consumers regarding revenue requirement, rate spread and rate design in Nevada Power Company 2021 General Rate Case, Public Utility Commission of Nevada, Docket No. 20-06003

- Frank \& Salahuddin LLC, Denver, Colorado, 2020

Retained as an expert witness for plaintiffs regarding calculation of lost earnings.

- ba, Denver, Colorado, 2020

Retained as an expert witness for plaintiffs regarding calculation of lost earnings.

- Level Development Group, LLC, Denver, Colorado, 2020

Develop real estate valuation model for establishing sale price of newly constructed residential housing.

- Hagens Berman Sobol Shapiro LLP, Phoenix, Arizona, 2020
- Killmer, Lane, and Newman, LLP, Denver, Colorado, 2020

Deposed as expert witness for plaintiff re racial disparities in police use of force re Brandon Washington V. City Of Aurora, Colorado, Case No. 1:19-cv-01160-
RM-MEH, United States District Court, District of Colorado.

- Davison Van Cleve, PC, Portland, OR 2020

Retained as an expert witness for Alliance of Western Energy Consumers regarding coal plant pollution control investments, coal plant decommissioning costs, rate spread and rate design re PacifiCorp 2020 Request for a General Rate Revision, Public Utility Commission of Oregon Docket No. UE 374.

- Davison Van Cleve, PC, Portland, OR and Washington Attorney General, 2020

Retained as an expert witness for Packaging Company of America and Washington Public Council regarding decommissioning costs and rate design re PacifiCorp 2020 Request for a General Rate Revision, Washington Utility and Transportation Commission.

- Sanger Law, PC, Portland, OR, 2019

Retained as a consultant for Renewable Energy Coalition and for Northwest \& Intermountain Power Producers Coalition to provide analysis of PacifiCorp avoided costs in a Utility PURPA Compliance Filing at the Washington Utility and Transportation Commission Docket, No. UE-190666.

- Sanger Law, PC, Portland, OR, 2019

Retained as a consultant for Northwest \& Intermountain Power Producers Coalition to provide analysis of Portland General Electric avoided costs in support of testimony to the Oregon Legislature.

- Powder River Basin Resource Council, Laramie, Wyoming, 2019.

Testified as an expert witness for Powder River Basin Resource Council regarding coal plant closures re PacifiCorp 2019 Integrated Resource Plan, Wyoming Public Service Commission Docket No. 90000-147-XI-19.

- The Law Office of Ralph Lamar, Arvada, CO 2019

Deposed as an expert witness for plaintiffs regarding lost profits of a Farmers insurance agency

- Jester, Gibson \& Moore, Denver, CO 2019

Retained as an expert witness for plaintiffs regarding lost earnings in an ADEA wrongful termination matter.

- Albrechta \& Coble, Ltd. Fremont, OH 2019

Retained as an expert witness for plaintiff regarding lost earnings in a race related wrongful termination matter.

- Conrad Law, PC, Salt Lake City, UT 2019

Retained as an expert witness for Ellis-Hall Consultants, LLC. regarding economic damages in Ellis-Hall Consultants, LLC. et. al. v. George B. Hofmann IV, United States District Court, District of Utah, Central Division.

- Davison Van Cleve, PC, Portland, OR 2019

Retained as an expert witness for Alliance of Western Energy Consumers regarding net variable power cost calculations in PORTLAND GENERAL ELECTRIC COMPANY, 2020 Annual Power Cost Update Tariff Public Utility Commission of Oregon Docket No. UE 359.

- Sanger Law, PC, Portland, OR, 2019

Testified as an expert witness for Renewable Energy Coalition and Rocky Mountain Coalition for Renewable Energy regarding Qualified Facility avoided costs in Application of Rocky Mountain Power for a Modification of Avoided Cost Methodology and Reduced Term of PURPA Power Purchase Agreements Public Service Commission of Wyoming Docket No. 20000-545-ET-18

- Sanger Law, PC, Portland, OR, 2019

Retained as an expert witness for Cafeto Coffee Company regarding the necessity, design, and location of transmission lines in SPRINGFIELD UTILITY BOARD Petition for Certificate of Public Convenience and Necessity Public Utility Commission of Oregon Docket No. PCN 3.

- Baumgartner Law, LLC, Denver, CO, 2018

Retained as an expert witness for plaintiffs re calculation of economic harm due to injury in re Eric Bowman, v. Top Tier Colorado, LLC., Case No. 18CV31359, United States District Court, District of Colorado.

- Cohen Milstein Sellers \& Toll PLLC, Washington DC, 2018

Retained as an expert witness for plaintiffs re calculation of economic harm due to breach of contract in re Isaac Harris et al. v. Medical Transportation Management, Inc., Civil Action No. 17-1371, United States District Court, District of Columbia.

- Davison Van Cleve, PC, Portland, OR 2020

Retained as an expert witness for Alliance of Western Energy Consumers regarding depreciation rates in re PacifiCorp Application for Authority to Implement Revised Depreciation Rates, Public Utility Commission of Oregon Docket No. UM 1968.

- Davison Van Cleve, PC, Salem, OR and Washington Attorney General, OR 2020

Retained as an expert witness for Packaging Company of America and Washington Public Council regarding depreciation rates in re Pacific Power 2018 Depreciation Study, Washington Utility and Transportation Commission, Docket No. UE-180778.

- Hagens Berman Sobol Shapiro LLP, Phoenix, Arizona, 2018

Deposed as an expert witness for plaintiffs re calculation of economic harm due to breach of contract in re Vicky Maldonado and Carter v. Apple Inc., AppleCare Services

Company. Inc., and Apple CSC. Inc., Case No. 3:16-cv-04067-WHO, United States District Court, District of California.

- Hagens Berman Sobol Shapiro, LLP, Phoenix, Arizona, 2018

Deposed and testified as an expert witness for plaintiffs re calculation of unpaid mileage for truck drivers in re Swift Transportation Co., Inc., Civil Action No. CV2004-001777, Superior Court of the State of Arizona, County of Maricopa.

