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Jun 26 2023

INFORMATION SHEET

PRESIDING: Commissioner Kemerait, Presiding; Chair Mitchell and Commissioners Brown-Bland, Clodfelter, Hughes, McKissick, Jr., and Duffley
PLACE: Raleigh, NC
DATE: Wednesday, May 31, 2023
TIME: 1:00 p.m. – 3:54 p.m.
DOCKET NO.: E-7, Sub 1282
COMPANY: Duke Energy Progress, LLC
DESCRIPTION: In the Matter of Application of Duke Energy Carolinas, LLC, Pursuant to N.C.G.S. § 62-133.2 and Commission Rule R8-55 Relating to Fuel and Fuel-Related Charge Adjustments for Electric Utilities

VOLUME NUMBER: 2

APPEARANCES
See Attached

WITNESSES
See Attached

EXHIBITS
See Attached

REPORTED BY: Tonja Vines	TRANSCRIPT PAGES: 158
TRANSCRIBED BY: Tonja Vines	PREFILED PAGES: 198
DATE FILED: June 20, 2023	TOTAL PAGES: 356

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PLACE: Dobbs Building, Raleigh, North Carolina

DATE: Wednesday, May 31, 2023

TIME: 1:00 p.m. - 3:54 p.m.

DOCKET NO: E-7, Sub 1282

BEFORE: Commissioner Karen M. Kemerait, Presiding
Chair Charlotte A. Mitchell
Commissioner ToNola D. Brown-Bland
Commissioner Daniel G. Clodfelter
Commissioner Kimberly W. Duffley
Commissioner Jeffrey A. Hughes
Commissioner Floyd B. McKissick, Jr.

IN THE MATTER OF:

Application of Duke Energy Carolinas, LLC, Pursuant to N.C.G.S. 62-133.2 and Commission Rule R8-55 Relating to Fuel and Fuel-Related Charge Adjustments for Electric Utilities

VOLUME 2

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A P P E A R A N C E S:

FOR DUKE ENERGY CAROLINAS, LLC:

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Duke Energy Corporation
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Raleigh, North Carolina 27601

Robert W. Kaylor, Esq.
Law Office of Robert W. Kaylor
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Raleigh, North Carolina 27609

FOR CAROLINA INDUSTRIAL GROUP FOR FAIR UTILITY RATES III:

Christina Cress, Esq., Partner
Douglas D.C. Conant, Esq.
Bailey & Dixon, LLP
434 Fayetteville Street, Suite 2500
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A P P E A R A N C E S (Cont'd.)

FOR CAROLINA UTILITY CUSTOMERS ASSOCIATION:
Marcus W. Trathen, Esq.
Brooks, Pierce, McLendon, Humphrey & Leonard, LLP
150 Fayetteville Street, Suite 1700
Raleigh, North Carolina 27601

FOR SOUTHERN ALLIANCE FOR CLEAN ENERGY:
Thomas Gooding, Esq., Associate Attorney
Munashe Magarira, Esq., Staff Attorney
Southern Environmental Law Center
601 West Rosemary Street, Suite 220
Chapel Hill, North Carolina 27516

FOR THE USING AND CONSUMING PUBLIC:
William S.F. Freeman, Esq.
William E.H. Creech, Esq.
Public Staff - North Carolina Utilities Commission
4326 Mail Service Center
Raleigh, North Carolina 27699-4300

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NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

DATE: May 30, 2023 DOCKET NO.: E-7, Sub 1281 E-7, Sub 1282

ATTORNEY NAME and TITLE: Ladawn Toon

AGC

FIRM NAME: Ladawn Toon

ADDRESS: 411 Fayetteville St.

CITY: Raleigh STATE: NC ZIP CODE: 27601

APPEARANCE ON BEHALF OF: Duke Energy Carolinas

APPLICANT: X COMPLAINANT: ___ INTERVENOR: ___

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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NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

DATE: 5/30/23 DOCKET NO.: E-7, Sub 1282, E-7 Sub 1283

ATTORNEY NAME and TITLE: Robert W. Kaylor

FIRM NAME: Law Office of Robert W. Kaylor

ADDRESS: 353 E. Six Forks Rd. Ste 260

CITY: Raleigh STATE: NC ZIP CODE: 27609

APPEARANCE ON BEHALF OF: Duke Energy Carolinas LLC

APPLICANT: ✓ COMPLAINANT: ___ INTERVENOR: ___

PROTESTANT: ___ RESPONDENT: ___ DEFENDANT: ___

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Jun 26 2023

NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

DEC Rider Hearings

DATE: 5/30/2023 DOCKET NO.: E-7, Subs 1281, 1282, 1285

ATTORNEY NAME and TITLE: Christina Cress, Partner

Douglas "D.C." Conant

FIRM NAME: Bailey & Dixon, LLP

ADDRESS: 434 Fayetteville St., Ste. 2500

CITY: Raleigh STATE: NC ZIP CODE: 27601

APPEARANCE ON BEHALF OF: CIGFUR III

APPLICANT: ___ COMPLAINANT: ___ INTERVENOR: X

PROTESTANT: ___ RESPONDENT: ___ DEFENDANT: ___

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Email: ccress@bdixon.com

SIGNATURE: ____________

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NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

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Jun 26 2023

DATE: 05/30/2023 **DOCKET NO.:** E-7, Sub 1282 and E-7, Sub 1285

ATTORNEY NAME and TITLE: Thomas Gooding, Associate Attorney

FIRM NAME: Southern Environmental Law Center

ADDRESS: 601 W. Rosemary St., Suite 220

CITY: Chapel Hill **STATE:** NC **ZIP CODE:** 27516

APPEARANCE ON BEHALF OF: E-7, Sub 1282 - SACE
E-7, Sub 1285 - NC Justice Center, NC Housing Coalition, and SACE

APPLICANT: ___ **COMPLAINANT:** ___ **INTERVENOR:** X

PROTESTANT: ___ **RESPONDENT:** ___ **DEFENDANT:** ___

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Email: tgooding@selcnc.org

SIGNATURE: [signature]

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Jun 26 2023

NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

DATE: 05/30/23 DOCKET NO.: E-7, Sub 1282 and 1285

ATTORNEY NAME and TITLE: Munashe Magarira, Staff attorney

FIRM NAME: Southern Environmental Law Center

ADDRESS: 601 W Rosemary St, Ste 220

CITY: Chapel Hill STATE: NC ZIP CODE: 27516

APPEARANCE ON BEHALF OF: E-7, Sub 1282 - SACE
E-7, Sub 1285 - NC Justice Center, NC Housing Coalition and SACE

APPLICANT: ___ COMPLAINANT: ___ INTERVENOR: ✓

PROTESTANT: ___ RESPONDENT: ___ DEFENDANT: ___

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Email: MMagarira@selcnc.org

SIGNATURE: [signature]

(Signature Required for distribution of CONFIDENTIAL information)

NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

E-7, Sub 1282
E-7, Sub 1285
E-7, Sub 1281

DATE: 5-30-23 DOCKET NO.: ______

ATTORNEY NAME and TITLE: ______

Marcus Trathen

FIRM NAME: Brooks Pierce

ADDRESS: Suite 1700, Wells Fargo Building

CITY: Raleigh STATE: NC ZIP CODE: 27601

APPEARANCE ON BEHALF OF: CUCA

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.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: MTrathen@brookspierce.com

SIGNATURE: ______

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NORTH CAROLINA UTILITIES COMMISSION
PUBLIC STAFF - APPEARANCE SLIP

DATE: May 30, 2023

DOCKET #: E-7, Sub 1282
DEC Fuel 2023

PUBLIC STAFF ATTORNEYS: Zeke Creech and Will Freeman

TO REQUEST A **CONFIDENTIAL** TRANSCRIPT, PLEASE PROVIDE YOUR EMAIL ADDRESS BELOW:

ACCOUNTING ______
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ECONOMICS ______
LEGAL zeke.creech@psncuc.nc.gov;william.freeman@psncuc.nc.gov
TRANSPORTATION ______
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COUNSEL/MEMBER(s) REQUESTING A **CONFIDENTIAL** TRANSCRIPT WHO HAS SIGNED A CONFIDENTIALITY AGREEMENT WILL NEED TO SIGN BELOW.

/s/ William Creech
/s/ Will Freeman

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Jun 26 2023

Duke Energy Carolinas, LLC Fossil Fuel Procurement Practices

Coal

- Using Stochastic cost production modeling, near and long-term coal consumption is forecasted based on inputs such as load projections, weather, fleet maintenance and availability schedules, coal quality and cost, non-coal commodity and emission prices, environmental permit and emissions constraints, projected renewable energy production, and wholesale energy imports and exports.
- Station and system inventory targets are developed to provide generational reliability, insulation from short-term market volatility, and adaptability to evolving coal production and transportation conditions. Inventories are monitored continuously.
- On a continuous basis, existing purchase commitments are compared with consumption and inventory requirements to determine changes in supply needs.
- All qualified suppliers are invited to participate in Request for Proposals to satisfy additional supply needs.
- Spot market solicitations are conducted on an on-going basis to supplement existing purchase commitments.
- Contracts are awarded based on the highest customer value, considering factors such as price, quality, transportation, reliability and flexibility.
- Delivered coal volume and quality are monitored against contract commitments. Coal and freight payments are calculated based on certified scale weights and coal quality analysis meeting ASTM standards as established by ASTM International.

Gas

- Using Stochastic cost production modeling, near and long-term natural gas consumption is forecasted based on inputs such as load projections, weather, commodity and emission prices, projected renewable energy production, and fleet maintenance and availability schedules.
- Physical procurement targets are developed to procure a cost effective and reliable natural gas supply.
- Natural gas supply is contracted utilizing a portfolio of long term, short term, spot market and physical call option agreements
- Short-term and long-term Requests for Proposals and market solicitations are conducted with potential suppliers, as needed, to procure the cost competitive, secure, and reliable natural gas supply, firm transportation, and storage capacity needed to meet forecasted gas usage.
- Short-term and spot purchases are conducted on an on-going basis to supplement term natural gas supply.
- On a continuous basis, existing purchases are compared against forecasted gas usage to determine changes in supply and transportation needs.
- Natural gas transportation for the generation fleet is obtained through a mix of long-term firm transportation agreements, and shorter-term pipeline capacity purchases.

- A targeted percentage of the natural gas fuel price exposure is managed via a rolling 60-month structured financial natural gas hedging program.
- Through the Asset Management and Delivered Supply Agreement between Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC implemented on January 1, 2103, DEC serves as the designated Asset Manager that procures and manages the combined gas supply needs for the combined Carolinas gas fleet.

Fuel Oil

- No. 2 fuel oil is burned primarily for initiation of coal combustion (light-off at steam plants) and in combustion turbines (peaking assets).
- All No. 2 fuel oil is moved via pipeline to applicable terminals where it is then loaded on trucks for delivery into the Company's storage tanks. Because oil usage is highly variable, the Company relies on a combination of inventory, responsive suppliers with access to multiple terminals, and trucking agreements to manage its needs. Replenishment of No. 2 fuel oil inventories at the applicable plant facilities is done on an "as needed basis" and coordinated between fuel procurement and station personnel.
- Formal solicitations for supply may be conducted as needed with an emphasis on maintaining a network of reliable suppliers at a competitive market price in the region of our generating assets.

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DUKE ENERGY CAROLINAS
Summary of Coal Purchases
Twelve Months Ended December 31, 2022 & 2021
Tons

Line No.	Month	Contract (Tons)	Net Spot Purchase and Sales(Tons)	Total (Tons)
1	January 2022	113,717	163,936	277,652
2	February	197,748	101,133	298,880
3	March	223,662	127,470	351,132
4	April	203,061	0	203,061
5	May	179,549	13,169	192,718
6	June	241,861	0	241,861
7	July	250,687	49,307	299,994
8	August	187,891	42,429	230,320
9	September	234,123	36,026	270,150
10	October	281,284	11,937	293,221
11	November	328,541	12,238	340,780
12	December	261,395	60,317	321,712
13	**Total (Sum L1:L12)**	**2,703,519**	**617,962**	**3,321,481**

Line No.	Month	Contract (Tons)	Net Spot Purchase and Sales(Tons)	Total (Tons)
14	January 2021	323,175	272,905	596,079
15	February	178,088	352,765	530,853
16	March	307,174	179,526	486,700
17	April	244,734	259,026	503,760
18	May	214,001	267,134	481,135
19	June	167,453	305,774	473,227
20	July	408,398	114,825	523,224
21	August	477,986	126,407	604,393
22	September	405,691	50,464	456,155
23	October	276,793	140,002	416,795
24	November	75,126	75,590	150,715
25	December	150,700	89,983	240,682
26	**Total (Sum L14:L25)**	**3,229,319**	**2,234,401**	**5,463,718**

Note: Detail amounts may not add to totals shown due to rounding.

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Mar 26 2023

DUKE ENERGY CAROLINAS
Summary of Gas Purchases
Twelve Months Ended December 31, 2022 & 2021
MBTUs

Line No.	Month	MBTUs
1	January 2022	17,943,338
2	February	21,093,075
3	March	14,222,298
4	April	10,645,484
5	May	17,950,127
6	June	26,864,105
7	July	30,423,120
8	August	29,458,599
9	September	22,034,233
10	October	25,066,022
11	November	18,733,958
12	December	19,089,533
13	**Total (Sum L1:L12)**	**253,523,894**

Line No.	Month	MBTUs
14	January 2021	15,219,115
15	February	10,438,520
16	March	10,115,378
17	April	8,394,699
18	May	10,080,567
19	June	13,869,501
20	July	23,083,528
21	August	21,334,474
22	September	17,254,822
23	October	17,385,461
24	November	22,756,045
25	December	19,657,646
26	**Total (Sum L14:L25)**	**189,589,756**

Note: Detail amounts may not add to totals shown due to rounding.

PUBLIC

DOCKET NO. E-7, SUB 1282
SWEZ PUBLIC EXHIBIT 3

Duke Energy Carolinas Spot Gas Supply Purchases from Piedmont Natural Gas Company

(January 1, 2022 through December 31, 2022) [BEGIN CONFIDENTIAL]

Trade Date	Start Date	End Date	Total MMBtus	Fixed Price ($/MMBtu)	Index Price ($/MMBtu)	Total Price ($/MMBtu)	Pricing Location	Gas Daily Reported Range (Note 1)

[redacted]

[END CONFIDENTIAL]

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Jan 26 2023

STIPULATION

Regarding the Proper Methodology for Determining the Fuel Costs Associated with Power Purchases from Power Marketers and Others

This **Stipulation** ("Stipulation") is made as of the **5th** day of January 2023, by and among Duke Energy Carolinas, LLC, ("DEC"), Duke Energy Progress, LLC ("DEP," and together "Companies"), and the Public Staff of the North Carolina Utilities Commission ("Public Staff"). This Stipulation is effective as of the date it is signed by the last party to sign it, as indicated by the date next to such party's signature.

North Carolina General Statute §62-133.2 provides for annual fuel charge adjustment proceedings for electric utilities engaged in the generation or production of electricity by fossil or nuclear fuels. The Companies met with the Public Staff to discuss updating the total fuel cost to total energy cost ratio that is applied to certain power purchases to approximate the actual fuel cost component of a power purchase. As a result of this meeting, the Companies and the Public Staff have agreed to the following stipulations to establish a percentage range as the basis for an appropriate fuel cost proxy percentage.

WHEREAS, the fuel charge adjustment statute, N.C. Gen. Stat. § 62-133.2, requires electric utilities to present "verified annualized information and data in such form and detail as the Commission may require" for all aspects of its fuel expenses, including "sources and fuel cost component of purchased power used."

WHEREAS, many of the purchases made by the Companies are from sellers who do not generate the power that they sell, but rather purchase it from other utilities for resale, the actual fuel cost component is not identified separately from the total purchase cost. Additionally, some power sellers who generate the power they sell withhold disclosure of their actual fuel costs. As a result, the total fuel cost to total energy cost ratio of such power purchases is unavailable to the Companies for the purpose of recognizing actual fuel costs on those purchases in the annual fuel charge adjustment as required by N.C. Gen. Stat. § 62-133.2.

WHEREAS, in 1997, the Companies, the Public Staff, and other parties entered a certain stipulation (which was applicable to the 1997 and 1998 fuel proceedings) addressing the proper methodology to determine the fuel costs associated with power purchases by electric utilities from power marketers and certain utilities. The parties entered a similar stipulation in 1999 (applicable to the 1999, 2000, and 2001 fuel proceedings). Each stipulation provided for the use of the fuel component of the Companies' off-system sales as a reasonable basis for approximating the fuel component on power purchases when the actual fuel component is unavailable. The underlying methodology for such stipulations has been accepted by this Commission as reasonable in each fuel rider proceeding since the beginning of 1997.

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Jun 26 2023

STIPULATION

Regarding the Proper Methodology for Determining the Fuel Costs Associated with Power Purchases from Power Marketers and Others

WHEREAS, the Companies and Public Staff continue to consider it reasonable to use the Companies' short-term off-system sales as the basis for determining the appropriate total fuel cost to total energy cost ratio to be used to approximate fuel costs associated with power purchases when actual fuel costs are unavailable; however, the most recent proxy was established during the 2008 fuel proceeding, through analysis of off-system sales from calendar year 2007, and the fuel percentage proxy was set at sixty-one percent (61%). Since the 2008 fuel proceeding, the proxy has not been updated.

WHEREAS, due to increasing fuel commodity prices, the 61% fuel proxy established in the 2008 fuel proceeding is no longer appropriate for determining the fuel portion of power purchases.

WHEREAS, the Companies and the Public Staff agree, for future fuel proceedings starting with the Companies' 2023 annual fuel rider proceedings, an annual compilation of actual total fuel and fuel-related costs as a component of total short-term off-system sales revenue is an appropriate basis for estimating fuel costs on power purchases when the actual fuel component is unavailable or unidentified as a component of the price paid for energy under a power purchase contract.