- Killmer, Lane, and Newman, LLP, Denver, Colorado, 2018

Retained as expert witness for plaintiffs re reasonable attorney fees in re Jeanne Stroup and Ruben Lee, v. United Airlines, Inc., Case No. 15-cv-01389-WYD-STV, United States District Court, District of Colorado.

- Klein and Frank, PC, Denver, Colorado, 2018

Retained as expert witness for plaintiffs re potential jury bias in re Gail Goehrig and Chris Goehrig v. Core Mountain Enterprises, LLC, Case No. 2016CV030004, San Juan County District Court.

- Robert Belluso, Pennsylvania, 2017

Retained as expert witness for plaintiff re lost profit in re Robert Belluso D.O. v Trustees of Charleroi Community Park, PHRC Case No. 201505365, Pennsylvania Human Relations Commission.

- Lowery Parady, LLC, Denver, Colorado, 2017

Analyzed payroll data and calculated unpaid overtime and unpaid hours for plaintiff class action in re Violeta Solis, et al. v. The Circle Group, LLC, et al., Case No. 1:16-cv-01329-RBJ, United States District Court, District of Colorado.

- Sawaya \& Miller Law Firm, Denver, Colorado, 2017

Provided data processing and analysis of employment records.

- Financial Scholars Group, Orinda, California, 2017

Provided analysis of risk profile in bundled real estate and personal loans in re Old Republic Insurance Company v. Countrywide Bank et al., Circuit Court of Cook County, Illinois, Chancery Division.

- Financial Scholars Group, Orinda, California, 2017

Provided consultation and analysis of financial market transactions in preparation of settlement claims filings in re Laydon v. Mizuho Bank, Ltd., et al. and Sonterra Capital Master Fund Ltd., et al v. UBS AG et al.

- Clean Energy Action, Boulder, Colorado, 2016-2017

Provided consultation on the appropriate discounting methodology used in energy resource planning in the Public Service Company of Colorado application for approval of the 2016 Electric Resource Plan, Proceeding No. 16A-0396E, Public Utilities Commission of the State of Colorado.

- Confidential Client, 2016

Provided analysis and report on the probability that distinct crimes are independent events based on geographical analysis of crime rates.

- Christine Lamb and Kevin James Burns, Denver, Colorado, 2016

Provided data analysis for defendant of the impact of ethnicity on termination decisions in re Aragon et al v. Home Depot USA, Inc., Case No. 1:15-cv- 00466-MCA-KK, United States District Court, District of New Mexico.

- Steptoe \& Johnson LLP, Washington, DC, 2015 - 2016

Programmed analysis of internet traffic data for plaintiffs applying a proprietary probability model developed to identify and verify accounts responsible for repeated infringements of asserted copyrights by defendants' internet subscribers in re BMG Rights Management (US) LLC, and Round Hill Music LP v. Cox Enterprises, Inc., et al., Case No. 1:14-cv-1611(LOG/JFA), United States District Court Eastern District of Virginia, Alexandria Division.

- Padilla \& Padilla, PLLC, Denver, Colorado, 2014-2016

Provided research and analysis for plaintiffs re the impact on minority applicants from use of the AccuPlacer Test by the City and County of Denver, and estimated damages in re Marian G. Kerner et al. v. City and County of Denver, Civil Action No.
11-cv-00256-MSK-KMT, United States District Court, District of Colorado.

- U.S. Equal Employment Opportunity Commission, 2013

Provided statistical analysis of EEOC filings.

## OTHER REGULATORY PROCEEDINGS:

- Portland General Electric 2016 Annual Power Cost Variance Docket No. UE 329.
- PacifiCorp 2016 Power Cost Adjustment Mechanism Docket No. UE 327.
- Public Utility Commission of Oregon Staff Investigation into the Treatment of New Facility Direct Access Charges Docket No. UM 1837
- PacifiCorp Oregon Specific Cost Allocation Investigation Docket No. UM 1824.
- PacifiCorp 2018 Transition Adjustment Mechanism Docket No. UE 323.
- Portland General Electric 2018 General Rate Case Docket No. UE 319.
- Avista Corp. 2017 General Rate Case Docket No. UG 325.
- Portland General Electric Affiliated Interest Agreement with Portland General Gas Supply Docket No. UI 376.
- Portland General Electric 2017 Automated Update Tariff Docket No. UE 308
- PacifiCorp 2017 Transition Adjustment Mechanism Docket No. UE 307
- Portland General Electric 2017 Reauthorization of Decoupling Adjustment Docket No. UE 306
- Northwest Natural Gas Investigation of WARM Program Docket No. UM 1750.
- PacifiCorp Investigation into Multi-Jurisdictional Allocation Issues Docket No. UM 1050.
- Idaho Power Company 2015 Power Supply Expense True Up Docket No. UE 305
- Homer Electric Association 2015 Depreciation Study U-15-094
- Submitted prefiled testimony regarding the depreciation study.
- Chugach Electric Association 2015 Rate Case U-15-081
- Developed staff position regarding margin calculations.
- ENSTAR 2014 Rate Case U-14-111
- Submitted prefiled testimony regarding sales forecast.
- Alaska Pacific Environmental Services 2014 Rate Case U-14-114/115/116/117/118

Submitted prefiled testimony regarding cost allocations, cost of service, cost of capital, affiliated interests, and depreciation.

- Alaska Waste 2014 Rate Case U-14-104/105/106/107

Submitted prefiled testimony regarding cost of service study, cost of capital, operating ratio, and affiliated interest real estate contracts.

- Fairbanks Natural Gas 2014 Rate Case U-14-102

Submitted prefiled testimony regarding cost of service study and forecasting models.

- Avista 2015 Rate Case U-14-104

Submitted analysis supporting OPUC Staff settlement positions regarding Avista's sales and load forecast, decoupling mechanisms and interstate cost allocation methodology. Represented Staff in settlement conferences on November 21, November 26, and December 4, 2013.

- Portland General Electric 2015 Rate Case

Submitted pre-filed opening testimony addressing PGE's sales forecast, printing and mailing budget forecast, mailing budget, marginal cost study, line extension policy and reactive demand charge. Represented OPUC Staff in settlement conferences on May 20, May 27, and June 12, 2014.

- Portland General Electric 2014 General Rate Case

Submitted analysis supporting OPUC Staff settlement positions regarding PGE's sales and load forecast, revenue decoupling mechanism, and cost of service study. Represented OPUC Staff in settlement conferences on May 29, June 3, June 6, July 2, and July 9 of 2013. Submitted testimony in support of partial stipulation, pre-filed opening testimony addressing PGE's decoupling mechanism, and testimony in support of a second partial stipulation.

- PacifiCorp 2014 General Electric Rate Case

Submitted analysis supporting OPUC Staff settlement positions regarding PacifiCorp's sales and load forecast and cost of service study. Represented Staff in settlement conferences on June 12 through June 14, 2013.



| $\begin{aligned} & \text { Public } \\ & \text { Staff } \\ & \text { Line No. } \end{aligned}$ | $\begin{aligned} & \begin{array}{l} \text { Walsh } \\ \text { Supp Ex } \end{array} \end{aligned}$ | mvRP Project Name | $\begin{gathered} \text { MVRP Funding } \\ \text { Project \# } \end{gathered}$ | Plant | Ferclicense | $\begin{aligned} & \text { Max Incentive } \\ & \text { (SM) } \end{aligned}$ | $\begin{gathered} \text { Imputed } \\ \text { Incentive (SM) } \end{gathered}$ | 40331 Section <br> $\begin{array}{l}\text { Hydroelectric } \\ \text { Provacion } \\ \text { Incentives } \\ \text { Program } \\ \text { Proposal Re: } \\ \text { Jeff Thomas } \\ \text { Testimony }\end{array}$ | 40331 Section 242 . <br> Duke Energy Rationale for not putting in applications | 40332. Section 223 <br> Hydrolectric <br> Efficiency <br> Impovement <br> Incentives <br> Program Proposal <br> Re: Jeff Thomas <br> Testimony | 40332 Section 243 - Duke Energy Rationale for not putting in applications | 40333 Section 247 Maintaining \& Enancing Hydroelecticity Incentives Program Proposal Re: Jeff Thomas Testimony | 40333 Section 247. <br> Duke Energy Rationale for not putting in applications |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 28 | 112 | FFRC Queens Creek PMF Wall Raise Dam Crest | acooooz1 | Quens creek | Quens creek | 0.5 | 0.5 | No | - | No | - | Yes |  |
| 29 | 113 | Bad Creek Tie Back Wall Anchor System | BA003109 | Bad Creek | ${ }^{\text {Bad Creek }}$ | 1.1 | 1.1 | No | - | No | - | Yes |  |
| 30 | 120 | Ferc Ninety Nine Island PICXHILL RECONFGURAT | innooos4 | 99 Llands | Ninety-Nine Isands | 0.4 | 0.4 | No | - | No | - | Yes |  |
| 31 | 121 | FERC Cowans Ford Beatrys Ford Swim Area | croor215 | Cowans ford | Catawba-Wateree | 1.3 | 1.0 | No | - | No | - | Yes |  |



```
Amortize Rate Case Costs
Aor the Tat Period Ending December 31, 2021
Amounts in dollars)
Calculation of Additional Rate Case Expenses associated with Docket No. E-7 Sub 1214
```

Account \& Descr: 0186195 - DEFERRED RATE CASE EXPENSE OU \& Descr: NCRD - Carolinas Rates - DEC
Process: NCRC18 and NCRTCSE
Line
No.
No.
1

Year Total actual North Carolina rate case expenses from Docket No. E-7 Sub 1214 through January 2020 capital cutoff - Process: NCRC18 and NCRTCSE
Feb 2020
Apr 2020
May 2020
Jun 2020
Jul 2020
Aug 2020
Sep 2020
Oct 2020
Dec 2020
Jan 2021
Feb 2021
Feb 2021
Mar 2021
Mpr 2021
Apr 2021
Jun 2021
Jul 2021
Aug 2021
Aug 202
Sep 2021
Nov 2021
Dec 2021

## Subtotal 2021 expenses

iopeption
reption
Less: Revenue requirement for rate case costs in Docket No E-7, Sub 214 per Order
otal remaining requested for recovery for rate case expenses incurred for Docket No. E-2 Sub 1214 - February 2020 through December 2021 excludes accruals
[1] Represents actual costs from prior rate case Docket No. E-7 Sub 1214, NC-1600. [2] Represents NCRC18 costs since the initial capital cutoff in Docket No E-7 Sub 1214 3] Represents costs incurred to date for rate case costs in Docket No. E-7 Sub 1214 4] NC-1600 - Docket No. E-7 Sub 1214

TOTAL

| \$ | 3,185,504 |
| :---: | :---: |
| \$ | 413,901 |
| \$ | 373,452 |
| \$ | 948,366 |
| \$ | 910,408 |
| \$ | 425,187 |
| \$ | 205,623 |
| \$ | 552,057 |
| \$ | 709,794 |
| \$ | 899,793 |
| \$ | 1,073,011 |
| \$ | 484,723 |
| \$ | 6,996,314 [2] |
| \$ | $(12,269)$ |
| \$ | 401,298 |
| \$ | 112,088 |
| \$ | 91,142 |
| \$ | 44,469 |
| \$ | 84,914 |
| \$ | 27,354 |
| \$ | 32,888 |
| \$ | 18,253 |
| \$ | 6,902 |
| \$ | 9,674 |
| \$ | (3781) |
| \$ | 812,933 [2] |