WHEREAS, total purchase costs on economically dispatchable and curtailable purchases will continue to be requested for cost recovery through the annual fuel charge adjustment and actual or identified fuel costs on other energy purchases will continue to be requested for cost recovery through the annual fuel charge adjustment; in addition, when actual fuel costs are unavailable or unidentified, the fuel cost proxy will establish a percentage of the total energy cost that is appropriate for cost recovery through the annual fuel charge adjustment. The remaining balance of total purchase costs not requested for cost recovery through the annual fuel charge adjustment will continue to be requested for cost recovery through base rates.

NOW, THEREFORE, Duke Energy Carolinas, LLC, Duke Energy Progress, LLC, and the Public Staff of the North Carolina Utilities Commission agree as follows:

For the Companies' annual fuel rider proceedings filed during 2023 through 2027, if actual fuel cost for a power purchase is unavailable or the fuel cost component is unidentified under a power purchase contract, the Companies shall assume that the fuel cost was in a range between 75% to 85%, the exact percentage to be determined by the parties beginning with a composite calendar year 2022 review of short-term off-system sales[1] (applied to the test year purchases under review in 2023 fuel proceedings) through a composite calendar year 2026 review of short-term off-system sales (applied to the test year purchases under review in 2027 fuel proceedings).

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[1] Southeast Energy Exchange Market ("SEEM") sales will be included in the basis for the fuel proxy since they are, by nature, short-term off-system sales.

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Jan 26 2023

STIPULATION

Regarding the Proper Methodology for Determining the Fuel Costs Associated with Power Purchases from Power Marketers and Others

The Companies will propose a composite total fuel cost to total energy cost ratio, based on DEC's and DEP's combined short-term off-system sales of a calendar year. Such composite, in accordance with the terms herein, shall be no greater than 85%, but no less than 75%. For each of the above-specified fuel proceeding test years, the Companies will assess the prior calendar year composite proxy percentage to be used by both DEC and DEP, consistently for the full test periods of the subsequent annual fuel rider proceeding, despite the three-month difference in end date between DEC's and DEP's twelve-month test periods.

To the extent that the analysis of annual composite short-term off-system sales indicates that the actual fuel and fuel-related component of such sales revenue falls outside the range of 75% to 85%, the ratio will be adjusted accordingly to reflect either the minimum or maximum of the range. For example, if analysis results in a fuel and fuel-related cost ratio of 65%, the Companies will propose recovering 75% of the purchase cost through the annual fuel charge adjustment and 25% through base rates. Alternatively, if the fuel and fuel-related cost ratio is 90%, the Companies will propose recovering 85% of the purchase cost through the annual fuel charge adjustment and 15% through base rates. In either case, the Companies and the Public Staff will support this approach in the fuel proceedings starting in 2023, through 2027.

To the extent that DEC and DEP filed NC general rate case proposals based on a 2021 test year which reflected 39% of costs on power purchases when the actual fuel component was unavailable or unidentified as a component of the price paid for energy under a power purchase contract, an adjustment to the revenue requirement will be made under a supplemental filing to reflect the outcome of this Stipulation.

This Stipulation shall remain in effect until the completion of the Companies' annual fuel rider proceedings filed in calendar year 2027 or the effective date of a merger of the DEC and DEP utilities, whichever occurs sooner.

Should the parties have differences regarding the utilization of the terms of this Stipulation to determine fuel costs for any specific purchase or group of purchases, the parties agree to meet to attempt to resolve those differences. If the differences cannot be resolved, the parties will submit the issues to the Commission for resolution.

[**Signature Page to Follow**]

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Jun 26 2023

STIPULATION

Regarding the Proper Methodology for Determining the Fuel Costs Associated with Power Purchases from Power Marketers and Others

ATTORNEY FOR DUKE ENERGY CAROLINAS, LLC and DUKE ENERGY PROGRESS, LLC

s/ [Ladawn S. Toon]
Electronically submitted
Date: 2/9/2023

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Associate General Counsel
Duke Energy Corporation
P. O. Box 1551 / NCRH 20
Raleigh, North Carolina 27602
Tel. 919.546.7971
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ATTORNEYS FOR PUBLIC STAFF–NORTH CAROLINA UTILITIES COMMISSION

s/ [Robert B. Josey]
Electronically submitted
Date: 2/8/2023

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Staff Attorney
Manager, Electric Section
Public Staff – N.C. Utilities Commission
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May 26 2023

Duke Energy Carolinas, LLC
Average Forward NYMEX Henry Hub Price
for Billing Period September 1, 2023 through August 31, 2024
As of COB January 12, 2023 and April 13, 2023

	NYMEX HH COB 1/12/23	NYMEX HH COB 4/13/23
9/1/2023	$3.62	$2.47
10/1/2023	$3.68	$2.56
11/1/2023	$4.07	$2.95
12/1/2023	$4.49	$3.41
1/1/2024	$4.76	$3.65
2/1/2024	$4.60	$3.56
3/1/2024	$4.10	$3.27
4/1/2024	$3.65	$3.00
5/1/2024	$3.61	$3.00
6/1/2024	$3.72	$3.15
7/1/2024	$3.81	$3.29
8/1/2024	$3.84	$3.33
Average	**$ 3.99**	**$ 3.14**

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May 26 2023

Duke Energy Carolinas, LLC
Average Forward NYMEX Henry Hub Price
for Billing Period September 1, 2023 through August 31, 2024
As of COB January 12, 2023

	NYMEX HH COB 1/12/23
9/1/2023	$3.62
10/1/2023	$3.68
11/1/2023	$4.07
12/1/2023	$4.49
1/1/2024	$4.76
2/1/2024	$4.60
3/1/2024	$4.10
4/1/2024	$3.65
5/1/2024	$3.61
6/1/2024	$3.72
7/1/2024	$3.81
8/1/2024	$3.84
Average	**$ 3.99**

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Jun 26 2023

Duke Energy Carolinas, LLC

Docket No. E-7, Sub 1282
Fuel and Fuel-Related Cost Proceeding
Test Year Ended December 31, 2022
Public Staff Data Request No. 7
Date Sent: March 27, 2023
Requested Due Date: April 7, 2023

Public Staff Technical Contacts:

Name	Email	Phone Number
Evan Lawrence	evan.lawrence@psncuc.nc.gov	919-715-7847
Dustin Metz	dustin.metz@psncuc.nc.gov	919-733-1513

Public Staff Legal Contact:

Name	Email	Phone Number
William E. H. Creech	zeke.creech@psncuc.nc.gov	919-733-0974
Will Freeman	william.freeman@psncuc.nc.gov	919-733-0887

Please provide all responses to this request in searchable native electronic format (e.g., Excel, Word, or PDF files). If in Excel format, please include all working formulas. In addition, please include (1) the name and title of the individual who has the responsibility for the subject matter addressed therein, and (2) the identity of the person making the response by name, occupation, and job title.

Topic: Steam Facility Outages

The table below includes the information for each outage the Public Staff believes is relevant to this DR. This information is from the BLPPPRs filed in Docket No. E-7, Sub 1260.

Outage Number	Plant	Unit	Start Date/Time	End Date/Time	Outage Reason
1	Belews Creek	2	3/17/2022 2:00:00 AM	4/22/2022 11:59:00 PM	Unit 2 Planned Outage for Boiler Minor, ITOT Project, Turbine valve work, etc.
2	Belews Creek	2	4/22/2022 11:59:00 PM	5/8/2022 9:00:00 AM	Foreign material found in the IP turbine. Required removal of IP turbine shell to rem
3	Belews Creek	2	5/8/2022 11:00:00 AM	5/8/2022 9:00:00 PM	IP Turbine Vibration Troubleshooting

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4	Belews Creek	2	5/9/2022 2:00:00 PM	5/12/2022 6:00:00 PM	Adjusted ground strap along with installing a balance shot for #5 bearing vibration.
5	Belews Creek	1	8/12/2022 4:00:00 AM	8/17/2022 12:00:00 AM	1A SAH Plugged. Offline SAH wash.
6	Belews Creek	1	8/17/2022 12:00:00 PM	8/22/2022 10:00:00 PM	1-BU-207A Stem nut was stripped.
7	Belews Creek	2	8/31/2022 5:00:00 PM	10/29/2022 10:00:00 AM	Belews Creek 2 tripped offline. 2-LP2 Turbine crossover pipe damage.
8	Belews Creek	2	10/30/2022 3:00:00 PM	11/7/2022 2:00:00 PM	Belews Creek 2 manually tripped offline due to water leak in exciter.
9	WS Lee	CC GT 11	3/11/2022 10:12:00 PM	3/31/2022 11:59:00 PM	Turbine damage internally
10	WS Lee	CC ST 10	11/3/2022 3:34:00 AM	12/11/2022 3:07:00 AM	Generator inspection.
11	WS Lee	CC ST 10	12/11/2022 3:07:00 AM	12/31/2022 11:59:00 PM	Fire damage discovered in the ST compartment

1. For each outage in the table above, please provide any available outage report, root cause analysis, contributary cause analysis, internal memos, vendor or OEM findings, or any other like/similar documentation that provides context to the underpinnings of the outage/event.

<u>Belews Creek</u>

2. Please provide the following for outage 1:
    a. A scope of work completed.
    b. Initial outage scope of work.
    c. Initial outage expected timeframe.
    d. Reason for any extension of the outage greater than 5 days.
    e. Discussion of the processes and controls in place to ensure that the work performed meets the required standards.

3. Please provide the following for outage 2:
    a. Explanation of how the work completed in outage 1 may have contributed to this outage.

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Jun 26 2023

   b. Explanation of what the "foreign material" consisted of.
   c. Description of the events that led plant operators to remove the unit from operation.
   d. Scope of work that was completed during this outage.
   e. Initial outage duration estimate.
   f. What steps were taken to prevent or mitigate the possibility of foreign material entering the IP turbine in the future.

4. Please provide the following for outage 3:
   a. Explanation of how the work completed in outages 1 and 2 contributed to this outage.
   b. Scope of work that was completed during this outage.

5. Please provide the following for outage 4:
   a. Explanation of how the work completed in outages 1, 2, and 3 contributed to this outage.
   b. Scope of work that was completed during this outage.

6. Please provide the following for outage 5:
   a. A scope of work completed.
   b. Initial outage scope of work.
   c. Initial outage expected timeframe.
   d. Definition of "SAH".
   e. Explanation of the purpose of the SAH component/system.
   f. Performance metrics that plant personnel evaluated in making the decision to remove the unit from service.

7. Please provide the following for outage 6:
   a. Explanation of how the work completed in outage 5 contributed to this outage.
   b. Scope of work completed.
   c. Initial outage expected timeframe.
   d. Purpose of the stem nut that was stripped.
   e. Location of the stem nut.

8. Please provide the following for outage 7:
   a. Description of work completed during the outage.
   b. Performance metrics that plant personnel evaluated in making the decision to remove the unit from service.
   c. Description of any abnormalities observed prior to the outage.
   d. Description of the 2-LP2 turbine crossover pipe function.

9. Please provide the following for outage 8:
   a. Description of how the events that occurred in outage 7 contributed to this outage.

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b. Description of the process the Company took to inspect the exciter prior to attempting to reenergize the unit.
c. Performance metrics that plant personnel evaluated in making the decision to remove the unit from service.
d. Scope of work completed during the outage to return the unit to service.
e. What damage occurred because of the water entering the exciter?
f. What damage occurred because of the exciter being energized with water inside?

<u>WS Lee</u>

10. Please provide the following as it pertains to outage 9:
    a. Description of the damage to the turbine.
    b. Performance metrics that plant personnel evaluated in making the decision to remove the unit from service.
    c. Work completed to return the unit to service.
    d. When was last time this turbine had been disassembled?
    e. Were there previous outages which contributed to the damage to the turbine?

11. Please provide the following for outage 10:
    a. Please provide the results of the generator inspection.
    b. Please provide the initial scope of work for the outage.
    c. Please provide the scope of work completed during the outage.
    d. Please provide the initial expected outage duration.
    e. If the duration of the outage was extended by 5 or more days, please provide an explanation of why the extension occurred.
    f. How does the Company ensure the work completed is of required quality?
    g. Was the work completed by a contractor or by Duke Energy personnel?

12. Please provide the following for outage 11:
    a. What is the normal startup procedure after an extended maintenance outage?
    b. Did the startup after this outage deviate from the normal procedure? If so, how?
    c. What performance metrics did plant personnel observe in making the decision to remove the unit from service.
    d. What times were these performance metrics observed?
    e. What time did the unit initially begin the startup procedure?
    f. What time was the fire noticed?
    g. What time did the fire suppression system activate?
    h. Did the fire suppression system perform as intended?
    i. Please provide the full scope of work required to bring the unit back online.
    j. Please provide a full description of the scope of the damage observed.
    k. How did the work completed in outage 10 contribute to the fire?

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13. The Public Staff requests a call to discuss the response to this data request. Please communicate with the Public Staff attorneys to set this call up.

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Jun 26 2023

Public Staff
Docket No. E-7, Sub 1282
2023 DEC Fuel
Public Staff Data Request No. 7
Item No. 7-13
Page 1 of 1

DUKE ENERGY CAROLINAS, LLC

Request:

The Public Staff requests a call to discuss the response to this data request. Please communicate with the Public Staff attorneys to set this call up.

Response:

Meeting has been scheduled for April 14 at 11:00 a.m.

Responder: Trudy Morris, Gen. & Reg. Strategy Director

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Freeman, William

Subject: FW: [External] RE: DEC Fuel Case - Steam Facility Outages, PSDR 7

From: Donaldson, Bob <Bob.Donaldson@duke-energy.com>
Sent: Monday, April 17, 2023 3:58 PM
To: Lawrence, Evan D <evan.lawrence@psncuc.nc.gov>; Metz, Dustin <dustin.metz@psncuc.nc.gov>
Subject: RE: [External] RE: DEC Fuel Case - Steam Facility Outages, PSDR 7

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Thank you for the feedback Evan. Sorry for the inconvenience.

We'll take all your feedback and comments into consideration moving forward.

Bob Donaldson, PE, CEM
Regulatory Affairs Manager - North Carolina

Duke Energy
410 S. Wilmington St., Raleigh, NC 27601
Mail Code NC20
office: 919.546.5451 cell: 919.812.3249
bob.donaldson@duke-energy.com

From: Lawrence, Evan D <evan.lawrence@psncuc.nc.gov>
Sent: Monday, April 17, 2023 12:22 PM
To: Donaldson, Bob <Bob.Donaldson@duke-energy.com>; Metz, Dustin -psncuc.nc <Dustin.Metz@psncuc.nc.gov>
Subject: RE: [External] RE: DEC Fuel Case - Steam Facility Outages, PSDR 7

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Bob,

Sorry for the delay in responding. At this time we are just too busy to have this meeting.

Initially, I was picturing this to be similar to the discussion that we have on the nuclear outages. There are a number of reasons why those meetings work well, one of them being the documentation which we receive before the fuel cases are filed. I know that we have spent some time and several conversations to understand what is available there and helpful for us, and I don't know that we have had those same conversations pertaining to the fossil and hydro outages. The document we received for the fossil and hydro facility outages provides a list of outages and summaries of work, and states that reports were not created for those outages. There were a number of other outages, including the ones we sent the DR on. I would have expected to also have information on those, including outage reports and root cause analysis (such as that received for the Belews Creek outage) with that standing data request. We may need to make a correction to that DR so that we receive that information early so that we can actually have time to review it in sufficient

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detail to serve discovery if necessary. I believe we may also want to make a change to it to also include solar facilities, as those will be having a larger impact on the generation mix moving forward. Thanks for your time.

Evan D. Lawrence
Energy Division
Electric Section – Operations and Planning
Public Staff – North Carolina Utilities Commission
(919) 715-7847

https://publicstaff.nc.gov/electric

From: Donaldson, Bob <Bob.Donaldson@duke-energy.com>
Sent: Wednesday, April 12, 2023 3:07 PM
To: Metz, Dustin <dustin.metz@psncuc.nc.gov>; Lawrence, Evan D <evan.lawrence@psncuc.nc.gov>
Subject: [External] RE: DEC Fuel Case - Steam Facility Outages, PSDR 7

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Good Afternoon Dustin & Evan,

It's come to my attention that our key SME's for this Steam Facility Outages call on Friday have a schedule conflict.

Could you provide us with a few dates & times for next week?

Bob Donaldson, PE, CEM
Regulatory Affairs Manager - North Carolina

Duke Energy
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Mail Code NC20
office: 919.546.5451   cell: 919.812.3249
bob.donaldson@duke-energy.com

-----Original Appointment-----
From: Donaldson, Bob
Sent: Wednesday, April 5, 2023 10:55 AM
To: Donaldson, Bob; Metz, Dustin -psncuc.nc; Lawrence, Evan D; Flanagan, Jeffrey; Lanning, Michael F
Cc: Weir, Tiffany; Clark, Sigourney; Morris, Trudy H
Subject: DEC Fuel Case - Steam Facility Outages, PSDR 7
When: Friday, April 14, 2023 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

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Outage discussion regarding Belews Creek and W.S. Lee. It's the Company's understanding this is technical SME discussion only.