# Reconcilation of Actual Costs Incurred to the Settlement by Time Period 

|  | Per ttlement greement | Actuals [5] | Variance |
| :---: | :---: | :---: | :---: |
| \$ | 3,185,504 | 3,185,504 | \$ - |
|  | 819,496 | 3,276,936 | 2,457,440 |
|  |  | \$ 3,719,378 | 3,719,378 |
|  |  | \$ 812,933 | 812,933 |
| \$ | 4005000 | \$ 10994751 | 6989751 |

```
Docket No. E-7, Sub }12
Amortize rate case costs
For the test period ended December 31, 2018
(Dollars in thousands)
NC Retail Rate Case Expenses Incurred/Projected Through July 2020
Account & Descr: 0186195 - DEFERRED RATE CASE EXPENSE
OU & Descr: NCRD - Carolinas Rates - DEC
Process: NCRTCSE
Line
No. Description
Oct 2018
    Nov 2018
    Sec 2018
        ubtotal 2018 expenses
        Jan 2019
        Feb 2019
        Mar 2019
8
9
11 Jul 2019
11 Jul 2019
3 Sep 2019
14 Oct 2019
15 Nov 2019
16 Dec 2019
17 Jan 2020
18 Actuals Total 4, 462,949
18 Actuals Total 
20 Total NC rate case expenses
    Total
    NC Retail
2 Nov 2018
41,548
#018 expenses 32,42
4 S $ $ $ % 117,570
43,637
53,693
127,569
98,599
125,597
233,563
208,441
256,128
256,128
270,932
535,900
392,571
3,185,504
819,496 [1]
[1] Duke Energy Carolinas - Rate Case Charges and Projection Summary
```

| Company Application | Public Staff Recommendation | Order |
| :---: | :---: | :---: |
| Docket E-7 Sub 989 |  |  |
| Test year 1/1/10-12/31/10 |  |  |
| Calculated 13 month average change in CPI and PPI compared to the last month of the test period. | Calculated 13 month average change in CPI and PPI compared to the last month of the test period. (Witness Peedin) | Calculated 13 month average change in CPI and PPI compared to the last month of the test period. Agreed to adjustment in Settlement. |
| Docket E-7 Sub 1026 |  |  |
| Test year 7/1/11-6/30/12 |  |  |
| Calculated 13 month average change in CPI and PPI compared to the last month of the test period. | Calculated 13 month average change in CPI and PPI compared to the last month of the update period. (Witness Fernald) | Calculated 13 month average change in CPI and PPI compared to the last month of the update period. Agreed to Public Staff methodology in settlement. |
| Docket E-7 Sub 1146 |  |  |
| Test year 1/1/16-12/31/16 |  |  |
| Calculated 13 month average change in CPI and PPI compared to the last month of the test period. | Calculated 13 month average change in CPI and PPI compared to the last month of the update period. (Witness Boswell) | Calculated 13 month average change in CPI and PPI compared to the last month of the update period. Agreed to Public Staff methodology in McManeus Rebuttal testimony. |
| Docket E-7 Sub 1214 |  |  |
| Test year 1/1/18-12/31/18 |  |  |
| Calculated 13 month average change in CPI and PPI compared to the last month of the test period. | Calculated 13 month average change in CPI and PPI compared to the last month of the update period. (Witness Boswell) | Calculated 13 month average change in CPI and PPI compared to the last month of the update period. Agreed to Public Staff methodology in settlement. |
| Docket E-7 Sub 1276 |  |  |
| Test year 1/1/21-12/31/21 |  |  |
| Calculated 13 month average change in CPI and PPI compared to the last month of the update period. This calculation aligns with rebuttal or settlement position of last three cases. | Calculated the year over year average change for 61 months (2018-2023), then averaged those 61 months together. (Accounting Panel Boswell, Zhang) |  |

Application of CCR ARO Over Amortizations
(Dollars in thousands)

NC Retail Calculation of Over-amortizations

The Company is proposing the use the overamortization of regulatory assets associated with tranche 1 of CCR ARO recovery as ordered in E-7, Sub 1146 (NC1800F) to offset the amounts being requested for tranche 2 of CCR ARO recovery in this proceeding.

| Monthly |  |  |  | Return |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line No | Month | Amortization | WACC | Impact |  | Balance |
| 1 | 12/31/2021 |  |  |  |  | 153,176 |
| 2 | 1/31/2022 | $(8,062)$ |  |  |  | 145,114 |
| 3 | 2/28/2022 | $(8,062)$ |  |  |  | 137,053 |
| 4 | 3/31/2022 | $(8,062)$ |  |  |  | 128,991 |
| 5 | 4/30/2022 | $(8,062)$ |  |  |  | 120,929 |
| 6 | 5/31/2022 | $(8,062)$ |  |  |  | 112,867 |
| 7 | 6/30/2022 | $(8,062)$ |  |  |  | 104,805 |
| 8 | 7/31/2022 | $(8,062)$ |  |  |  | 96,743 |
| 9 | 8/31/2022 | $(8,062)$ |  |  |  | 88,681 |
| 10 | 9/30/2022 | $(8,062)$ |  |  |  | 80,619 |
| 11 | 10/31/2022 | $(8,062)$ |  |  |  | 72,557 |
| 12 | 11/30/2022 | $(8,062)$ |  |  |  | 64,495 |
| 13 | 12/31/2022 | $(8,062)$ |  |  |  | 56,433 |
| 14 | 1/31/2023 | $(8,062)$ |  |  |  | 48,371 |
| 15 | 2/28/2023 | $(8,062)$ |  |  |  | 40,310 |
| 16 | 3/31/2023 | $(8,062)$ |  |  |  | 32,248 |
| 17 | 4/30/2023 | $(8,062)$ |  |  |  | 24,186 |
| 18 | 5/31/2023 | $(8,062)$ |  |  |  | 16,124 |
| 19 | 6/30/2023 | $(8,062)$ |  |  |  | 8,062 |
| 20 | 7/31/2023 | $(8,062)$ |  |  |  | (0) |
| 21 | 8/30/2023 | $(8,062)$ | 0.547\% | (44) |  | $(8,106)$ |
|  | Total Overamortization | $(8,062)$ |  | (44) |  | $(8,106)$ |
| 23 ADIT |  |  |  |  |  | 1,893 |
| 24 Net |  |  |  |  |  | (6213) |
| 25 Amortization impact (\$8,106k/5 year amort) |  |  |  |  | \$ | $(1,621)$ |
| 26 CCR ARO Rate Base Balance |  |  |  |  |  | $(8,106)$ |
| 27 Less 1 year amort |  |  |  |  | \$ | 1621 |
| 28 Adjusted CCR ARO Rate Base Balance |  |  |  |  | \$ | $(6,485)$ |
| 29 ADIT |  |  |  |  |  | 1,514 |
| 30 Net Rate Base Impact |  |  |  |  |  | $(4,971)$ |