Bob Donaldson, PE, CEM
Regulatory Affairs Manager - North Carolina

Duke Energy
410 S. Wilmington St., Raleigh, NC 27601
Mail Code NC20
office: 919.546.5451 cell: 919.812.3249
bob.donaldson@duke-energy.com

____

Microsoft Teams meeting

Join on your computer, mobile app or room device
Click here to join the meeting

Meeting ID: 290 463 045 123
Passcode: cn6sue
Download Teams | Join on the web

Join with a video conferencing device
duke-energy@m.webex.com
Video Conference ID: 115 251 327 8
Alternate VTC instructions

Or call in (audio only)
+1 704-659-4701,,581755181# United States, Charlotte
Phone Conference ID: 581 755 181#
Find a local number | Reset PIN

Learn More | Help | Meeting options

____

Email correspondence to and from his address may be subject to the Nor h Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Summary Comparison of Fuel and Fuel Related Cost Factors
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Exhibit 1

Line #	Description	Reference	Residential cents/kWh	General cents/kWh	Industrial cents/kWh	Composite cents/kWh
	Current Fuel and Fuel Related Cost Factors (Approved Fuel Rider Docket No. E-7, Sub 1263)					
1	Approved Fuel and Fuel Related Costs Factors	Input	2.0003	1.8217	1.8396	1.9010
2	EMF Increment (Decrement) cents/kWh	Input	0.4863	0.6254	0.5726	0.5597
3	EMF Interest Increment (Decrement) cents/kWh	Input	-	-	-	-
4	Approved Net Fuel and Fuel Related Costs Factors	Sum	**2.4866**	**2.4471**	**2.4122**	**2.4607**
	Fuel and Fuel Related Cost Factors Required by Rule R8-55					
5	Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales	Exh 2 Sch 2 pg 2	**4.3435**	**3.8366**	**3.4807**	**3.9640**
6	NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales	Exh 2 Sch 3 pg 2	**4.4116**	**3.9471**	**3.4582**	**4.0257**
	Proposed Fuel and Fuel Related Cost Factors using Proposed Nuclear Capacity Factor of 93.52%					
7	Fuel and Fuel Related Costs excluding Purchased Capacity cents/kWh	Exh 2 Sch 1 pg 2	2.6764	2.2274	1.6912	2.2905
8	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Exh 2 Sch 1 pg 2	0.0362	0.0279	0.0215	0.0297
9	Total adjusted Fuel and Fuel Related Costs cents/kWh	Sum	2.7126	2.2553	1.7127	2.3202
10	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6644	1.6649	1.7267	1.6774
11	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
12	Net Fuel and Fuel Related Costs Factors cents/kWh	Sum	**4.3770**	**3.9202**	**3.4394**	**3.9976**

Note: Fuel factors exclude regulatory fee

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

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Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,819,128	0.5613	330,162,771
2	Coal	Workpaper 3 & 4	10,320,159	3.8575	398,104,637
3	Gas CT and CC	Workpaper 3 & 4	31,212,640	3.7804	1,179,963,909
4	Reagents and Byproducts	Workpaper 9			24,944,696
5	Total Fossil	Sum	41,532,800		1,603,013,242
6	Hydro	Workpaper 3	5,600,555		
7	Net Pumped Storage	Workpaper 3	(4,083,743)		
8	Total Hydro	Sum	1,516,812		-
9	Solar Distributed Generation	Workpaper 3	358,121		-
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	102,226,860		1,933,176,012
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(25,697,152)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,888,880)		(83,614,236)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum Lines 10-13	86,459,580		1,820,177,243
15	Purchased Power	Workpaper 3 & 4	11,789,258	3.5185	414,804,733
16	JDA Savings Shared	Workpaper 5			(69,598,371)
17	Total Purchased Power		11,789,258		345,206,362
18	Total Generation and Purchased Power	Line 14 + Line 17	98,248,839	2.2040	2,165,383,605
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,148,043)	5.0520	(57,998,825)
20	Line losses and Company use	Line 22-Line 18-Line 19	(6,269,005)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,107,384,780
22	Projected System MWh Sales for Fuel Factor	Workpaper 7	90,831,791		90,831,791
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.3201

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7	23,477,265	24,077,007	13,270,457	60,824,730
	Calculation of Renewable and Cogeneration Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,931,581
3	QF Purchased Power - Capacity	Workpaper 4				12,176,644
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 27,108,225
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 18,076,112
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 8,503,847	$ 6,713,696	$ 2,858,570	$ 18,076,112
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0362	0.0279	0.0215	0.0297
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	2.6764	2.2274	1.6912	2.2905
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0362	0.0279	0.0215	0.0297
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	2.7126	2.2553	1.7127	2.3202
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6644	1.6649	1.7267	1.6774
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 1 Page 3	4.3770	3.9202	3.4394	3.9976

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
Proposed Nuclear Capacity Factor of 93.52%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Rate Class	Projected Billing Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/(Decrease) as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	D	E	F	G
		Workpaper 7	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	23,477,265	$ 2,466,691,215	$ 443,824,801	17.99%	1.8904	2.4866	4.3770
2	General Service/Lighting	24,077,007	1,971,226,718	354,677,270	17.99%	1.4731	2.4471	3.9202
3	Industrial	13,270,457	757,602,036	136,313,200	17.99%	1.0272	2.4122	3.4394
4	NC Retail	60,824,730	$ 5,195,519,969	$ 934,815,271	17.99%			

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7	$ 2,111,780,996
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 1, Page 2	27,108,225
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,084,672,770
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7	91,011,082
9	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
10	Allocation %	Line 9 / Line 8	66.83%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,393,186,813
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 1, Page 2	18,076,112
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,411,262,925
14	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.3202
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	1.6774
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.9976

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	1.5369
24	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 934,815,272

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

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Jun 26 2023

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,819,128	0.5613	330,162,771
2	Coal	Calculated	8,369,573	3.8575	322,859,932
3	Gas CT and CC	Workpaper 3 & 4	31,212,640	3.7804	1,179,963,909
4	Reagents and Byproducts	Workpaper 9	-		24,944,696
5	Total Fossil	Sum	39,582,214		1,527,768,538
6	Hydro	Workpaper 3	5,600,555		
7	Net Pumped Storage	Workpaper 3	(4,083,743)		
8	Total Hydro	Sum	1,516,812		
9	Solar Distributed Generation	Workpaper 3	358,121		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	100,276,274		1,857,931,308
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(25,697,152)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,888,880)		(83,614,236)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum	84,508,994		1,744,932,539
15	Purchased Power	Workpaper 3 & 4	11,789,258		414,804,733
16	JDA Savings Shared	Workpaper 5	-		(69,598,371)
17	Total Purchased Power	Sum	11,789,258		345,206,362
18	Total Generation and Purchased Power	Line 14 + Line 17	96,298,253		2,090,138,901
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,148,043)		(57,998,825)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(6,269,005)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,032,140,076
22	Normalized Test Period MWh Sales	Exhibit 4	88,881,205		88,881,205
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.2864

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Exhibit 2
Schedule 2

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Normalized Test Period MWh Sales	Exhibit 4	22,892,401	24,448,017	12,219,040	59,559,458
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,931,581
3	QF Purchased Power - Capacity	Workpaper 4				12,176,644
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 27,108,225
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 18,076,112
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 8,503,847	$ 6,713,696	$ 2,858,570	$ 18,076,112
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales	Line 8 / Line 1 / 10	0.0371	0.0275	0.0234	0.0303
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	2.6420	2.1442	1.7306	2.2563
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0371	0.0275	0.0234	0.0303
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	2.6791	2.1717	1.7540	2.2866
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6644	1.6649	1.7267	1.6774
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 2 Page 3	4.3435	3.8366	3.4807	3.964

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Rate Class	Normalized Test Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/(Decrease) as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	D	E	F	G
		Exhibit 4	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	22,892,401	$ 2,466,691,215	$ 425,091,247	17.23%	1.8569	2.4866	4.3435
2	General Service/Lighting	24,448,017	$ 1,971,226,718	339,706,575	17.23%	1.3895	2.4471	3.8366
3	Industrial	12,219,040	$ 757,602,036	130,559,509	17.23%	1.0685	2.4122	3.4807
4	NC Retail	59,559,458	$ 5,195,519,969	$ 895,357,331				

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7a	$ 2,036,536,291
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 2, Page 2	27,108,225
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,009,428,066
8	Normalized Test Period System MWh Sales for Fuel Factor	Workpaper 7a	89,060,496
9	NC Retail Normalized Test Period MWh Sales	Exhibit 4	59,559,458
10	Allocation %	Line 9 / Line 8	66.88%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,343,810,646
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 2, Page 2	18,076,112
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,361,886,758
14	NC Retail Normalized Test Period MWh Sales	Line 9	59,559,458
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.2866
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	1.6774
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.9640

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	1.5033
24	NC Retail Normalized Test Period MWh Sales	Exhibit 4	59,559,458
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 895,357,332

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Exhibit 2
Schedule 3

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Jun 26 2023

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 2	57,782,460	0.5613	324,343,758
2	Coal	Calculated	11,094,415	3.8575	427,971,909
3	Gas CT and CC	Workpaper 3 & 4	31,212,640	3.7804	1,179,963,909
4	Reagents and Byproducts	Workpaper 9	-		24,944,696
5	Total Fossil	Sum	42,307,056		1,632,880,514
6	Hydro	Workpaper 3	5,600,555		
7	Net Pumped Storage	Workpaper 3	(4,083,743)		
8	Total Hydro	Sum	1,516,812		
9	Solar Distributed Generation	Workpaper 3	358,121		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	101,964,448		1,957,224,272
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(25,697,152)
12	Less Catawba Joint Owners	Calculated	(14,626,468)		(82,140,560)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum	86,459,580		1,845,699,178
15	Purchased Power	Workpaper 3 & 4	11,789,258		414,804,733
16	JDA Savings Shared	Workpaper 5	-		(69,598,371)
17	Total Purchased Power	Sum	11,789,258		345,206,362
18	Total Generation and Purchased Power	Line 14 + Line 17	98,248,839		2,190,905,541
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,148,043)		(57,998,825)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(6,269,005)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,132,906,715
22	Projected System MWh Sales for Fuel Factor	Workpaper 7b	90,831,791		90,831,791
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.3482

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7b	23,477,265	24,077,007	13,270,457	60,824,730
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,931,581
3	QF Purchased Power - Capacity	Workpaper 4				12,176,644
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 27,108,225
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 18,076,112
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 8,503,847	$ 6,713,696	$ 2,858,570	$ 18,076,112
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0362	0.0279	0.0215	0.0297
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	2.7110	2.2543	1.7100	2.3186
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0362	0.0279	0.0215	0.0297
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	2.7472	2.2822	1.7315	2.3483
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6644	1.6649	1.7267	1.6774
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 3 Page 3	4.4116	3.9471	3.4582	4.0257

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Rate Class	Projected Billing Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/Decrease as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	C / B = D	E	F	G
		Workpaper 7b	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	23,477,265	$ 2,466,691,215	$ 451,939,498	18.32%	1.9250	2.4866	4.4116
2	General Service/Lighting	24,077,007	$ 1,971,226,718	$ 361,162,033	18.32%	1.5000	2.4471	3.9471
3	Industrial	13,270,457	$ 757,602,036	$ 138,805,490	18.32%	1.0460	2.4122	3.4582
4	NC Retail	60,824,730	$ 5,195,519,969	$ 951,907,021				

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7b	$ 2,137,302,931
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 3, Page 2	27,108,225
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,110,194,706
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7b	91,011,082
9	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
10	Allocation %	Line 9 / Line 8	66.83%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,410,243,122
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 3, Page 2	18,076,112
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,428,319,234
14	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.3483
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	1.6774
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	4.0257

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	1.5650
24	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 951,907,021

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Proposed Composite
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Exhibit 3
Page 1 of 4

Line No.	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)		NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022				4,988,891	$ 82,008,233
2	February (1)				5,189,525	$ 61,224,070
3	March				4,642,682	$ 16,628,788
4	April				4,283,375	$ 22,131,836
5	May (1)				4,361,034	$ 82,217,312
6	June (1)				5,223,755	$ 115,761,737
7	July				5,560,704	$ 146,325,916
8	August				6,010,616	$ 185,513,643
9	September				5,369,219	$ 84,720,701
10	October				4,315,777	$ 27,143,393
11	November				4,103,701	$ 71,328,379
12	December (1)				5,009,748	$ 186,026,549
13	**Total Test Period**				**59,059,028**	**$ 1,081,030,561**
14	**Adjustment to remove (Over)/Under Recovery - January 2022 (2)**					$ 81,987,600
15	**Adjusted (Over)/Under Recovery**					**$ 999,042,961**
16	NC Retail Normalized Test Period MWh Sales			Exhibit 4		59,559,458
17	**Experience Modification Increment (Decrement) cents/kWh**					**1.6774**

(1) Prior period corrections not included in rate incurred but are included in over/(under) recovery total

(2) January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 15.

Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Residential
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022	2.6880	1.5337	2,129,408	$ 24,579,060
2	February [(1)]	2.2111	1.5337	2,308,671	$ 15,631,479
3	March	1.8234	1.5337	1,783,273	$ 5,165,674
4	April	2.2527	1.5337	1,441,708	$ 10,365,435
5	May [(1)]	3.7477	1.5337	1,441,079	$ 31,901,319
6	June [(1)]	3.6847	1.5337	1,916,024	$ 41,213,674
7	July	3.7644	1.5337	2,208,753	$ 49,270,398
8	August	4.1426	1.5337	2,405,836	$ 62,764,654
9	September	3.7169	1.7555	1,992,460	$ 39,079,833
10	October	3.2667	2.0003	1,373,788	$ 17,397,939
11	November	4.5684	2.0003	1,345,710	$ 34,559,470
12	December [(1)]	5.2540	2.0003	2,073,011	$ 73,670,397
13	**Total Test Period [(3)]**			**22,419,721**	**$ 405,599,334**
14	Test Period Wtd Avg. ¢/kWh	3.4346	1.6532		
15	Adjustment to remove (Over)/Under Recovery - January 2022 [(2)]				$ 24,571,837
16	**Adjusted (Over)/Under Recovery**				**$ 381,027,497**
17	NC Retail Normalized Test Period MWh Sales			Exhibit 4	22,892,401
18	**Experience Modification Increment (Decrement) cents/kWh**				**1.6644**

Notes:

[(1)] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[(2)] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

[(3)] North Carolina Residential sales on Exhibit 3, Line 13 differ from North Carolina Residential sales on Workpaper 11, due to an adjustment reported on the June 2022 monthly fuel report.

Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - GS/Lighting
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)		Reported (Over)/ Under Recovery (d)
1	January 2022	3.6550	1.6895	1,921,732	$	37,771,442
2	February [1]	3.2504	1.6895	1,927,508	$	30,077,232
3	March	2.2020	1.6895	1,808,909	$	9,269,996
4	April	2.1636	1.6895	1,840,396	$	8,725,608
5	May [1]	3.4774	1.6895	1,904,671	$	34,049,947
6	June [1]	3.9661	1.6895	2,184,316	$	49,730,332
7	July	4.5134	1.6895	2,260,531	$	63,835,167
8	August	4.9415	1.6895	2,467,241	$	80,234,867
9	September	2.9735	1.7523	2,309,221	$	28,198,709
10	October	2.1545	1.8217	1,927,666	$	6,414,818
11	November	3.2050	1.8217	1,777,613	$	24,589,863
12	December [1]	5.0399	1.8217	2,007,616	$	71,896,623
13	**Total Test Period**			**24,337,421**	**$**	**444,794,604**
14	Test Period Wtd Avg. ¢/kWh	3.5242	1.7265			
15	Adjustment to remove (Over)/Under Recovery - January 2022 [2]				$	37,762,562
16	**Adjusted (Over)/Under Recovery**				**$**	**407,032,042**
17	NC Retail Normalized Test Period MWh Sales			Exhibit 4		24,448,017
18	**Experience Modification Increment (Decrement) cents/kWh**					**1.6649**

Notes:

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Industrial
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022	3.8206	1.7243	937,751	$ 19,657,733
2	February [1]	3.3522	1.7243	953,346	$ 15,515,360
3	March	1.9331	1.7243	1,050,500	$ 2,193,118
4	April	2.0280	1.7243	1,001,271	$ 3,040,792
5	May [1]	3.3268	1.7243	1,015,284	$ 16,266,045
6	June [1]	3.9333	1.7243	1,123,416	$ 24,817,732
7	July	4.7681	1.7243	1,091,420	$ 33,220,351
8	August	5.4617	1.7243	1,137,540	$ 42,514,122
9	September	3.4130	1.7791	1,067,538	$ 17,442,158
10	October	2.1680	1.8396	1,014,322	$ 3,330,636
11	November	3.0819	1.8396	980,378	$ 12,179,045
12	December [1]	5.7913	1.8396	929,121	$ 40,459,529
13	**Total Test Period**			**12,301,885**	**$ 230,636,623**
14	Test Period Wtd Avg. ¢/kWh	3.6009	1.7565		
15	Adjustment to remove (Over)/Under Recovery - January 2022 [2]				$ 19,653,201
16	**Adjusted (Over)/Under Recovery**				**$ 210,983,421**
17	NC Retail Normalized Test Period MWh Sales			Exhibit 4	12,219,040
18	**Experience Modification Increment (Decrement) cents/KWh**				**1.7267**

Notes:

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Sales, Fuel Revenue, Fuel Expense and System Peak
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Exhibit 4

Line #	Description	Reference	Total Company	North Carolina Retail	North Carolina Residential	North Carolina General Service/Lighting	North Carolina Industrial
1	Test Period MWh Sales (excluding inter system sales) [1]	Exhibit 6 Schedule 1 (Line 4) and Workpaper 11 (NC Retail)	88,284,042	59,059,117	22,419,810	24,337,421	12,301,885
2	Customer Growth MWh Adjustment	Workpaper 13 Pg 1	160,003	162,487	130,366	103,625	(71,505)
3	Weather MWh Adjustment	Workpaper 12 Pg 1	437,160	337,854	342,225	6,970	(11,341)
4	Total Normalized MWh Sales	Sum	88,881,205	59,559,458	22,892,401	24,448,017	12,219,040
5	Test Period Fuel and Fuel Related Revenue *		$ 1,606,073,846	$ 1,006,893,394			
6	Test Period Fuel and Fuel Related Expense *		$ 2,966,425,990	$ 2,087,923,955			
7	Test Period Unadjusted (Over)/Under Recovery		$ 1,360,352,144	$ 1,081,030,561			

Line #	Description	2021 Summer Coincidental Peak (CP) kW
8	Total System Peak	17,241,828
9	NC Retail Peak	11,480,608
10	NC Residential Peak	5,400,475
11	NC General Service/Lighting Peak	4,263,819
12	NC Industrial Peak	1,816,314

* Total Company Fuel and Fuel-Related Revenue and Fuel and Fuel-Related Expense are determined based upon the fuel and fuel-related cost recovery mechanism in each of the company's jurisdictions.

(1) North Carolina Residential sales on Exhibit 4, Line 1 differ from North Carolina Residential sales on Exhibit 3, Page 2 of 4 due to an adjustment reported on the June 2022 monthly fuel report.

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Duke Energy Carolinas, LLC **Clark Exhibit 5**
North Carolina Annual Fuel and Fuel Related Expense
Nuclear Capacity Ratings
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Unit	Rate Case Docket E-7, Sub 1214	Fuel Docket E-7, Sub 1263	Proposed Capacity Rating MW
Oconee Unit 1	847.0	847.0	847.0
Oconee Unit 2	848.0	848.0	848.0
Oconee Unit 3	859.0	859.0	859.0
McGuire Unit 1	1,158.0	1,158.0	1,158.0
McGuire Unit 2	1,157.6	1,157.6	1,157.6
Catawba Unit 1	1,160.1	1,160.0	1,160.0
Catawba Unit 2	1,150.1	1,150.1	1,150.1
Total Company	7,179.8	7,179.7	7,179.7

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E-7, Sub 1282
Clark Exhibit 6

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Jun 26 2023

DECEMBER 2022 MONTHLY FUEL FILING

Clark Exhibit 6
Schedule 1

DUKE ENERGY CAROLINAS
SUMMARY OF MONTHLY FUEL REPORT

Docket No. E-7, Sub 1260

Line No.		Dec 2022	12 Months Ended Dec 2022
1	Fuel and fuel-related costs	$ 400,088,306	$ 3,125,398,595
	MWH sales:		
2	Total system sales	7,795,402	89,477,757
3	Less intersystem sales	205,952	1,193,715
4	Total sales less intersystem sales	7,589,450	88,284,042
5	Total fuel and fuel-related costs (¢/KWH) (line 1/line 4)	5.2716	3.5402
6	Current fuel and fuel-related cost component (¢/KWH) (per Schedule 4, Line 7a Total)	1.8989	
	Generation Mix (MWH):		
	Fossil (by primary fuel type):		
7	Coal	1,226,989	8,102,494
8	Fuel Oil	78,865	130,190
9	Natural Gas - Combined Cycle	923,129	13,612,829
10	Natural Gas - Combined Heat and Power	7,147	91,218
11	Natural Gas - Combustion Turbine	74,091	1,686,686
12	Natural Gas - Steam	1,243,316	13,557,414
13	Biogas	2,080	18,277
14	Total fossil	3,555,617	37,199,108
15	Nuclear 100%	5,486,217	59,538,303
16	Hydro - Conventional	215,484	1,696,649
17	Hydro - Pumped storage	(34,571)	(697,976)
18	Total hydro	180,913	998,673
19	Solar Distributed Generation	15,173	320,481
20	Total MWH generation	9,237,920	98,056,565
21	Less joint owners' portion - Nuclear	1,417,939	15,313,271
22	Less joint owners' portion - Combined Cycle	(160)	592,719
23	Adjusted total MWH generation	7,820,141	82,150,575

Note: Detail amounts may not add to totals shown due to rounding.

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Clark Exhibit 6
Schedule 2

DUKE ENERGY CAROLINAS
DETAILS OF FUEL AND FUEL-RELATED COSTS

Docket No. E-7, Sub 1260

Fuel and fuel-related costs:	Dec 2022	12 Months Ended Dec 2022
0501110 coal consumed - steam	$ 45,283,039	$ 270,898,099
0501222-0501223 biomass/test fuel consumed	-	
0501310 fuel oil consumed - steam	157,081	1,075,261
0501330 fuel oil light-off - steam	48,166	1,713,942
Total Steam Generation - Account 501	45,488,286	273,687,302
Nuclear Generation - Account 518		
0518100 burnup of owned fuel	21,706,902	247,614,928
Other Generation - Account 547		
0547100, 0547124 - natural gas consumed - Combustion Turbine	11,551,223	129,502,907
0547100 - Combustion Turbine - credit for inefficient fuel cost	-	(2,857,210)
0547100 natural gas consumed - Steam	139,769,907	960,513,825
0547101 natural gas consumed - Combined Cycle	78,921,823	626,119,762
0547101 natural gas consumed - Combined Heat and Power	1,290,155	8,688,719
0547106 biogas consumed - Combined Cycle	112,306	986,012
0547200 fuel oil consumed - Combustion Turbine	13,579,427	20,076,765
Total Other Generation - Account 547	245,224,841	1,743,030,780
Reagents		
Reagents (lime, limestone, ammonia, urea, dibasic acid, and sorbents)	3,579,598	19,538,566
Total Reagents	3,579,598	19,538,566
By-products		
Net proceeds from sale of by-products	451,601	2,946,324
Total By-products	451,601	2,946,324
Total Fossil and Nuclear Fuel Expenses Included in Base Fuel Component	316,451,228	2,286,817,900
Purchased Power and Net Interchange - Account 555		
Capacity component of purchased power (economic)	-	(215,310)
Capacity component of purchased power (renewables)	661,601	15,482,895
Capacity component of purchased power (PURPA)	414,939	9,369,817
Fuel and fuel-related component of purchased power	126,508,359	940,337,520
Total Purchased Power and Net Interchange - Account 555	127,584,899	964,974,922
Less:		
Fuel and fuel-related costs recovered through intersystem sales	43,533,664	122,923,146
Fuel in loss compensation	381,194	2,967,546
Solar Integration Charge	13,226	(4,005)
Lincoln CT marginal fuel revenue	19,737	506,640
Miscellaneous Fees Collected	-	900
Total Fuel Credits - Accounts 447 /456	43,947,821	126,394,227
Total Fuel and Fuel-related Costs	$ 400,088,306	$ 3,125,398,595

Notes: Detail amounts may not add to totals shown due to rounding.
Report reflects net ownership costs of jointly owned facilities.

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Jun 26 2023

DUKE ENERGY CAROLINAS
PURCHASED POWER AND INTERCHANGE
SYSTEM REPORT - NORTH CAROLINA VIEW

DEC 2022

Purchased Power	Total	Capacity	Non-capacity			
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel $ Not Fuel-related $
Alcoa Power Generating Inc.	-	-	-	-	-	
American Electric Power Serv Corp.	-	-	-	-	-	
Associated Electric Cooperative, Inc.	153,251	-	3,154	130,264	22,988	
Blue Ridge Electric Membership Corp.	-	-	-	-	-	
Calpine Energy Services, L.P.	-	-	-	-	-	
Cargill Power Marketers, LLC.	-	-	-	-	-	
Carolina Power Partners, LLC	$ 220,128	-	2,924	$ 187,109	$ 33,019	
Cherokee County Cogeneration Partners	-	$ -	-	-	-	
City of Kings Mountain	-	-	-	-	-	
Constellation	-	-	-	-	-	
Cube Yadkin Generation LLC	115,680	-	723	98,328	17,352	
DE Progress	-	-	-	-	-	
DE Progress - Native Load Transfer	70,200,387	-	466,390	70,248,967	2,377,140	(2,425,721)
DE Progress - Native Load Transfer (Prior Period Adjust)	-	-	-	-	-	
DE Progress - Native Load Transfer Benefit	2,350,019	-	-	2,350,019	-	
DE Progress - Fees	(25,148)	-	-	-	(25,148)	
EDF Trading North America, LLC.	-	-	-	-	-	
Exelon Generation Company, LLC.	-	-	-	-	-	
Florida Power & Light Company	-	-	-	-	-	
Haywood Electric - Economic	32,445	19,590	116	10,927	1,928	
LGE/KU	650,620	-	11,423	553,027	97,593	
Lockhart Power Co.	-	-	-	-	-	
Macquarie Energy, LLC	16,474,177	-	68,687	14,003,050	2,471,127	
Midwest Independent System Operator	-	-	-	-	-	
Morgan Stanley Capital Group	57,600	-	800	48,960	8,640	
NCEMC - Economic	30,628	3,317	611	23,215	4,097	
NCMPA - Economic	1,893,200	-	18,346	1,609,220	283,980	
NCMPA Instantaneous - Economic	7,173,244	-	48,002	4,089,467	3,083,778	
NTE Carolinas LLC	-	-	-	-	-	
Oglethorpe Power	-	-	-	-	-	
Piedmont Electric Membership Corp. - Economic	-	-	-	-	-	
Piedmont Municipal Power Agency	681,363	-	11,318	388,992	292,370	
PJM Interconnection, LLC.	498,917	-	5,150	424,080	74,838	
Rainbow Energy Marketing Corporation	-	-	-	-	-	
Rutherford Electric Membership Corp.	-	-	-	-	-	
South Carolina Electric & Gas Company / Dominion Energy	13,472	-	288	11,451	2,021	
Southern Company Services, Inc.	148,469	-	2,641	126,198	22,270	
Tennessee Valley Authority	700,625	-	12,982	595,531	105,094	
The Energy Authority	15,029	-	386	12,775	2,254	
Town of Dallas	-	-	-	-	-	
Town of Forest City	20,417	20,417	-	-	-	
Westar Energy, Inc.	-	-	-	-	-	
	$ 101,404,524	**$ 43,324**	**653,941**	**$ 94,911,581**	**$ 8,875,341**	**$ (2,425,721)**
Renewable Energy						
REPS	$ 4,896,784.45	$ 639,202	86,592	$ -	$ 4,257,583	
DERP - Purchased Power	$ 342,872.54	22,399	5,884	-	229,623	90,850
DERP - Net Metered Generation	$ 496.80	-	18			497
	$ 5,240,154	**$ 661,601**	**92,494**	**$ -**	**$ 4,487,206**	**$ 91,347**
HB589 PURPA Purchases						
CPRE - Purchased Power	$ 1,214,288.27	-	29,865			1,214,288
Qualifying Facilities	$ 3,465,792.71	414,939	66,488		2,956,940	93,914
	$ 4,680,081	**$ 414,939**	**96,353**	**$ -**	**$ 2,956,940**	**$ 1,308,203**
Non-dispatchable / Other						
Carolina Power & Light (DE Progress) (Emergency)	-	-	-	-		-
South Carolina Public Service Authority - Emergency	-	-	-	-		-
Blue Ridge Electric Membership Corp.	1,573,673	$ 803,142	24,891	654,951		115,580
Cargill Power Marketers, LLC.	-	-	-	-		-
Carolina Power Partners, LLC	-	-	-	-		-
DE Progress - As Available Capacity	-	-	-	-		-
Exelon Generation Company, LLC.	-	-	-	-		-
Haywood Electric	177,287	79,852	3,859	82,820		14,615
Macquarie Energy, LLC	15,571,770	-	35,899	13,236,005		2,335,766
Morgan Stanley Capital Group	-	-	-	-		-
NCEMC - Other	679,250	-	1,235	577,363		101,888
NCMPA	2,097,600	-	2,696	1,782,960		314,640
NTE Carolinas LLC	-	-	-	-		-
Piedmont Electric Membership Corp.	739,661	379,423	11,904	306,202		54,036
PJM Interconnection, LLC - Other	-	-	-	-		-
South Carolina Electric & Gas Company / Dominion Energy	-	-	-	-		-
Southern Company Services, Inc.	-	-	-	-		-
Tennessee Valley Authority	-	-	-	-		-
Generation Imbalance	3,118,465	-	9,905	2,559,774		558,691
Energy Imbalance - Purchases	1,435,304	-	469	1,175,506		259,798
Energy Imbalance - Sales	(4,204,965)	-	-	(3,566,988)		(637,977)
Qualifying Facilities - Pre HB589	-	-	-			-
Other Purchases	472	-	18	-		472
	$ 21,188,517	**$ 1,262,418**	**90,876**	**$ 16,808,592**	**$ -**	**$ 3,117,507**
Total Purchased Power	**$ 132,513,276**	**$ 2,382,281**	**933,664**	**$ 111,720,172**	**$ 16,319,487**	**$ 2,091,335**
Interchanges In						
Other Catawba Joint Owners	6,968,385	-	710,207	4,330,916		2,637,471
WS Lee Joint Owner	170,714		2,953	158,305		12,409
Total Interchanges In	7,139,099	-	713,160	4,489,220	-	2,649,878
Interchanges Out						
Other Catawba Joint Owners	(6,832,104)	(134,209)	(693,600)	(4,230,264)		(2,467,631)
Catawba- Net Negative Generation	-	-	-	-		-
WS Lee Joint Owner	(1,942,451)		(33,801)	(1,790,256)		(152,195)
Total Interchanges Out	(8,774,555)	(134,209)	(727,400)	(6,020,520)	-	(2,619,826)
Net Purchases and Interchange Power	**$ 130,877,820**	**$ 2,248,072**	**919,424**	**$ 110,188,872**	**$ 16,319,487**	**$ 2,121,387**

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DUKE ENERGY CAROLINAS
INTERSYSTEM SALES*
SYSTEM REPORT - NORTH CAROLINA VIEW

DEC 2022

	Total	Capacity	Non-capacity		
Sales	**$**	**$**	**mWh**	**Fuel $**	**Non-fuel $**
Utilities:					
Midwest Independent System Operator - Emergency	-	-	-	-	-
DE Progress - Emergency	-	-	-	-	-
SC Public Service Authority - Emergency	-	-	-	(155)	155
SC Electric & Gas / Dominion Energy - Emergency	508,666	-	2,763	2,270,933	(1,762,267)
Tennessee Valley Authority - Emergency	1,924,600	-	8,648	5,948,337	(4,023,737)
Market Based:					
Associated Electric Cooperative, Inc.	2,552	-	41	1,603	949
American Electric Power Services Corp.	-	-	-	-	-
Cargill-Alliant, LLC.	-	-	-	-	-
Carolina Power Partners, LLC	8,800	-	150	8,953	(153)
Central Electric Power Cooperative, Inc.	-	$ -	-	-	-
Constellation Power Sources	-	-	-	-	-
EDF Trading Company	-	-	-	-	-
Evergy Kansas Central	-	-	-	-	-
Exelon Generation Company, LLC.	-	-	-	-	-
Macquarie Energy, LLC	-	-	-	980	(980)
Midwest Independent System Operator	-	-	-	-	-
Morgan Stanley	-	-	-	-	-
NCEMC	-	-	-	-	-
NCEMC (Balancing/Generator)	-	-	-	-	-
NCMPA	127,155	87,500	213	38,688	967
Oglethorpe Power Corporation	-	-	-	-	-
PJM Interconnection, LLC.	17,071	-	200	13,976	3,095
SC Electric & Gas / Dominion Energy	20,383	-	182	4,442	15,941
South Carolina Electric & Gas - T	(4)	-	-	-	(4)
South Carolina Public Service Authority - T	(4)	-	-	-	(4)
Southern Company	90,699	-	1,058	121,282	(30,583)
Tenaska Power Service	-	-	-	-	-
Tennessee Valley Authority	5,926	-	90	3,948	1,978
The Energy Authority	18,112	-	411	10,634	7,479
Westar Energy	-	-	-	-	-
Other:					
Cargill-Alliant, LLC - Mitigation sales	-	-	-	-	-
DE Progress - Native Load Transfer Benefit	1,268,405	-	-	1,268,405	-
DE Progress - Native Load Transfer	32,571,610	-	187,066	32,362,740	208,869
Generation Imbalance	1,777,596	-	5,130	1,478,897	298,699
BPM Transmission	8,535	-			8,535
Total Intersystem Sales	**$ 38,350,103**	**$ 87,500**	**205,952**	**$ 43,533,664**	**$ (5,271,061)**

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DUKE ENERGY CAROLINAS
PURCHASED POWER AND INTERCHANGE
SYSTEM REPORT - NORTH CAROLINA VIEW