## Comparison of application of over amortization Company vs Rider (benefit)/cost

| $\begin{aligned} & 31 \\ & 32 \end{aligned}$ |  | Company (benefit)/cost | Rider (benefit)/cost | Difference <br> (Company - Rider) |
| :---: | :---: | :---: | :---: | :---: |
| 33 |  |  |  |  |
| 34 | CCR ARO Rate Base Balance | $(6,485)$ | - | $(6,485)$ |
| 35 | 23 35\% ADIT | 1,514 |  | 1,514 |
| 36 | Total Rate Base | $(4,971)$ [1] | - | $(4,971)$ |
| 37 |  |  |  |  |
| 38 | Revenue requirement impact | $(2,089)$ | - | $(2,089)$ |
| 39 |  |  |  |  |
| 40 | 1 Year Rider (proposed by Public Staff) | - | $(8,062)$ | 8,062 |
| 41 |  |  |  |  |
| 42 | Year 1 (2024) | $(2,089)$ | $(8,062)$ | 5,973 |
| 43 | Year 2 | $(2,089)$ | - | $(2,089)$ |
| 44 | Year 3 | $(2,089)$ | - | $(2,089)$ |
| 45 | Year 4 | $(2,089)$ | - | $(2,089)$ |
| 46 | Year 5 | $(2,089)$ | - | $(2,089)$ |
| 47 | Year 6 | $(2,089)$ | - | $(2,089)$ |
| 486 Year impact (Sum L27 to L29) |  | $(12,532)$ | $(8,062)$ | $(4,470)$ |

[^39]NC Retail Calculation of Over amortizations
The Company's proposal is to apply the over amorization from E-7 Sub 989 of $\$ 620 \mathrm{k}$ and from $\mathrm{E}-\mathrm{F}$ Sub 1026 of $\$ 535 \mathrm{~K}$ to reduce the balance
being reauested in this Docket $\mathrm{E}-\mathrm{T}$ Sub 1276 . being requested in
See line 24 below.


As illustrated on lines 22 through 26 above, the Company's approach reduces amortization expense in this case by $\$ 842 \mathrm{k}$ per year for each year of the MYRP rate period for total benefit of $\$ 2.5 \mathrm{M}$ (Column G ). The Public Staff's


The Company's approach over the three year MYRP rate period would have the same result over the three year period as the Public Staff's recommended approach excluding the disallowance, and reduces rate volatility for th
Note that this analysis does not include revenue requirement impacts from rate base balances because the Company and Public Staff differ on whether or not to include balance from the current proceeding in rate base.