Twelve Months Ended DEC 2022

Clark Exhibit 6
Schedule 3 - Purchases
Page 3 of 5

Purchased Power	Total	Capacity	Non-capacity			
						Not Fuel $
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel-related $
Alcoa Power Generating Inc.	-	-	-	-	-	
American Electric Power Serv Corp.	-	-	-	-	-	
Associated Electric Cooperative, Inc.	163,916	-	3,384	136,769	27,147	
Blue Ridge Electric Membership Corp. - Economic	-	-	-	-	-	
Calpine Energy Services, L.P.	-	-	-	-	-	
Cargill Power Marketers, LLC.	$ -	-	-	$ -	$ -	
Carolina Power Partners, LLC	9,667,773	$ -	128,879	5,950,172	3,717,601	
Cherokee County Cogeneration Partners	(6,400,734)	(215,310)	-	22,574	(6,207,998)	
City of Kings Mountain	-	-	-	-	-	
Constellation	489,570	-	6,659	298,638	190,932	
Cube Yadkin Generation LLC	221,550	-	2,810	162,909	58,641	
DE Progress	-	-	-	-	-	
DE Progress - Native Load Transfer	544,444,833	-	7,369,876	520,344,456	26,483,093	(2,382,715)
DE Progress - Native Load Transfer (Prior Period Adjust)	-	-	-	-	-	
DE Progress - Native Load Transfer Benefit	54,871,210	-	-	54,871,210	-	
DE Progress - Fees	(153,265)	-	-	-	(153,265)	
EDF Trading North America, LLC.	-	-	-	-	-	
Exelon Generation Company, LLC.	-	-	-	-	-	
Florida Power & Light Company	-	-	-	-	-	
Haywood Electric - Economic	958,305	242,809	6,962	439,537	275,958	
LGE/KU	785,194	-	14,077	635,117	150,077	
Lockhart Power Co.	-	-	-	-	-	
Macquarie Energy, LLC	51,250,548	-	486,963	35,216,637	16,033,911	
Midwest Independent System Operator	-	-	-	-	-	
Morgan Stanley Capital Group	72,600	-	1,100	58,110	14,490	
NCEMC	970,306	3,317	15,767	596,418	370,571	
NCMPA	14,524,190	-	220,006	9,314,124	5,210,066	
NCMPA Load Following Economic	37,141,682	-	465,009	21,929,915	15,211,767	
NTE Carolinas LLC	-	-	-	-	-	
Oglethorpe Power	-	-	-	-	-	
Piedmont Electric Membership Corp. - Economic	-	-	-	-	-	
Piedmont Municipal Power Agency	5,268,496	-	102,863	3,124,813	2,143,684	
PJM Interconnection, LLC.	14,064,189	-	192,441	8,698,896	5,365,294	
Rainbow Energy Marketing Corporation	-	-	-	-	-	
Rutherford Electric Membership Corp.	-	-	-	-	-	
South Carolina Electric & Gas Company / Dominion Energy	13,472	-	288	11,451	2,021	
Southern Company Services, Inc.	557,481	-	9,748	375,696	181,785	
Tennessee Valley Authority	5,408,020	-	84,497	3,467,042	1,940,978	
The Energy Authority	16,905	-	424	13,919	2,986	
Town of Dallas	-	-	-	-	-	
Town of Forest City	**$ 244,999**	**$ 244,999**	**-**	**$ -**	**$ -**	
Westar Energy, Inc.	$ -	$ -	-	$ -	$ -	
	734581242	275815.11	9111753	665668404.2	71019738.84	-2382715.37
Renewable Energy						
REPS	71,532,035	15,214,422	1,148,827	-	56,317,611	-
DERP - Purchased Power	4,025,008	268,474	69,800	-	2,739,889	1,016,646
DERP - Purchased Power - Pre HB589	$ -	$ -	-	$ -		$ -
DERP - Net Metered Generation	124,177.1400	0.0000	4,598.5974	0.0000		124,177.1400
	$ 75,681,220	15,482,895	1223226	$ -	$ 59,057,500	1,140,823
	ok	ok	ok		ok	
HB589 PURPA Purchases						
CPRE - Purchased Power	**$ 6,118,008**	**$ -**	**301,278**			**$ 6,118,008**

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Qualifying Facilities	**$ 44,602,804 OK**	**$ 9,369,818 OK**	**747,251**		**$ 34,126,582**	**1106408.62**
	$ 50,720,812	**$ 9,369,818**	**1,048,529**	**$ -**	**$ 34,126,582**	**7224417**
Non-dispatchable / Other						
Carolina Power & Light (DE Progress) - Emergency	$ 30,606	$ -	177	$ 26,015		$ 4,591
South Carolina Public Service Authority - Emergency	-	-	-	-		-
Blue Ridge Electric Membership Corp.	12,234,125	5,929,525	293,671	5,358,911		945,690
City of Concord	-	-	-	-		-
Cargill Power Marketers, LLC.	-	-	-	-		-
Carolina Power Partners, LLC	5,412,299	-	53,596	4,600,454		811,845
DE Progress - As Available Capacity	400,501	400,501	-	-		-
Exelon Generation Company, LLC.	-	-	-	-		-
Haywood Electric	2,184,429	978,976	45,858	1,024,635		180,818
Macquarie Energy, LLC	95,814,395	-	573,508	81,442,236		14,372,159
Morgan Stanley Capital Group	-	-	-	-		-
NCEMC - Other	9,311,412	36,488	51,330	7,883,685		1,391,239
NCMPA - Reliability	6,533,220	-	39,228	5,553,237		979,983
NTE Carolinas LLC	-	-	-	-		-
Piedmont Electric Membership Corp.	5,818,999	2,826,296	140,160	2,543,798		448,905
PJM Interconnection, LLC - Other	-	-	-	-		-
South Carolina Electric & Gas Company	-	-	-	-		-
Southern Company Services, Inc.	-	-	-	-		-
Tennesse Valley Authority	-	-	-	-		-
Generation Imbalance	9,288,793		69,713	6,023,880		3,264,913
Energy Imbalance - Purchases	2,954,691		(19,820)	2,284,580		670,111
Energy Imbalance - Sales	(7,911,557)		-	(7,181,724)		(729,833)
Qualifying Facilities - Pre HB589	-	-	-	-		-
Other Purchases	6,318	-	233	-		6,318
	$ 142,078,232	**$ 10,171,786**	**1,247,654**	**$ 109,559,706**	**$ -**	**$ 22,346,739**
Total Purchased Power	**$ 1,003,061,506**	**$ 35,300,314**	**12,631,162**	**$ 775,228,110**	**$ 164,203,821**	**$ 28,329,264**
						2
Interchanges In						
Other Catawba Joint Owners	73,411,183	-	7,683,448	45,957,871		27,453,312
WS Lee Joint Owner	27,399,050	-	421,179	25,673,117		1,725,933
Total Interchanges In	100,810,232	-	8,104,626	71,630,988	-	29,179,244
Interchanges Out						
Other Catawba Joint Owners	(72,945,394)	(1,580,207)	(7,598,655)	(45,548,810)		(25,816,377)
Catawba- Net Negative Generation	(452,734)	-	(13,562)	(391,439)		(61,295)
WS Lee Joint Owner	(26,616,561)	-	(411,650)	(24,785,151)		(1,831,410)
Total Interchanges Out	(100,014,689)	(1,580,207)	(8,023,867)	(70,725,400)	-	(27,709,082)
Net Purchases and Interchange Power	**$ 1,003,857,049**	**$ 33,720,107**	**12,711,921**	**$ 776,133,698**	**$ 164,203,821**	**$ 29,799,426**

NOTES: Detail amounts may not add to totals shown due to rounding.
CPRE purchased power amounts are recovered through the CPRE Rider.

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DUKE ENERGY CAROLINAS
INTERSYSTEM SALES*
SYSTEM REPORT - NORTH CAROLINA VIEW

Twelve Months Ended DEC 2022

Sales	Total $	Capacity $	Non-capacity mWh	Non-capacity Fuel $	Non-capacity Non-fuel $
Utilities:					
Midwest Independent System Operator - Emergency	-	-	-	-	-
DE Progress - Emergency	$ 106,271	-	1,150	$ 101,064	$ 5,207
SC Public Service Authority - Emergency	417,282	-	4,767	389,377	27,905
SC Electric & Gas / Dominion Energy - Emergency	522,805	-	3,020	2,283,300	(1,760,495)
Tennessee Valley Authority - Emergency	1,924,600	-	8,648	5,948,337	(4,023,737)
Market Based:					
Associated Electric Cooperative, Inc.	2,552	-	41	1,603	949
American Electric Power Services Corp.	-	-	-	-	-
Cargill-Alliant, LLC.	-	-	-	-	-
Carolina Power Partners, LLC	8,800	-	150	8,953	(153)
Central Electric Power Cooperative, Inc.	5,538,111	$ 5,267,000	3,450	265,640	5,471
Constellation Power Sources	-	-	-	-	-
EDF Trading Company	-	-	-	-	-
Evergy Kansas Central (BPM)	-	-	-	-	-
Exelon Generation Company, LLC.	-	-	-	-	-
Macquarie Energy, LLC	1,459,360	-	20,545	1,456,745	2,615
Midwest Independent System Operator	-	-	-	-	-
Morgan Stanley	-	-	-	-	-
NCEMC	-	-	-	-	-
NCEMC (Balancing/Generator)	-	-	-	-	-
NCMPA	1,764,061	1,050,000	6,341	686,859	27,202
Oglethorpe Power Corporation	-	-	-	-	-
PJM Interconnection, LLC.	16,952	-	200	13,976	2,976
SC Electric & Gas / Dominion Energy	209,983	-	1,382	147,017	62,966
South Carolina Electric & Gas - T	(4)	-	-	-	(4)
South Carolina Public Service Authority - T	(4)	-	-	-	(4)
Southern Company	112,627	-	1,409	136,190	(23,563)
Tenaska Power Service	-	-	-	-	-
Tennesse Valley Authority	5,926	-	90	3,948	1,978
The Energy Authority	83,368	-	1,474	62,119	21,250
Westar Energy	-	-	-	-	-
Other:					
Cargill-Alliant, LLC - Mitigation sales	-	-	-	-	-
DE Progress - Native Load Transfer Benefit	10,826,966	-	-	10,826,966	-
DE Progress - Native Load Transfer	98,082,917	17,512	1,104,079	96,983,455	1,081,950
Generation Imbalance	4,126,628	-	36,969	3,607,599	519,029
BPM Transmission	(289,990)	-	-	-	(289,990)
Total Intersystem Sales	**$ 124,919,210**	**$ 6,334,512**	**1,193,715**	**$ 122,923,146**	**$ (4,338,447)**

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Clark Exhibit 6
Schedule 4
Page 1 of 2

Duke Energy Carolinas
(Over) / Under Recovery of Fuel Costs
Dec-22

Line No.			Residential	Commercial	Industrial	Total
1	Actual System kWh sales	Input				7,589,450,642
2	DERP Net Metered kWh generation	Input				10,675,770
3	Adjusted System kWh sales	L1 + L2				7,600,126,412
4	N.C. Retail kWh sales	Input	2,073,010,864	2,007,616,467	929,120,959	5,009,748,290
5	NC kWh sales % of actual system kWh sales	L4 T / L1				66.01%
6	NC kWh sales % of adjusted system kWh sales	L4 T / L3				65.92%
7	Approved fuel and fuel related rates (¢/kWh)					
	7a Billed rates by class (¢/kWh)	L7g	2.0003	1.8217	1.8396	1.8989
	7b Billed fuel expense	L7a * L4 / 100	$41,466,436	$36,572,749	$17,092,109	$95,131,294
	Rate changes:		Agrees to CY Rate	Agrees to CY Rate	Agrees to CY Rate	ate with Annual Fuel Filings.
	7c New approved rates	Input	2.0003	1.8217	1.8396	
	7d Ratio of days to rate	Input	100.00%	100.00%	100.00%	
	7e Prior approved rates	Input	1.5337	1.6895	1.7243	
	7f Ratio of days to rate	Input	$0	$0	$0	
	7g Total prorated ¢/KWH	(L7c * L7d) + (L7e * L7f)	2.0003	1.8217	1.8396	
8	Incurred base fuel and fuel related (¢/kWh) (less renewable purchased power capacity)					
	Allocation changes:					
	8a New approved Docket E-7, Sub 1263 allocation factor	Input	41.25%	38.34%	20.40%	ate with Annual Fuel Filings.
	8b System incurred expense	Input				$399,273,363
	8c Incurred base fuel and fuel related expense	L8b * L6 * 8a	$108,577,957	$100,915,104	$53,694,541	$263,187,602
	8d Incurred base fuel rates by class (¢/kWh)	L8c / L4 * 100	5.2377	5.0266	5.7791	5.2535
9	Incurred renewable purchased power capacity rates (¢/kWh)					
	9a NC retail production plant %	Input				0.6668
	9b Production plant allocation factors	Input	$0	$0	$0	$1
	9c System incurred expense	Input				1,076,540
	9d Incurred renewable capacity expense	L9a * L9b * L9c	337,710	266,619	113,521	717,851
	9e Incurred renewable capacity rates by class (¢/kWh)	((L9a * L9c) * L9b) / L4 * 100	$0	$0	$0	$0
10	Total incurred rates by class (¢/kWh)	L8h + 9e	$5	$5	$6	$5
11	Difference in ¢/kWh (incurred - billed)	L10 - L7a	$3	$3	$4	3
12	(Over) / under recovery [See footnote]	(L4 * L11) / 100	$67,449,231	$64,608,974	$36,715,953	$168,774,159
13	Prior period adjustments	Input	$ 6,221,166	$ 7,287,649	$ 3,743,576	$ 17,252,391
14	Total (over) / under recovery	L12 + L13	$ 73,670,398	$ 71,896,623	$ 40,459,529	$ 186,026,550
15	Total system incurred expense	L8f + L9c				$ 400,349,903
16	Less: Jurisdictional allocation adjustment(s)	Input				$ 261,597
17	Total Fuel and Fuel-related Costs per Schedule 2	L15 + L16				$ 400,088,306

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		(Over) / Under Recovery				
	Year 2022	Total To Date	Residential	Commercial	Industrial	Total Company
	January	$82,008,235	$24,579,060	$37,771,442	$19,657,733	$82,008,235
	February	$143,232,306	$15,631,479	$30,077,232	$15,515,360	$61,224,071
_/1	March	$159,861,094	$5,165,674	$9,269,996	$2,193,118	$16,628,788
	April	$181,992,930	$10,365,435	$8,725,608	$3,040,792	$22,131,835
_/1	May	$264,210,240	$31,901,319	$34,049,947	$16,266,045	$82,217,311
	June	$379,971,976	$41,213,673	$49,730,332	$24,817,731	$115,761,736
	July	$526,297,892	$49,270,398	$63,835,167	$33,220,351	$146,325,916
	August	$711,811,535	$62,764,654	$80,234,867	$42,514,122	$185,513,643
	September	796,532,236	$39,079,834	$28,198,709	$17,442,158	$84,720,701
	October	823,675,629	$17,397,939	$6,414,818	$3,330,636	$27,143,393
	November	$895,004,007	34,559,470	24,589,863	12,179,045	$71,328,378
	December	$1,081,030,557	$73,670,398	$71,896,623	$40,459,529	$186,026,550
			$405,599,335	$444,794,603	$230,636,622	$1,081,030,557

Notes:
Detail amounts may not recalculate due to percentages presented as rounded.
Presentation of over or under collected amounts reflects a regulatory asset or liability. Over collections, or regulatory liabilities, are shown as negative amounts.
Under collections, or regulatory assets, are shown as positive amounts.
Includes prior period adjustments.
_/1 Reflects a prorated rate and prorated allocation factor for periods in which the approved rates changed.

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DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED COST REPORT
December 2022

Description	Buck	Dan River	Lee	Clemson	Lee	Lincoln	(A) Lincoln (Unit17)	Mill Creek	Rockingham
	CC	CC	CC	CHP	Steam/CT	CT	CT	CT	CT
Cost of Fuel Purchased ($)									
Coal									
Oil	-	-	-		581,554	-	-	4,046,679	4,504,834
Gas - CC	$40,036,410	$38,694,262	$221,226						
Gas - CHP				$1,290,155					
Gas - CT					$339,173	$1,752,935	$247	$1,301,300	$8,157,569
Gas - Steam					-				
Biogas	-	379,200	-						
Total	$40,036,410	$39,073,462	$221,226	$1,290,155	$920,726	$1,752,935	$247	$5,347,979	$12,662,402
Average Cost of Fuel Purchased (¢/MBTU)									
Coal		-							
Oil					2,568.26	-	-	2,253.14	2,410.28
Gas - CC	1,210.54	1,211.01	2,080.56						
Gas - CHP				1,297.62					
Gas - CT					1,277.34	1,215.43	(1,129.41)	1,212.99	1,217.66
Gas - Steam					-				
Biogas	-	2,595.49	-						
Weighted Average	1,210.54	1,217.31	2,080.56	1,297.62	1,871.51	1,215.43	(1,129.41)	1,864.18	1,477.81
Cost of Fuel Burned ($)									
Coal		-	-		-				
Oil - CC	-	-	-						
Oil - Steam/CT					$288,821	4,242,357	-	5,012,521	4,035,727
Gas - CC	$40,036,410	$38,694,262	$221,226						
Gas - CHP				$1,290,155					
Gas - CT					339,173	$1,752,935	$247	$1,301,300	$8,157,569
Gas - Steam					-				
Biogas	-	379,200	-						
Nuclear									
Total	$40,036,410	$39,073,462	$221,226	$1,290,155	$627,994	$5,995,292	$247	$6,313,821	$12,193,296
Average Cost of Fuel Burned (¢/MBTU)									
Coal					-				
Oil - CC									
Oil - Steam/CT					1,751.81	1,517.46	-	1,952.52	1,856.01
Gas - CC	1,210.54	1,211.01	2,080.56						
Gas - CHP				1,297.62					
Gas - CT					1,277.34	1,215.43	(1,129.41)	1,212.99	1,217.66
Gas - Steam					-				
Biogas	-	2,595.49	-						
Nuclear									
Weighted Average	1,210.54	1,217.31	2,080.56	1,297.62	1,459.09	1,414.68	(1,129.41)	1,734.56	1,374.08
Average Cost of Generation (¢/kWh)									
Coal		-	-		-	-	-		
Oil - CC	-	-	-						
Oil - Steam/CT		-	-		17.56	12.13	-	23.53	20.14
Gas - CC	8.53	8.51	-						
Gas - CHP				18.05					
Gas - CT					12.54	291,185.15	-	14.61	12.95
Gas - Steam					-	-	-	-	-
Biogas	-	18.23	-						
Nuclear									
Weighted Average	8.53	8.55	-	18.05	14.44	17.14	-	20.90	14.68
Burned MBTU's									
Coal					-				
Oil - CC									
Oil - Steam/CT					16,487	279,569	-	256,721	217,441
Gas - CC	3,307,314	3,195,214	10,633						
Gas - CHP				99,425					
Gas - CT					26,553	144,223	(22)	107,280	669,936
Gas - Steam					-				
Biogas	-	14,610	-						
Nuclear									
Total	3,307,314	3,209,824	10,633	99,425	43,040	423,792	(22)	364,001	887,377
Net Generation (mWh)									
Coal									
Oil - CC									
Oil - Steam/CT		-	-		1,644	34,986	-	21,307	20,035
Gas - CC	469,549	454,840	(1,260)		-				
Gas - CHP				7,147					
Gas - CT					2,705	1	(523)	8,908	63,001
Gas - Steam					-				
Biogas	-	2,080	-						
Nuclear 100%									
Hydro (Total System)									
Solar (Total System)									
Total	469,549	456,920	(1,260)	7,147	4,349	34,987	(523)	30,215	83,036
Cost of Reagents Consumed ($)									
Ammonia	$48,324	$0	$6,766						
Limestone									
Sorbents									
Urea									
Re-emission Chemical									
Dibasic Acid									
Activated Carbon									
Lime (water emissions)									
Total	$48,324	$0	$6,766						

Notes:
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
Detail amounts may not add to totals shown due to rounding.
Data is reflected at 100% ownership.
Schedule excludes in-transit and terminal activity.
Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.
Re-emission chemical reagent expense is not recoverable in NC.
Lime (water emissions) expense is not recoverable in SC fuel clause.

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Mar 26 2023

DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED COST REPORT
December 2022

Description	Allen	Marshall	Belews Creek	Cliffside	Catawba	McGuire	Retail	onee	Current Month
	Steam	Steam - Dual Fuel	Steam - Dual Fuel	Steam - Dual Fuel	Nuclear	Nuclear		Nuclear	
Cost of Fuel Purchased ($)									
Coal	$8,397	$22,275,183	$13,005,647	$4,159,826					39449052.41
Oil	-	-	43,134	195,355					9371554.83
Gas - CC									78951896.85
Gas - CHP									1290154.86
Gas - CT									11551223.21
Gas - Steam		23,192,605	89,015,098	27,562,204					139769906.7
Biogas									379200.4585
Total	$8,397	$45,467,788	$102,063,879	$31,917,385					280762989.3
Average Cost of Fuel Purchased (¢/MBTU)									
Coal	-	556.38	405.58	529.76					493.39
Oil	-	-	2,094.23	2,358.10					2345.876765
Gas - CC									1212.190124
Gas - CHP									1297.616153
Gas - CT									1218.467781
Gas - Steam		1,212.83	1,212.32	1,219.81					1213.873974
Biogas				.					2595.485685
Weighted Average	-	768.58	967.31	1,045.42					1021.532064
Cost of Fuel Burned ($)									
Coal	$0	$20,049,558	$15,376,945	$9,856,536					45283038.68
Oil - CC									0
Oil - Steam/CT	-	2,092	-	203,154			-		13784673.86
Gas - CC									78951896.85
Gas - CHP									1290154.86
Gas - CT							-		11551223.21
Gas - Steam		23,192,605	89,015,098	27,562,204					139769906.7
Biogas									379200.4585
Nuclear					$9,964,761	$9,371,945			29753844.93
Total	$0	$43,244,255	$104,392,043	$37,621,894	$9,964,761	$9,371,945	$0 #		320763940
Average Cost of Fuel Burned (¢/MBTU)									
Coal	-	418.68	345.25	368.79					380.0415591
Oil - CC									0
Oil - Steam/CT	-	1,442.88	-	2,545.79			-		1771.028179
Gas - CC									1212.190124
Gas - CHP									1297.616153
Gas - CT							-		1218.467781
Gas - Steam		1,212.83	1,212.32	1,219.81					1213.873974
Biogas									2595.485685
Nuclear					57.13	53.27			54.49758916
Weighted Average	-	645.32	884.95	761.55	57.13	53.27	-		371.3414283
Average Cost of Generation (¢/kWh)									
Coal	-	4.02	3.37	3.57					3.690582692
Oil - CC									-
Oil - Steam/CT	-	13.67	-	23.16			-		17.47873714
Gas - CC									8.552637244
Gas - CHP									18.05169806
Gas - CT							-		15.59056553
Gas - Steam		11.10	11.18	11.55					11.24170747
Biogas									18.2330654
Nuclear					0.57	0.53			0.542338098
Weighted Average	-	6.11	8.34	7.29	0.57	0.53			3.472252469
Burned MBTU's									
Coal	-	4,788,789	4,453,853	2,672,644					11915286
Oil - CC									0
Oil - Steam/CT	-	145	-	7,980			-		778343
Gas - CC									6513161.2
Gas - CHP									99425
Gas - CT							-		947970
Gas - Steam		1,912,266	7,342,548	2,259,553					11514367.2
Biogas									14610
Nuclear					17,441,277	17,594,902			54596626
Total	-	6,701,200	11,796,401	4,940,177	17,441,277	17,594,902	-		86379788.4
Net Generation (mWh)									
Coal	(3,652)	498,367	455,930	276,344					1226988.865
Oil - CC									0
Oil - Steam/CT	-	15	-	877			-		78865.388
Gas - CC									923129.2594
Gas - CHP									7147
Gas - CT							-		74091.111
Gas - Steam		208,863	795,860	238,593					1243315.636
Biogas									2079.740571
Nuclear 100%					1,755,875	1,777,031			5486217
Hydro (Total System)									180912.503
Solar (Total System)									15173.19
Total	(3,652)	707,245	1,251,790	515,814	1,755,875	1,777,031	-		9237921
Cost of Reagents Consumed ($)									
Ammonia			$1,573,130	$112,122					1740341.44
Limestone	$0	$463,125	669,388	417,704					1550217.58
Sorbents	-	135,320	-						135319.92
Urea	-	135,168							135167.6
Re-emission Chemical	-	-	-	-					0
Dibasic Acid	-								0
Activated Carbon	19,413	-							19413
Lime (water emissions)	-	-	-						0
Total	19,413	733,613	$2,242,518	$529,827					3580459.54

Notes:
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
Detail amounts may not add to totals shown due to rounding.
Data is reflected at 100% ownership.
Schedule excludes in-transit and terminal activity.
Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.
Re-emission chemical reagent expense is not recoverable in NC.
Lime (water emissions) expense is not recoverable in SC fuel clause.

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Jun 26 2023

I/A

Clark Exhibit 6
Schedule 6

DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED CONSUMPTION AND INVENTORY REPORT
December 2022

Description	Buck	Dan River	Lee	Clemson	Lee	Lincoln	(A) Lincoln (Unit17)	Mill Creek	Rockingham	Allen	Marshall	Belews Creek	Cliffside	Current Month	Total 12 ME December 2022
	CC	CC	CC	CHP	Steam/CT	CT	CT	CT	CT	Steam	Steam - Dual Fuel	Steam - Dual Fuel	Steam - Dual Fuel		
Coal Data:															
Beginning balance					-					74,257	942,182	1,063,230	560,022	2,639,691	2,249,850.29
Tons received during period										-	160,876	126,317	34,519	321,712	3,321,481.00
Inventory adjustments					-					-	-	-	-	-	87,264.42
Tons burned during period					-					-	188,294	175,590	106,421	470,305	3,167,498.27
Ending balance					-					74,257	914,764	1,013,957	488,120	2,491,098	2,491,097.54
MBTUs per ton burned					-					-	25.43	25.37	25.11	25.34	25.14
Cost of ending inventory ($/ton)					-					76.97	106.48	87.57	92.62	95.19	95.19
Oil Data:															
Beginning balance	-	-	-		676,615	8,412,634	815,389	2,345,685	2,482,428	97,085	278,522	19,411	189,712	15,317,480	17,610,506
Gallons received during period	-	-	-		164,086	-	-	1,301,461	1,354,355	-	-	14,925	60,032	2,894,859	4,430,957
Miscellaneous adjustments	-	-	-		-	-	-	-	-	-	-	(12,217)	(7,796)	(18,962)	(283,590)
Gallons burned during period		-	-		119,913	2,024,251	-	1,863,711	1,584,733	-	1,055	-	57,940	5,652,654	9,217,150
Ending balance	-	-	-		720,788	6,388,383	815,389	1,783,435	2,252,050	97,085	277,467	22,119	184,008	12,540,723	12,540,723
Cost of ending inventory ($/gal)	-	-	-		2.41	2.10	2.40	2.69	2.55	3.67	1.98	2.92	3.51	2.33	2.33
Natural Gas Data:															
Beginning balance															
MCF received during period	3,201,724	3,078,374	10,314	96,396	25,719	139,785	(21)	103,973	645,289		1,854,024	7,076,232	2,186,597	18,418,406	245,725,869
MCF burned during period	3,201,724	3,078,374	10,314	96,396	25,719	139,785	(21)	103,973	645,289		1,854,024	7,076,232	2,186,597	18,418,406	245,725,869
Ending balance															
Biogas Data:															
Beginning balance															
MCF received during period	-	14,075	-											14,075	125,074
MCF burned during period	-	14,075	-											14,075	125,074
Ending balance															
Limestone Data:															
Beginning balance										17,697	69,262	39,265	31,093	157,316	158,739
Tons received during period										-	-	-	-	-	163,156
Inventory adjustments										-	-	-	-	-	(9,121)
Tons consumed during period										-	10,150	11,833	7,544	29,527	184,984
Ending balance										17,697	59,112	27,432	23,549	127,789	127,789
Cost of ending inventory ($/ton)										55.11	45.63	55.25	47.15	49.29	49.29

Description	Buck	Qtr Ending December 2022	Total 12 ME December 2022
Ammonia Data: (B)			
Beginning balance	3,836	3,836	2,761
Tons received during period	925	925	5,319
Tons consumed during period	1,127	1,127	4,446
Ending balance	3,634	3,634	3,634
Cost of ending inventory ($/ton)	339.09	339.09	339.09

Notes:
Detail amounts may not add to totals shown due to rounding.
Schedule excludes in-transit and terminal activity.
Gas is burned as received; therefore, inventory balances are not maintained.
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
(B) Quarterly ammonia inventory amounts are revised to reflect a correction to June quantities, affecting the quarter ending September 2021 beginning balance. Revised amounts for quarter ending June 2021 are revised above.

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Schedule 7

DUKE ENERGY CAROLINAS
ANALYSIS OF COAL PURCHASED
'December 2022

STATION	TYPE	QUANTITY OF TONS DELIVERED	DELIVERED COST	DELIVERED COST PER TON
ALLEN	SPOT	-	$ -	$ -
	CONTRACT	-	7,786	-
	FUEL MANAGEMENT AGREEMENT		(7,786)	
	FIXED TRANSPORTATION / ADJUSTMENTS	-	8,397	-
	TOTAL	0	8,397	-
BELEWS CREEK	SPOT	-	-	-
	CONTRACT	126,317	11,773,259	93.20
	FUEL MANAGEMENT AGREEMENT		814,231	
	FIXED TRANSPORTATION / ADJUSTMENTS	-	418,157	-
	TOTAL	126,317	13,005,647	102.96
BUCK	SPOT	-	-	-
CLIFFSIDE	SPOT	-	-	-
	CONTRACT	34,519	3,969,974	115.01
	FUEL MANAGEMENT AGREEMENT			
	FIXED TRANSPORTATION / ADJUSTMENTS	-	189,852	-
	TOTAL	34,519	4,159,826	120.51
	TOTAL	-	-	-
MARSHALL	SPOT	60,317	11,977,372	198.57
	CONTRACT	100,559	11,121,036	110.59
	FUEL MANAGEMENT AGREEMENT		(1,413,676)	
	FUEL MANAGEMENT AGREEMENT			
	FIXED TRANSPORTATION / ADJUSTMENTS	-	-	-
	TOTAL	-	(0)	-

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Jan 26 2023

Clark Exhibit 6
Schedule 8

DUKE ENERGY CAROLINAS
ANALYSIS OF COAL QUALITY RECEIVED
December 2022

STATION	PERCENT MOISTURE	PERCENT ASH	HEAT VALUE	PERCENT SULFUR
ALLEN	-	-	-	-
BELEWS CREEK	6.68	9.63	12,693	1.84
CLIFFSIDE	13.99	8.16	11,374	1.99
LEE	-	-	-	-
MARSHALL	7.56	9.61	12,443	1.39

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Jun 26 2023

Clark Exhibit 6
Schedule 9

DUKE ENERGY CAROLINAS
ANALYSIS OF OIL PURCHASED
DECEMBER 2022

	ALLEN	BELEWS CREEK
VENDOR	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract
SULFUR CONTENT %	-	-
GALLONS RECEIVED	-	14,925
TOTAL DELIVERED COST	$ -	$ 43,134
DELIVERED COST/GALLON	$ -	$ 2.89
BTU/GALLON	138,000	138,000

	CLIFFSIDE	MARSHALL
VENDOR	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract
SULFUR CONTENT %	-	-
GALLONS RECEIVED	60,032	-
TOTAL DELIVERED COST	$ 195,355	$ -
DELIVERED COST/GALLON	$ 3.25	$ -
BTU/GALLON	138,000	138,000

	LEE	MILL CREEK	ROCKINGHAM
VENDOR	HighTowers	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract	Contract
SULFUR CONTENT %	-	-	-
GALLONS RECEIVED	164,086	1,301,461	1,354,355
TOTAL DELIVERED COST	$ 581,554	$ 4,046,679	$ 4,504,834
DELIVERED COST/GALLON	$ 3.54	$ 3.11	$ 3.33
BTU/GALLON	138,000	138,000	138,000

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Duke Energy Carolinas Base Load Power Plant Performance Review Plan
Report Period: December 2022 - December 2022

Station	Unit	Date of Outage	Duration of Outage (Hours)	Scheduled / Unscheduled	Cause of Outage	Reason Outage Occurred	Remedial Actions Taken
Oconee	1						
	2						
	3						
McGuire	1						
	2						
Catawba	1						
	2						

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022

Belews Creek Station

No Outages at Baseload Units During the Month.

Buck Combined Cycle Station

No Outages at Baseload Units During the Month.

Clemson CHP

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1	12/12/2022 8:13:00 AM To 12/21/2022 7:52:00 AM	Sch	3999	Other miscellaneous balance of plant problems	Planned outage to repair duct work damage.	
1	12/24/2022 7:59:00 AM To 12/24/2022 3:05:00 PM	Unsch	5041	Fuel piping and valves	Gas Turbine trip due to reduced gas pressure from Fort Hill.	

Dan River Combined Cycle Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
9	12/23/2022 11:51:00 PM To 12/24/2022 1:56:00 AM	Unsch	1740	Boiler drum gage glasses / level indicator	HRSG 9 LP Drum Level Transmitters froze and lost indication on the Drum level transmitters.	
9	12/24/2022 1:56:00 AM To 12/25/2022 12:08:00 AM	Unsch	5016	High pressure compressor bleed valves	Started the GT9 and unit failed to start due to a faulty Compressor Blead valve switch.	

Marshall Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
4	12/2/2022 10:55:00 PM To 12/9/2022 9:53:00 PM	Sch	8140	Reaction tanks including agitators	Maintenance outage to repair leaking reaction tank agitators "A" and "E".	
4	12/30/2022 2:56:00 PM To 12/31/2022 11:59:00 PM	Sch	0920	Other slag and ash removal problems	Clinker Removal from Bottom Ash Hopper.	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022

WS Lee Combined Cycle

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
WS Lee CC ST 10	11/3/2022 3:34:00 AM To 12/11/2022 3:07:00 AM	Sch	4640	Seal oil system and seals	Generator inspection.	
WS Lee CC ST 10	12/11/2022 3:07:00 AM To 12/31/2022 11:59:00 PM	Unsch	4410	Turning gear and motor	Fire damage discovered in the ST compartment.	
WS Lee CC GT 11	11/3/2022 3:48:00 AM To 12/10/2022 8:44:00 AM	Sch	5272	Boroscope inspection	Gas turbine 11 borscope inspection.	
WS Lee CC GT 11	12/10/2022 8:56:00 AM To 12/10/2022 7:19:00 PM	Sch	1740	Boiler drum gage glasses / level indicator	Test fired unit coming out of PO. (HRSG drum levels)	
WS Lee CC GT 11	12/11/2022 3:07:00 AM To 12/31/2022 11:59:00 PM	Unsch	4410	Turning gear and motor	Fire damage in the ST compartment.	
WS Lee CC GT 12	11/3/2022 3:47:00 AM To 12/10/2022 3:55:00 PM	Sch	5260	Major overhaul (use for non-specific overhaul only; see page B-CCGT-2)	GT12 HGP overhaul.	
WS Lee CC GT 12	12/10/2022 5:05:00 PM To 12/11/2022 3:07:00 AM	Sch	5048	Gas fuel system including controls and instrumentation	Unit testing coming out of outage - (ACDMS not available for tuning).	
WS Lee CC GT 12	12/11/2022 3:07:00 AM To 12/31/2022 11:59:00 PM	Unsch	4410	Turning gear and motor	Fire damage located in the ST compartment.	