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Application of Rate Case Costs Over Amortizations
Dollars in Thousands)
NC Retail Calculation of Over-amortizations
```

The Company's proposal is to apply the over amortization of severance costs of from E-7 Sub 1214 of $\$ 466,363$ The Company's proposal is to apply the over anorization of severance costs of from E-7 Sub

Deverance Over amortization [1]

| Line No | Balance | Docket No. E-7 Sub 1214 |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{gathered} \text { E-7 Sub } 1214 \\ \text { Amortization } \end{gathered}$ | Deferred Balance E-7 Sub 1214 |  |
| 1 | 12/31/2021 |  | 35,675 |  |
| 2 | 1/31/2022 | $(1,807)$ | 33,868 |  |
| 3 | 2/28/2022 | $(1,807)$ | 32,061 |  |
| 4 | 3/31/2022 | $(1,807)$ | 30,254 |  |
| 5 | 4/30/2022 | $(1,807)$ | 28,447 |  |
| 6 | 5/31/2022 | $(1,807)$ | 26,640 |  |
| 7 | 6/30/2022 $7 / 31 / 2022$ | $(1,807)$ $(1,807)$ | 24,833 |  |
| 9 | 8/31/2022 | $(1,807)$ | 21,219 |  |
| 10 | 9/30/2022 | $(1,807)$ | 19,411 |  |
| 11 | 10/31/2022 | $(1,807)$ | 17,604 |  |
| 12 | 11/30/2022 | $(1,807)$ | 15,797 |  |
| 13 | 12/31/2022 | $(1,807)$ | 13,990 |  |
| 14 | 1/31/2023 | $(1,807)$ | 12,183 |  |
| 15 | 2/28/2023 | $(1,807)$ | 10,376 |  |
| 16 | 3/31/2023 | $(1,807)$ | 8,569 |  |
| 17 | 4/30/2023 | $(1,807)$ | 6,762 |  |
| 18 | 5/31/2023 | $(1,807)$ | 4,955 |  |
| 19 | 6/30/2023 | $(1,807)$ | 3,148 |  |
| 20 | 7/31/2023 | $(1,807)$ | 1,341 |  |
| 21 | 8/30/2023 | $(1,807)$ | (466) | (466,361.00) |

[1] Calculation of the Severance over amortization balance as of the anticipated interim date of rates at 09/01/2023

Comparison of application of over amortization Company vs Public Staff (benefit)/cost

| Adjusts Rate Case Costs (\$466k/3 year amort) Adjustment to Annual Amortization | $\begin{aligned} & \text { Company } \\ & \text { (benefit)/cost } \end{aligned}$ | $\frac{\text { Public Staff }}{\text { (benefit)/cost }}$ | $\left(\begin{array}{l} \text { Difference } \\ \text { Company - PS) } \end{array}\right.$ |
| :---: | :---: | :---: | :---: |
|  | (155) |  | (155) |
|  | (155) | - | (155) |
| 1 Year Rider (proposed by Public Staff) | \$ - | (466) | 466 |
| Year 1 (adjustment to annual amortization) | (155) | (466) | 311 |
| Year 2 | (155) | - | (155) |
| Year 3 | (155) | - | (155) |
| 3 Year impact (Sum L32 to L34) | (466) | (466) | - |

As illustrated on lines 26 through 27 above, the Company's approach reduces amortization expense in this case by $\$ 155,000$ per year for each year of the MYRP rate period for total benefit of $\$ 466,000$. The Public Staff approach returns the amount in Year 1. The Company's approach over the three year MYRP rate period would have the same result over the three year period as the Public Staff's recommended approach, and reduces rate volatility in Year 2, and Year 3.
Note that this analysis does not include revenue requirement impacts from rate base balances because the Company and Public Staff differ on whether or not to include balance from the current proceeding in rate base

The Company is proposing the use the over amortization of regulatory assets associated with the early retirement of Buck coal fired generating units as ordered in E-7, Sub 1026 to accelerate the recovery of a similar regualtory asset related to the early retired Allen coal plant as ordered in E-7, Sub 1214.

| Line No | Balance | Buck Plant Over amortization [1] Docket No. E-7 Sub 1026 |  |
| :---: | :---: | :---: | :---: |
|  |  |  | Deferred |
|  |  | E-7 Sub 1026 | Balance E-7 |
|  |  | Amortization | Sub 1026 |
| 1 | 12/31/2021 |  | 8,073 |
| 2 | 1/31/2022 | (538) | 7,535 |
| 3 | 2/28/2022 | (538) | 6,997 |
| 4 | 3/31/2022 | (538) | 6,459 |
| 5 | 4/30/2022 | (538) | 5,920 |
| 6 | 5/31/2022 | (538) | 5,382 |
| 7 | 6/30/2022 | (538) | 4,844 |
| 8 | 7/31/2022 | (538) | 4,306 |
| 9 | 8/31/2022 | (538) | 3,767 |
| 10 | 9/30/2022 | (538) | 3,229 |
| 11 | 10/31/2022 | (538) | 2,691 |
| 12 | 11/30/2022 | (538) | 2,153 |
| 13 | 12/31/2022 | (538) | 1,615 |
| 14 | 1/31/2023 | (538) | 1,076 |
| 15 | 2/28/2023 | (538) | 538 |
| 16 | 3/31/2023 | (538) | - |
| 17 | 4/30/2023 | (538) | (538) |
| 18 | 5/31/2023 | (538) | $(1,076)$ |
| 19 | 6/30/2023 | (538) | $(1,615)$ |
| 20 | 7/31/2023 | (538) | $(2,153)$ |
| 21 | 8/31/2023 | (538) | (2 691) |

[1] Calculation of the Buck plant over amortization balance as of the anticipated interim date of rates at 09/01/2023.

[2] The full revenue impact to customers should also take into consideration the impact of the revenue requirement in future periods. The table above on the left reflects the remaining recovery period under the Company's approach and the table above on the right reflects the Public Staff's approach.


| Public Staff Position [3] |  |  |  |
| :---: | :---: | :---: | :---: |
| Allen Amortization without Applica |  |  |  |
|  | Year | Amortization | Balance |
| 8/31/2023 |  |  | 31,605 |
| 8/31/2024 | 1 | $(4,842)$ | 26,763 |
| 8/31/2025 | 2 | $(4,842)$ | 21,921 |
| 8/31/2026 | 3 | (4842) | 17080 |
| 8/31/2027 | 4 | $(4,842)$ | 12,238 |
| 8/31/2028 | 5 | $(4,842)$ | 7,397 |
| 8/31/2029 | 6 | $(4,842)$ | 2,555 |
| 8/31/2030 | 7 | $(4,842)$ | $(2,287)$ |
| 8/31/2031 | 8 | $(4,842)$ | $(7,128)$ |
| 8/31/2032 | 9 | $(4,842)$ | $(11,970)$ |

[3] The favorable impacts of reduced returns due to lower rate base would continue into future MYRP rate years under the Company's approach compared to the Public Staff and the outstanding amount would be recovered sooner. Assumes Company position of $8 / 31 / 2023$ balances in First Supplemental filing for comparison purposes and new rates every 3 years. Allen Amortization would cease in Year 6 under the Company Position.

Under the Company's approach, using the over amortizations of early retired plants from E-7 Sub 1026 reduces rate base by $\$ 2.1$ million (line 25 above) which reduced the revenue requirement by $\$ \$ 642 \mathrm{k}$ for each year of the MYRP rate period in this proceeding. In addition, the over amortization accelerates the recovery of Allen Unit 4 Unrecovered Plant regulatory asset by 1 years from 2030 to 2029 with the similar benefit of reduced revenue requirements based on lower rate base balances during those future periods.