Notes:

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Duke Energy Carolinas Base Load Power Plant Performance Review Plan
Report Period: December 2022

	Oconee 1	Oconee 2	Oconee 3	McGuire 1	McGuire 2	Catawba 1	Catawba 2
(A) MDC (MW)	847	848	859	1158	1158	1160	1150
(B) Period Hours	744	744	744	744	744	744	744
(C1) Net Gen (MWH)	647,998	651,793	653,520	889,246	887,785	880,020	875,855
(C2) Capacity Factor (%)	102.83	103.31	102.26	103.21	103.04	101.97	102.37
(D1) Net MWH Not Gen. Due to Full Schedule Outages	0	0	0	0	0	0	0
(D2) % Net MWH Not Gen. Due to Full Schedule Outages	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(E1) Net MWH Not Gen. Due to Partial Scheduled Outages	0	0	0	0	0	0	0
(E2) % Net MWH Not Gen. Due to Partial Scheduled Outages	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(F1) Net MWH Not Gen Due to Full Forced Outages	0	0	0	0	0	0	0
(F2) % Net MWH Not Gen Due to Full Forced Outages	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(G1) Net MWH Not Gen due to Partial Forced Outages	-17,830	-20,881	-14,424	-27,694	-26,233	-16,980	-20,255
(G2) % Net MWH Not Gen Due to Partial Forced Outages	-2.83	-3.31	-2.26	-3.21	-3.04	-1.97	-2.37
(H1) Net MWH Not Gen Due to Economic Dispatch	0	0	0	0	0	0	0
(H2) %Net MWH Not Gen Due to Economic Dispatch	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(I1) Core Conservation	0	0	0	0	0	0	0
(I2) % Core Conservation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(J1) Net MWH Possible in Period	630,168	630,912	639,096	861,552	861,552	863,040	855,600
(J2) % Net mwh Possible in Period	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
(K) Equivalent Availability (%)	100	100	100	100	100	100	100
(L) Output Factor (%)	102.83	103.31	102.26	103.21	103.04	101.97	102.37
(M) Heat Rate (BTU/Net KWH)	10,060	10,004	9,978	9,893	9,909	9,993	9,873

Notes:
1) Fields (E1), (E2), (G1), (G2), (H1), (H2), (I1) and (I2) are estimates
2) Fields (D1), (D2), (F1) and (F2) include ramping losses
EAF is calculated using Standard NERC calculation and excludes OMC events

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Belews Creek Station

	Unit 1	Unit 2
(A) MDC (mW)	1,110	1,110
(B) Period Hrs	744	744
(C) Net Generation (mWh)	595,517	656,273
(D) Capacity Factor (%)	72.11	79.47
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	61,727	44,766
(H) Scheduled Derates: percent of Period Hrs	7.47	5.42
(I) Net mWh Not Generated due to Full Forced Outages	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	38,639	0
(L) Forced Derates: percent of Period Hrs	4.68	0.00
(M) Net mWh Not Generated due to Economic Dispatch	129,957	124,801
(N) Economic Dispatch: percent of Period Hrs	15.74	15.11
(O) Net mWh Possible in Period	825,840	825,840
(P) Equivalent Availability (%)	87.85	94.58
(Q) Output Factor (%)	72.11	79.47
(R) Heat Rate (BTU/NkWh)	9,723	9,803

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Buck Combined Cycle Station

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	206	206	306	718
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	135,615	135,779	198,155	469,549
(D) Capacity Factor (%)	88.48	88.59	87.04	87.90
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	636	636
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.28	0.12
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	152	152	3,216	3,521
(L) Forced Derates: percent of Period Hrs	0.10	0.10	1.41	0.66
(M) Net mWh Not Generated due to Economic Dispatch	17,497	17,333	25,656	60,486
(N) Economic Dispatch: percent of Period Hrs	11.42	11.31	11.27	11.32
(O) Net mWh Possible in Period	153,264	153,264	227,664	534,192
(P) Equivalent Availability (%)	99.90	99.90	98.31	99.22
(Q) Output Factor (%)	88.48	88.59	87.04	87.90
(R) Heat Rate (BTU/NkWh)	10,371	10,176	2,649	7,056

Notes:

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- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Clemson CHP

	Clemson CHP1
(A) MDC (mW)	16
(B) Period Hrs	744
(C) Net Generation (mWh)	7,147
(D) Capacity Factor (%)	61.98
(E) Net mWh Not Generated due to Full Scheduled Outages	3,343
(F) Scheduled Outages: percent of Period Hrs	28.99
(G) Net mWh Not Generated due to Partial Scheduled Outages	0
(H) Scheduled Derates: percent of Period Hrs	0.00
(I) Net mWh Not Generated due to Full Forced Outages	110
(J) Forced Outages: percent of Period Hrs	0.95
(K) Net mWh Not Generated due to Partial Forced Outages	0
(L) Forced Derates: percent of Period Hrs	0.00
(M) Net mWh Not Generated due to Economic Dispatch	932
(N) Economic Dispatch: percent of Period Hrs	8.09
(O) Net mWh Possible in Period	11,532
(P) Equivalent Availability (%)	70.06
(Q) Output Factor (%)	88.46
(R) Heat Rate (BTU/NkWh)	13,906

Notes:

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- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan

December 2022
Dan River Combined Cycle Station

	Unit 8	Unit 9	Unit ST07	Block Total
(A) MDC (mW)	206	206	308	720
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	131,290	127,576	198,054	456,920
(D) Capacity Factor (%)	85.66	83.24	86.43	85.30
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	0	0
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(I) Net mWh Not Generated due to Full Forced Outages	0	5,002	0	5,002
(J) Forced Outages: percent of Period Hrs	0.00	3.26	0.00	0.93
(K) Net mWh Not Generated due to Partial Forced Outages	457	457	5,331	6,246
(L) Forced Derates: percent of Period Hrs	0.30	0.30	2.33	1.17
(M) Net mWh Not Generated due to Economic Dispatch	21,517	20,229	25,767	67,512
(N) Economic Dispatch: percent of Period Hrs	14.04	13.20	11.24	12.60
(O) Net mWh Possible in Period	153,264	153,264	229,152	535,680
(P) Equivalent Availability (%)	99.70	96.44	97.67	97.90
(Q) Output Factor (%)	85.66	86.05	86.43	86.10
(R) Heat Rate (BTU/NkWh)	10,567	10,487	2,708	7,138

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Marshall Station

	Unit 3	Unit 4
(A) MDC (mW)	658	660
(B) Period Hrs	744	744
(C) Net Generation (mWh)	358,385	297,208
(D) Capacity Factor (%)	73.21	60.53
(E) Net mWh Not Generated due to Full Scheduled Outages	0	132,020
(F) Scheduled Outages: percent of Period Hrs	0.00	26.89
(G) Net mWh Not Generated due to Partial Scheduled Outages	6,231	0
(H) Scheduled Derates: percent of Period Hrs	1.27	0.00
(I) Net mWh Not Generated due to Full Forced Outages	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	5,409	0
(L) Forced Derates: percent of Period Hrs	1.10	0.00
(M) Net mWh Not Generated due to Economic Dispatch	119,527	61,812
(N) Economic Dispatch: percent of Period Hrs	24.42	12.59
(O) Net mWh Possible in Period	489,552	491,040
(P) Equivalent Availability (%)	97.62	73.11
(Q) Output Factor (%)	73.21	82.78
(R) Heat Rate (BTU/NkWh)	9,494	9,365

Notes:

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- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
WS Lee Combined Cycle

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	248	248	313	809
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	-376	-884	0	-1,260
(D) Capacity Factor (%)	0.00	0.00	0.00	-0.21
(E) Net mWh Not Generated due to Full Scheduled Outages	58,307	60,004	76,097	194,407
(F) Scheduled Outages: percent of Period Hrs	31.60	32.52	32.68	32.30
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	0	0
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(I) Net mWh Not Generated due to Full Forced Outages	124,218	124,218	156,775	405,212
(J) Forced Outages: percent of Period Hrs	67.32	67.32	67.32	67.32
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	0	1,174	0	1,174
(N) Economic Dispatch: percent of Period Hrs	0.00	0.64	0.00	0.20
(O) Net mWh Possible in Period	184,512	184,512	232,872	601,896
(P) Equivalent Availability (%)	0.00	0.00	0.00	0.38
(Q) Output Factor (%)	0.00	0.00	0.00	-55.41
(R) Heat Rate (BTU/NkWh)	0	0	0	-14,135

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Intermediate Power Plant Performance Review Plan
December 2022

		Cliffside Station
		Cliffside 6
(A)	**MDC (mW)**	849
(B)	**Period Hrs**	744
(C)	**Net Generation (mWh)**	427,074
(D)	**Net mWh Possible in Period**	631,656
(E)	**Equivalent Availability (%)**	79.65
(F)	**Output Factor (%)**	84.32
(G)	**Capacity Factor (%)**	67.61

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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Duke Energy Carolinas
Peaking Power Plant Performance Review Plan
December 2022

		Cliffside Station
		Unit 5
(A)	**MDC (mW)**	546
(B)	**Period Hrs**	744
(C)	**Net Generation (mWh)**	88,740
(D)	**Net mWh Possible in Period**	406,224
(E)	**Equivalent Availability (%)**	95.43
(F)	**Output Factor (%)**	68.09
(G)	**Capacity Factor (%)**	21.85

Notes:

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Jun 26 2023

Duke Energy Carolinas Base Load Power Plant Performance Review Plan
Report Period: January 2022 - December 2022

	Oconee 1	Oconee 2	Oconee 3	McGuire 1	McGuire 2	Catawba 1	Catawba 2
(A) MDC (MW)	847	848	859	1158	1158	1160	1150
(B) Period Hours	8,760	8,760	8,760	8,760	8,760	8,760	8,760
(C1) Net Gen (MWH)	6,988,171	7,123,871	7,013,087	9,221,671	10,228,639	10,277,595	8,685,269
(C2) Capacity Factor (%)	94.18	95.9	93.2	90.91	100.83	101.14	86.21
(D1) Net MWH Not Gen. Due to Full Schedule Outages	544,917	0	486,752	805,968	0	0	1,159,200
(D2) % Net MWH Not Gen. Due to Full Schedule Outages	7.34	0.00	6.47	7.95	0.00	0.00	11.51
(E1) Net MWH Not Gen. Due to Partial Scheduled Outages	20,893	2,936	98,689	51,931	0	1,094	42,417
(E2) % Net MWH Not Gen. Due to Partial Scheduled Outages	0.28	0.04	1.31	0.51	0.00	0.01	0.42
(F1) Net MWH Not Gen Due to Full Forced Outages	0	443,928	0	227,682	111,593	0	259,478
(F2) % Net MWH Not Gen Due to Full Forced Outages	0.00	5.98	0.00	2.24	1.10	0.00	2.58
(G1) Net MWH Not Gen due to Partial Forced Outages	-134,261	-142,255	-73,688	-163,172	-196,152	-117,089	-72,364
(G2) % Net MWH Not Gen Due to Partial Forced Outages	-1.80	-1.92	-0.98	-1.61	-1.93	-1.15	-0.72
(H1) Net MWH Not Gen Due to Economic Dispatch	0	0	0	0	0	0	0
(H2) %Net MWH Not Gen Due to Economic Dispatch	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(I1) Core Conservation	0	0	0	0	0	0	0
(I2) % Core Conservation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(J1) Net MWH Possible in Period	7,419,720	7,428,480	7,524,840	10,144,080	10,144,080	10,161,600	10,074,000
(J2) % Net mwh Possible in Period	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
(K) Equivalent Availability (%)	92.38	93.81	92.16	89.24	98.76	99.99	85.38
(L) Output Factor (%)	101.65	101.99	99.64	101.22	101.96	101.14	100.25
(M) Heat Rate (BTU/Net KWH)	10,148	10,114	10,091	10,005	10,003	10,073	10,033

Notes:
1) Fields (E1), (E2), (G1), (G2), (H1), (H2), (I1) and (I2) are estimates
2) Fields (D1), (D2), (F1) and (F2) include ramping losses
EAF is calculated using Standard NERC calculation and excludes OMC events

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Belews Creek Station

	Unit 1	Unit 2
(A) MDC (mW)	1,110	1,110
(B) Period Hrs	8,760	8,760
(C) Net Generation (mWh)	5,464,278	3,779,808
(D) Capacity Factor (%)	56.20	38.87
(E) Net mWh Not Generated due to Full Scheduled Outages	682,961	1,672,770
(F) Scheduled Outages: percent of Period Hrs	7.02	17.20
(G) Net mWh Not Generated due to Partial Scheduled Outages	82,895	84,005
(H) Scheduled Derates: percent of Period Hrs	0.85	0.86
(I) Net mWh Not Generated due to Full Forced Outages	687,179	2,163,967
(J) Forced Outages: percent of Period Hrs	7.07	22.25
(K) Net mWh Not Generated due to Partial Forced Outages	251,493	60,684
(L) Forced Derates: percent of Period Hrs	2.59	0.62
(M) Net mWh Not Generated due to Economic Dispatch	2,554,795	1,962,366
(N) Economic Dispatch: percent of Period Hrs	26.27	20.18
(O) Net mWh Possible in Period	9,723,600	9,723,600
(P) Equivalent Availability (%)	82.47	59.05
(Q) Output Factor (%)	65.99	65.86
(R) Heat Rate (BTU/NkWh)	9,021	9,783

Notes:

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Buck Combined Cycle Station

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	206	206	306	718
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,406,294	1,403,629	2,056,915	4,866,838
(D) Capacity Factor (%)	77.93	77.78	76.73	77.38
(E) Net mWh Not Generated due to Full Scheduled Outages	127,024	132,116	189,644	448,783
(F) Scheduled Outages: percent of Period Hrs	7.04	7.32	7.07	7.14
(G) Net mWh Not Generated due to Partial Scheduled Outages	115,863	114,594	18,320	248,777
(H) Scheduled Derates: percent of Period Hrs	6.42	6.35	0.68	3.96
(I) Net mWh Not Generated due to Full Forced Outages	0	6,355	0	6,355
(J) Forced Outages: percent of Period Hrs	0.00	0.35	0.00	0.10
(K) Net mWh Not Generated due to Partial Forced Outages	152	152	13,415	13,720
(L) Forced Derates: percent of Period Hrs	0.01	0.01	0.50	0.22
(M) Net mWh Not Generated due to Economic Dispatch	155,227	147,714	402,266	705,207
(N) Economic Dispatch: percent of Period Hrs	8.60	8.19	15.01	11.21
(O) Net mWh Possible in Period	1,804,560	1,804,560	2,680,560	6,289,680
(P) Equivalent Availability (%)	86.53	85.97	91.74	88.59
(Q) Output Factor (%)	83.83	84.35	82.58	83.44
(R) Heat Rate (BTU/NkWh)	10,472	10,245	2,388	6,990

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Clemson CHP

	Clemson CHP1
(A) MDC (mW)	15
(B) Period Hrs	8,760
(C) Net Generation (mWh)	91,218
(D) Capacity Factor (%)	67.66
(E) Net mWh Not Generated due to Full Scheduled Outages	7,454
(F) Scheduled Outages: percent of Period Hrs	5.53
(G) Net mWh Not Generated due to Partial Scheduled Outages	14,157
(H) Scheduled Derates: percent of Period Hrs	10.50
(I) Net mWh Not Generated due to Full Forced Outages	10,738
(J) Forced Outages: percent of Period Hrs	7.97
(K) Net mWh Not Generated due to Partial Forced Outages	0
(L) Forced Derates: percent of Period Hrs	0.00
(M) Net mWh Not Generated due to Economic Dispatch	11,246
(N) Economic Dispatch: percent of Period Hrs	8.34
(O) Net mWh Possible in Period	134,813
(P) Equivalent Availability (%)	76.08
(Q) Output Factor (%)	78.22
(R) Heat Rate (BTU/NkWh)	12,264

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Dan River Combined Cycle Station

	Unit 8	Unit 9	Unit ST07	Block Total
(A) MDC (mW)	206	206	308	720
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,158,153	1,172,815	1,779,047	4,110,015
(D) Capacity Factor (%)	64.18	64.99	65.94	65.16
(E) Net mWh Not Generated due to Full Scheduled Outages	362,259	372,530	559,938	1,294,727
(F) Scheduled Outages: percent of Period Hrs	20.07	20.64	20.75	20.53
(G) Net mWh Not Generated due to Partial Scheduled Outages	107,474	107,353	9,098	223,925
(H) Scheduled Derates: percent of Period Hrs	5.96	5.95	0.34	3.55
(I) Net mWh Not Generated due to Full Forced Outages	25,190	20,771	24,126	70,086
(J) Forced Outages: percent of Period Hrs	1.40	1.15	0.89	1.11
(K) Net mWh Not Generated due to Partial Forced Outages	457	457	5,686	6,600
(L) Forced Derates: percent of Period Hrs	0.03	0.03	0.21	0.10
(M) Net mWh Not Generated due to Economic Dispatch	151,026	130,634	320,186	601,845
(N) Economic Dispatch: percent of Period Hrs	8.37	7.24	11.87	9.54
(O) Net mWh Possible in Period	1,804,560	1,804,560	2,698,080	6,307,200
(P) Equivalent Availability (%)	72.55	72.23	77.80	74.71
(Q) Output Factor (%)	82.36	83.10	84.15	83.34
(R) Heat Rate (BTU/NkWh)	10,691	10,619	2,489	7,120

Notes:

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Marshall Station

	Unit 3	Unit 4
(A) MDC (mW)	658	660
(B) Period Hrs	8,760	8,760
(C) Net Generation (mWh)	3,101,170	2,712,398
(D) Capacity Factor (%)	53.80	46.91
(E) Net mWh Not Generated due to Full Scheduled Outages	586,574	1,467,292
(F) Scheduled Outages: percent of Period Hrs	10.18	25.38
(G) Net mWh Not Generated due to Partial Scheduled Outages	10,850	0
(H) Scheduled Derates: percent of Period Hrs	0.19	0.00
(I) Net mWh Not Generated due to Full Forced Outages	101,148	149,140
(J) Forced Outages: percent of Period Hrs	1.75	2.58
(K) Net mWh Not Generated due to Partial Forced Outages	235,834	146,348
(L) Forced Derates: percent of Period Hrs	4.09	2.53
(M) Net mWh Not Generated due to Economic Dispatch	1,728,504	1,306,421
(N) Economic Dispatch: percent of Period Hrs	29.99	22.60
(O) Net mWh Possible in Period	5,764,080	5,781,600
(P) Equivalent Availability (%)	83.79	69.51
(Q) Output Factor (%)	61.49	65.12
(R) Heat Rate (BTU/NkWh)	10,369	9,782