[^0]:    2017 Sun Shares, Easy and Affordable Solar for Employers and their Employees, American Solar Energy Society, Solar 2017, Denver.
    2017 Vermont Solar Market Pathways, American Solar Energy Society, Solar 2017, Denver.
    Energy Futures Group, Inc
    PO Box 587, Hinesburg, VT 05461 - USA | 802-482-4874 | @dhill@energyfuturesgroup.com

[^1]:    ${ }^{1}$ Docket No. E-7, Sub 989 and Docket No. E-2, Sub 1023.

[^2]:    ${ }^{2}$ See EIA, 2011 data tables for electricity at: http://www.eia.gov/electricity/data.cfm\#sales.
    3 IBID.
    ${ }^{4}$ Duke Carolinas IRP, Annual Report, Sept. 2011, p. 18.
    ${ }^{5}$ Progress Energy Carolinas IRP, Sept. 1, 2011.

[^3]:    6 Called RIMS II input-output modeling, further described and employed in Chapter 3.

[^4]:    ${ }^{7}$ Payne, James, "A Survey of the Electricity Consumption-Growth Literature," Applied Energy 87, 2010, 723-731.
    8 Beaudreau, Bernard, "The Impact of Electric Power on productivity," Energy Economics, Vol. 17, No. 3, 1995, pp. 231-236.
    ${ }^{9}$ Ferguson, Ross, et. al. "Electricity Use and Economic Development," Energy Policy, 28, (2000), pp. 923-934.

[^5]:    ${ }^{10}$ Prepared by Resources for the Future, "Price Elasticities of Demand for Energy - Evaluating the Estimates," EPRI, EA-2612, project 1220-1, Final Report, Sept. 1982, Chapter 3.
    ${ }^{11}$ The concern in aggregating the commercial class of customers in some modeling efforts is that this inherently assumes this class of customers to be homogeneous in their response to electricity price changes. This is an oversimplification in that different types of commercial customers can assuredly respond in a different way than other commercial class customers. Nevertheless, the overall conclusions in the EPRI Report about this customer class are generally valid.
    ${ }^{12}$ The short-run is a term defined by economists as a period of time in which it is impractical for a consumer or firm to make capital-requiring or similar types of changes. Generally speaking, this should be 1-3 years for most commercial or industrial types of customers. The long-run is defined as the period of time in which the firm can vary all inputs or make capital-requiring modifications.
    ${ }^{13}$ Bohi, Douglas and Zimmerman, Mary, "An Update on Econometric Studies of Energy demand Behavior," Annual Review of Energy, No. 9, 1984, pp. 105-156.
    ${ }^{14}$ Niemeyer, V., "Trends in Regional US Electricity and Natural Gas Price Elasticity," Project No. 1022196, EPRI, 2010, p. A-1.
    15 Prepared by Resources for the Future, "Price Elasticities of Demand for Energy - Evaluating the Estimates," EPRI, EA-2612, project 1220-1, Final Report, Sept. 1982, Chapter 3.

[^6]:    16 Kamerschen, David and Porter, David, "The Demand for Residential, Industrial, and Total Electricity, 1973-1998," Energy economics, 26, 2004, pp. 87-100.

[^7]:    ${ }^{17}$ Carlton, Dennis, "The Location and Employment Choices of New Firms: An Econometric Model With Discrete and Continuous Endogenous Variables," The Review of Economics and Statistics, Vol. .65, No. 3, August, 1983, pp. 440-449.
    18 Badri, Massod, "Dimensions of Industrial Location Factors: Review and Exploration," Journal of Business and Public Affairs, Vol. 1, Issue 2, 2007, pp. 1-26.
    19 New York State Energy Plan, December 2009, pp. 11-13.

[^8]:    20 For example KPMG at: http://www.mmkconsulting.com/media/businessfacilities_may2004.shtml; The Boyd Company at:
    http://www.siouxfallsdevelopment.com/publications/BoydExecSummaries/Executive.Summary.Mail. Order.pdf; Ginovus at: http://www.insideindianabusiness.com/contributors.asp?id=1230; Rath Consulting at: http://rath-family.com/rc/DC_Site_Selection.pdf.
    ${ }_{21}$ Area Development Online at www.areadevelopment.com, Nov. 2011.
    22 See: http://thrivenc.com/sites/defaul/files/uploads/NC_Fact_Sheet.pdf.
    ${ }^{23}$ See:
    http://www.masc.sc/SiteCollectionDocuments/Utilities\%20and\%20Public\%20Works/electric_utilities_ econ_development.pdf.
    ${ }^{24}$ See: http://www.advancemississippi.com/documents/ratesib.pdf.
    25 Lescaroux, Francous, "Decomposition of US Manufacturing Intensity and Elasticities of Components With Respect To Energy Prices," Energy Economics, 30, 2008, pp. 1068-1080.
    26 Kahn, Matthew and Mansur, Robert, "Do Local Energy Prices and Regulation Affect the Geographic Concentration of Employment? A Border Pairs Approach," at: http://www.dartmouth.edu/~mansur/papers/kahn_mansur_manufacturing.pdf; and also see National Bureau of Economic Research, Cambridge, MA., Working Paper 16538, Nov. 2010.

[^9]:    27 "North Carolina State Energy Report, March 2010," North Carolina Energy Policy Council and the North Carolina Energy Office, March, 2010, p. 3.

[^10]:    28 "2011 North Carolina Economic Index," North Carolina Department of Commerce, Energy Policy Council and the North Carolina Energy Office, June, 2011, p. 1.

[^11]:    ${ }^{29}$ See Duke Annual IRP studies from the year 2000-2011.
    30 See: http://www.datacenterknowledge.com/archives/2010/1 1/17/north-carolina-emerges-as-data-center-hub/.
    ${ }^{31}$ See: www.bjxmag.com/bjx/article.asp/magarticle_id=1664.
    ${ }^{32}$ It should be noted that Duke Energy actually maintains a "Data Center Site Selection" page as part of the Company's economic development web site, see: http://www.duke-energy.com/economic-development/data-centers-site-selection.asp.
    ${ }^{33}$ Koomey, Johnathan, "Worldwide Electricity Used In Data centers,". Environmental Research Letters, 3, 20008, pp. 1-7 and an update found at http://www.analyticspress.com/datacenters.html. ${ }^{34}$ Per discussion with PEC representatives, the decline in the PEC customer count is somewhat overstated because PEC reclassified numerous industrial accounts to be commercial as part of a record clean-up to ensure correct application of the new 2007 Renewable Porfolio Standard (REPS) rate

[^12]:    35 See Appendix A for a more thorough description of RIMS II provided by the BEA. Other similar type models include IMPLAN.

[^13]:    ${ }^{36}$ As noted earlier, while the economic analysis was developed using the Charlotte metropolitan area input-output economic multipliers and customers in Duke's North Carolina service area, the estimates of economic impacts would be similar for essentially any location and any electric utility service territory in either State.

[^14]:    ${ }^{37}$ Duke Energy Carolinas IRP, Sept. 2011, p. 17.

[^15]:    ${ }^{38}$ In several cases this was true. Also, it is interesting to note that the on the Charlotte Chamber of Commerce's economic development web site it specifically mentions the region's reliable and reasonably priced electricity provided by Duke.

[^16]:    ${ }^{39}$ Item 45 in Duke's Form E-1 data.
    ${ }^{40}$ Order Granting General Rate Increase and Approving Amended Stipulation. Page 10, paragraph 14, Docket E-7, Sub 989.
    ${ }^{42}$ All calculations using data from the filed cost-of-service contained in the work papers in APPENDIX D.

[^17]:    ${ }^{43}$ Beaudreau, Bernard, "The Impact of Electric Power on productivity," Energy Economics, Vol. 17, No. 3, 1995, pp. 231-236.

[^18]:    44 Ferguson, Ross, et. al. "Electricity Use and Economic Development," Energy Policy, 28, (2000), pp. 923-934.
    45 Source: Energy Information Administration.
    ${ }^{46}$ Source: US Bureau of Economic Analysis.

[^19]:    47 Duke and PEC NCUC filings.

[^20]:    ${ }^{48}$ State regulators have allowed these types of discount rates to attract and/or retain customers since as early as 1937. See footnote 1, Goodman, Saul, "The Process of Ratemaking," Public Utilities Reports," Vienna, VA, 1998, p. 110.
    ${ }_{49}$ It should also be noted that it has been a common practice for natural gas utilities and pipelines to offer discount rates to large customers to avoid "bypass."

[^21]:    
    
    2 Eaci wiry in coumn 2 roprepenia she
    
    
     delverid to fred dermend by the hrousty corraponding to the eifty. ommings puid dilncity to houmationde amployed by the ind witry correapording to the emtry.
    
    

[^22]:    
    
    
    
    
    
    
    
    
    
    
    

[^23]:    ${ }^{1}$ Duke's Proposed Carbon Plan, Appendix Q at 2.

[^24]:    ${ }^{4} I d$. at 17 .

[^25]:    ${ }^{5}$ G.S. 62-110.9(4).
    ${ }^{6}$ See id.

[^26]:    ${ }^{7}$ HB 951, Part I, Section 1 (S.L. 2021-165) (N.C.G.A.).
    ${ }^{8}$ See id.

[^27]:    ${ }^{9}$ Majah-Leah V. Ravago, Arlan Zandro I. Brucal, James Roumasset, Jan Carlo Punongbayan, "The Role of Electricity Prices in Structural Transformation: Evidence from the Philippines," at 20, University of Hawai'i at Manoa Department of Economics Working Paper Series (February 2019), a complete copy of which is attached hereto as Exhibit MPG-2.

[^28]:    ${ }^{10}$ Part III, Section 5, HB 951 (S.L. 2021-165) (N.C.G.A.).

[^29]:    ${ }^{11}$ Duke's Proposed Carbon Plan, Appendix M.
    ${ }^{12}$ Id. at Appendix N .

[^30]:    * Forthcoming in Journal of Asian Economics
    ${ }^{\dagger}$ The author was Program Director of the Energy Policy and Development Program (EPDP) and Assistant Professor at the University of the Philippines when this project started.

[^31]:    ${ }^{1}$ As of 2018, implementation of EPIRA has experienced delays and the competitive retail sector has not fully materialized. See also Alonzo and Guanzon (2018) on the evolution of Philippine electricity policy and Ravago et al. (2018c) for further discussion of EPIRA implementation and timeline.

[^32]:    ${ }^{2}$ While the Philippines is ranked a respectable $29^{\text {th }}$ in the world for "getting electricity" (well below Malaysia and Thailand and only slightly above Indonesia in the Rankings and Ease of Doing Business Score, World Bank 2018), this metric is presumably more about accessibility grid connections) than quality and reliability.

[^33]:    ${ }^{3}$ Recently, however, the manufacturing sector has shown signs of resurgence (Deloitte 2014). From 2009 to 2013, the sector grew at $7.9 \%$ in value added terms, owing to greater competitiveness and an improved business climate in the country.

[^34]:    Data sources: Philippine Statistics Authority; Department of Energy, Philippines.

[^35]:    ${ }^{4}$ Results using one-period lagged values for price and GDP per capita are shown in Appendix Table A1. The intent of using lagged values is to capture any potential sluggishness in the response of macroeconomic variables to energy price shocks. The signs on coefficients of key variables are consistent with the results in Table 4.

[^36]:    ${ }^{5}$ The Singapore exception is consistent with its high per capita income and high transshipment and intermediary trade, all of which contribute to a large services sector.
    ${ }^{6}$ Cooperatives distributing electricity in small regions generally charge higher prices but offer subsidies supported by the National Electrification Administration that may not be reflected in reported price data.

[^37]:    ${ }^{7}$ Another way to examine the influence of electricity price on structural change is to estimate services share as a function of GDP per capita and electricity price. We estimated equation (1) using services share as the dependent variable for the Philippine regional database. The resulting coefficient for the electricity price variable is positive albeit not statistically significant. A similar finding holds for the agriculture sector.

[^38]:    ${ }^{1}$ https://www.nass.usda.gov/Publications/Todays_Reports/reports/land0822.pdf

[^39]:    The Company applied the over amortization related to CCR ARO to the next tranche of CCR
    ARO being sought for recovery in this case. In doing so, the Company has reduced the revenue requirement for this case by $\$ 2.1 \mathrm{M}$ per year for the MYRP period. The benefit to customers is $\$ 12.5 \mathrm{M}$ over a six-year period proposed by that aligns with MYRP periods.