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
WS Lee Combined Cycle

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	248	248	313	809
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,172,874	1,533,260	1,948,119	4,654,253
(D) Capacity Factor (%)	53.99	70.58	71.05	65.67
(E) Net mWh Not Generated due to Full Scheduled Outages	306,173	307,959	392,464	1,006,597
(F) Scheduled Outages: percent of Period Hrs	14.09	14.18	14.31	14.20
(G) Net mWh Not Generated due to Partial Scheduled Outages	38,348	53,273	0	91,621
(H) Scheduled Derates: percent of Period Hrs	1.77	2.45	0.00	1.29
(I) Net mWh Not Generated due to Full Forced Outages	537,604	152,289	194,999	884,893
(J) Forced Outages: percent of Period Hrs	24.75	7.01	7.11	12.49
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	147,623	147,623
(L) Forced Derates: percent of Period Hrs	0.00	0.00	5.38	2.08
(M) Net mWh Not Generated due to Economic Dispatch	117,480	125,699	58,674	301,853
(N) Economic Dispatch: percent of Period Hrs	5.41	5.79	2.14	4.26
(O) Net mWh Possible in Period	2,172,480	2,172,480	2,741,880	7,086,840
(P) Equivalent Availability (%)	59.40	76.36	73.19	69.93
(Q) Output Factor (%)	88.31	90.01	90.42	89.75
(R) Heat Rate (BTU/NkWh)	10,787	10,488	2,522	7,229

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Intermediate Power Plant
Performance Review Plan
January, 2022 through December, 2022

Cliffside Station

Units	Unit 6
(A) MDC (mW)	849
(B) Period Hrs	8,760
(C) Net Generation (mWh)	4,410,848
(D) Net mWh Possible in Period	7,437,240
(E) Equivalent Availability (%)	71.91
(F) Output Factor (%)	82.25
(G) Capacity Factor (%)	59.31

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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Duke Energy Carolinas
Peaking Power Plant
Performance Review Plan
January, 2022 through December, 2022

Cliffside Station

Units	Unit 5
(A) MDC (mW)	546
(B) Period Hrs	8,760
(C) Net Generation (mWh)	600,803
(D) Net mWh Possible in Period	4,782,960
(E) Equivalent Availability (%)	57.36
(F) Output Factor (%)	38.11
(G) Capacity Factor (%)	12.56

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Carolinas, LLC **Clark Workpaper 1**
North Carolina Annual Fuel and Fuel Related Expense
Proposed Nuclear Capacity Factor
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs	10,026,652	9,119,788	8,799,414	9,938,344	7,338,135	6,713,739	6,883,057	58,819,128
Cost (Gross of Joint Owners)	$ 62,355,885	$ 50,162,610	$ 46,520,487	$ 54,060,516	$ 41,917,165	$ 34,438,133	$ 40,707,973	$ 330,162,771
$/MWh	6.2190	5.5004	5.2868	5.4396	5.7122	5.1295	5.9142	
Avg $/MWh		**5.6132**						
Cents per kWh		**0.5613**						

			Sept 2023 - August 2024
MDC			
CATA_UN01	Catawba	MW	1,160.0
CATA_UN02	Catawba	MW	1,150.1
MCGU_UN01	McGuire	MW	1,158.0
MCGU_UN02	McGuire	MW	1,157.6
OCON_UN01	Oconee	MW	847.0
OCON_UN02	Oconee	MW	848.0
OCON_UN03	Oconee	MW	859.0
			7,179.7
Hours In Year			8,760
Generation GWhs			
CATA_UN01	Catawba	GWh	10,027
CATA_UN02	Catawba	GWh	9,120
MCGU_UN01	McGuire	GWh	8,799
MCGU_UN02	McGuire	GWh	9,938
OCON_UN01	Oconee	GWh	7,338
OCON_UN02	Oconee	GWh	6,714
OCON_UN03	Oconee	GWh	6,883
			58,819
	Proposed Nuclear Capacity Factor		93.52%

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 2

	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs with NERC applied	9,272,460	9,193,324	9,256,473	9,253,276	6,900,340	6,908,486	6,998,101	57,782,460
Hours	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760
MDC	1,160.0	1,150.1	1,158.0	1,157.6	847.0	848.0	859.0	7,179.7
Capacity factor	91.25%	91.25%	91.25%	91.25%	93.00%	93.00%	93.00%	91.87%
Cost	$ 52,048,053	$ 51,603,849	$ 51,958,314	$ 51,940,367	$ 38,732,897	$ 38,778,626	$ 39,281,651	$ 324,343,758

Avg $/MWh	**5.6132**
Cents per kWh	**0.5613**

2017-2021	Capacity Rating	NCF Rating	Weighted Average	
Oconee 1	847.0	93.00	10.97%	
Oconee 2	848.0	93.00	10.98%	
Oconee 3	859.0	93.00	11.13%	
McGuire 1	1,158.0	91.25	14.72%	
McGuire 2	1,157.6	91.25	14.71%	
Catawba 1	1,160.0	91.25	14.74%	
Catawba 2	1,150.1	91.25	14.62%	
	7,179.7		**91.87%**	Wtd Avg on Capacity Rating

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Duke Energy Carolinas, LLC **Clark Workpaper 3**
North Carolina Annual Fuel and Fuel Related Expense
North Carolina Generation and Purchased Power in MWhs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Resource Type	**Sept 2023 - August 2024**	
NUC Total (Gross)	58,819,128	
COAL Total	10,320,159	
Gas CT and CC total (Gross)	31,212,640	
Run of River	5,600,555	
Net pumped Storage	(4,083,743)	
Total Hydro	1,516,812	
Catawba Joint Owners	(14,888,880)	
Lee CC Joint Owners	(878,400)	
DEC owned solar	358,121	
Total Generation		86,459,580
Purchases for REPS Compliance	1,438,042	
Qualifying Facility Purchases - Non-REPS compliance	2,389,958	
Other Purchases	164,878	
Allocated Economic Purchases	1,329,474	
Joint Dispatch Purchases	6,466,906	
	11,789,258	
Total Generation and Purchased Power		98,248,839
Fuel Recovered Through Intersystem Sales	(1,148,043)	

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Duke Energy Carolinas, LLC **Clark Workpaper 4**
North Carolina Annual Fuel and Fuel Related Expense
Projected Fuel and Fuel Related Costs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Resource Type	Sept 2023 - August 2024	
Nuclear Total (Gross)	$ 330,162,771	
COAL Total	398,104,637	
Gas CT and CC total (Gross)	1,179,963,909	
Catawba Joint Owner costs	(83,614,236)	
CC Joint Owner costs	(25,697,152)	
Non-Economic Fuel Expense Recovered through Reimbursement	(3,687,381)	
Reagents and gain/loss on sale of By-Products	24,944,696	Workpaper 9
Purchases for REPS Compliance - Energy	68,790,240	
Purchases for REPS Compliance - Capacity	14,931,581	
Purchases of Qualifying Facilities - Energy	59,039,401	
Purchases of Qualifying Facilities - Capacity	12,176,644	
Other Purchases	397,088	
JDA Savings Shared	(69,598,371)	Workpaper 5
Allocated Economic Purchase cost	52,870,968	Workpaper 5
Joint Dispatch purchases	206,598,811	Workpaper 6
Total Purchases	345,206,362	
Fuel Expense recovered through intersystem sales	(57,998,825)	Workpaper 5
Total System Fuel and Fuel Related Costs	**$ 2,107,384,780**	

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Duke Energy Carolinas, LLC **Clark Workpaper 5**
North Carolina Annual Fuel and Fuel Related Expense
Projected Joint Dispatch Fuel Impacts
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Positive numbers represent costs to ratepayers, Negative numbers represent removal of costs to ratepayers

	Allocated Economic Purchase Cost		**Economic Sales Cost**		**Fuel Transfer Payment**		**JDA Savings Payment**	
	DEP	**DEC**	**DEP**	**DEC**	**DEP**	**DEC**	**DEP**	**DEC**
9/1/2023	$ 4,976,440	$ 7,317,885	$ (674,018)	$ (305,418)	$ (23,724,256)	$ 23,724,256	$ 6,910,581	$ (6,910,581)
10/1/2023	$ 5,904,520	$ 6,517,440	$ (69,203)	$ (114,170)	$ (15,802,316)	$ 15,802,316	$ 11,215,995	$ (11,215,995)
11/1/2023	$ 2,503,327	$ 3,105,057	$ (1,223,486)	$ (674,629)	$ (18,519,025)	$ 18,519,025	$ 10,008,333	$ (10,008,333)
12/1/2023	$ 762,505	$ 1,041,966	$ (5,872,462)	$ (1,890,081)	$ (15,722,366)	$ 15,722,366	$ 4,518,477	$ (4,518,477)
1/1/2024	$ 2,893,193	$ 2,042,582	$ (10,525,081)	$ (11,843,518)	$ (13,602,107)	$ 13,602,107	$ 4,544,884	$ (4,544,884)
2/1/2024	$ 315,449	$ 384,533	$ (10,078,466)	$ (13,200,189)	$ (6,837,056)	$ 6,837,056	$ 2,614,179	$ (2,614,179)
3/1/2024	$ 1,955,226	$ 2,816,591	$ (622,625)	$ (648,265)	$ (10,251,414)	$ 10,251,414	$ 1,341,892	$ (1,341,892)
4/1/2024	$ 3,952,712	$ 6,000,661	$ (639,409)	$ (211,299)	$ (12,097,213)	$ 12,097,213	$ 1,413,004	$ (1,413,004)
5/1/2024	$ 654,154	$ 713,694	$ (1,763,746)	$ (237,095)	$ (14,639,411)	$ 14,639,411	$ 6,435,252	$ (6,435,252)
6/1/2024	$ 4,153,979	$ 5,991,152	$ (1,260,436)	$ (644,515)	$ (21,582,339)	$ 21,582,339	$ 3,725,538	$ (3,725,538)
7/1/2024	$ 3,609,443	$ 5,189,561	$ (2,532,634)	$ (1,768,613)	$ (17,455,853)	$ 17,455,853	$ 14,114,687	$ (14,114,687)
8/1/2024	$ 8,014,976	$ 11,749,845	$ (1,306,118)	$ (1,592,378)	$ (11,496,801)	$ 11,496,801	$ 2,755,548	$ (2,755,548)
Sept 23 - Aug 24		$ 52,870,968		$ (33,130,170)		$ 181,730,155		$ (69,598,371)

$ 206,598,811	Workpaper 6 - Transfer - Purchases
$ (24,868,655)	Workpaper 6 - Transfer - Sales
$ 181,730,155	Sept 22-Aug 23 Net Fuel Transfer Payment
$ (24,868,655)	Workpaper 6 - Transfer - Sales
$ (33,130,170)	Sept 23-Aug 24 Economic Sales Cost
$ (57,998,825)	**Total Fuel expense recovered through intersystem sales**

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Duke Energy Carolinas, LLC **Clark Workpaper 6**
North Carolina Annual Fuel and Fuel Related Expense
Projected Merger Payments
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

					Purchase	Sale			Sale	Purchase
	Transfer Projection		Purchase Allocation Delta		Adjusted Transfer		Fossil Gen Cost		Pre-Net Payments	
	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC
9/1/2023	606,726	20,805	50,315	(50,315)	657,041	20,805	$ 36.94	$ 26.37	$ 548,621.47	$ 24,272,877.11
10/1/2023	619,535	32,076	95,370	(95,370)	714,904	32,076	$ 28.43	$ 141.02	$ 4,523,430.43	$ 20,325,746.34
11/1/2023	744,209	8,765	33,471	(33,471)	777,680	8,765	$ 25.47	$ 147.32	$ 1,291,175.66	$ 19,810,200.86
12/1/2023	558,288	34,315	(6,026)	6,026	558,288	40,342	$ 33.48	$ 73.65	$ 2,971,154.85	$ 18,693,520.46
1/1/2024	364,075	36,080	10,140	(10,140)	374,215	36,080	$ 40.82	$ 46.37	$ 1,673,120.48	$ 15,275,227.51
2/1/2024	261,473	47,009	(1,221)	1,221	261,473	48,231	$ 36.72	$ 57.30	$ 2,763,602.82	$ 9,600,659.02
3/1/2024	395,731	100,349	(4,372)	4,372	395,731	104,721	$ 34.26	$ 31.57	$ 3,306,397.03	$ 13,557,810.67
4/1/2024	400,208	82,708	30,753	(30,753)	430,962	82,708	$ 33.12	$ 26.32	$ 2,176,581.75	$ 14,273,794.40
5/1/2024	682,741	36,797	7,545	(7,545)	690,286	36,797	$ 22.54	$ 25.00	$ 919,824.47	$ 15,559,235.66
6/1/2024	551,409	42,848	67,925	(67,925)	619,334	42,848	$ 36.79	$ 28.05	$ 1,201,775.15	$ 22,784,113.70
7/1/2024	501,238	41,647	55,203	(55,203)	556,441	41,647	$ 33.71	$ 31.28	$ 1,302,736.04	$ 18,758,588.73
8/1/2024	328,372	64,562	102,180	(102,180)	430,552	64,562	$ 31.79	$ 33.92	$ 2,190,235.09	$ 13,687,036.24
Sept 23 - Aug 24	6,014,005	547,961	441,282	(441,282)	6,466,906	559,580			$ 24,868,655	$ 206,598,811
									Net Pre-Net Payments	$ 181,730,155

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.52%
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 7

Fall 2022 Forecast
Billed Sales Forecast
Sales Forecast - MWhs (000)

		Projected sales for the Billing Period	Remove impact of SC DERP Net Metered Generation	Adjusted Sales
North Carolina:				
	Residential	23,477,265		23,477,265
	General	23,838,527		23,838,527
	Industrial	13,270,457		13,270,457
	Lighting	238,480		238,480
	NC RETAIL	60,824,730	-	60,824,729
South Carolina:				
	Residential	7,223,610	136,278	7,359,888
	General	5,371,691	42,584	5,414,275
	Industrial	9,133,136	429	9,133,565
	Lighting	51,014	-	51,014
	SC RETAIL	21,779,451	179,291	21,958,742
Total Retail Sales				
	Residential	30,700,876	136,278	30,837,153
	General	29,210,218	42,584	29,252,802
	Industrial	22,403,593	429	22,404,022
	Lighting	289,494	-	289,494
	Retail Sales	82,604,181	179,291	82,783,471
	Wholesale	8,227,610	-	8,227,610
	Projected System MWH Sales for Fuel Factor	90,831,791	179,291	91,011,082
	NC as a percentage of total	**66.96%**		**66.83%**
	SC as a percentage of total	23.98%		24.13%
	Wholesale as a percentage of total	9.06%		9.04%
		100.00%		100.00%
	SC Net Metering allocation adjustment			
	Total projected SC NEM MWhs		179,291	
	Marginal fuel rate per MWh for SC NEM		$ 24.52	
	Fuel benefit to be directly assigned to SC Retail		$ 4,396,215	
	System Fuel Expense		$ 2,107,384,780	Clark Exhibit 2 Schedule 1 Page 1 of 3
	Fuel benefit to be directly assigned to SC Retail		$ 4,396,215	
	Total Fuel Costs for Allocation		$ 2,111,780,996	Clark Exhibit 2 Schedule 1 Page 3 of 3, L5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**	
Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1	$ 2,107,384,780				
QF and REPS Compliance Purchased Power - Capacity	$ 27,108,225				
Other fuel costs	$ 2,080,276,555				
SC Net Metering Fuel Allocation adjustment	$ 4,396,215				
Jurisdictional fuel costs after adj.	$ 2,084,672,770				
Allocation to states/classes		66.83%	9.04%	24.13%	
Jurisdictional fuel costs	$ 2,084,672,770	$ 1,393,186,813	$ 188,454,418	$ 503,031,540	66.68%
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)	
Total system actual fuel costs	$ 2,080,276,555	$ 1,393,186,813	$ 188,454,418	$ 498,635,324	
QF and REPS Compliance Purchased Power - Capacity	27,108,225	18,076,112			
Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1	$ 2,107,384,780	**$ 1,411,262,925**			
		Exh.2, Sch. 1 page 3, Line 13			

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Duke Energy Carolinas, LLC | **Clark Workpaper 7a**
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Fall 2022 Forecast
Billed Sales Forecast - Normalized Test Period Sales
Sales Forecast - MWhs (000)

	Test Period Sales	Customer Growth Adjustment	Weather Adjustment	Remove impact of SC DERP Net Metered generation	Normalized Test Period Sales
NC RETAIL	59,059,117	162,487	337,854	-	59,559,458
SC RETAIL	20,955,111	(8,320)	99,613	179,291	21,225,695
Wholesale	8,269,814	5,836	(306)	-	8,275,343
Normalized System MWH Sales for Fuel Factor	88,284,042	160,003	437,160	179,291	89,060,496
NC as a percentage of total	**66.90%**				**66.88%**
SC as a percentage of total	23.74%				23.83%
Wholesale as a percentage of total	9.37%				9.29%
	100.00%				100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	179,291
Marginal fuel rate per MWh for SC NEM	$ 24.52
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215

System Fuel Expense	$ 2,032,140,076	Clark Exhibit 2 Schedule 2 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 2,036,536,291	Clark Exhibit 2 Schedule 2 Page 3 of 3, L5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**
Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1	$ 2,032,140,076			
QF and REPS Compliance Purchased Power - Capacity	$ 27,108,225			
Other fuel costs	$ 2,005,031,851			
SC Net Metering Fuel Allocation adjustment	$ 4,396,215			
Jurisdictional fuel costs after adj.	$ 2,009,428,066			
Allocation to states/classes		66.88%	9.29%	23.83%
Jurisdictional fuel costs	$ 2,009,428,055	$ 1,343,810,646	$ 186,712,496	$ 478,904,904
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)
Total system actual fuel costs	$ 2,005,031,840	$ 1,343,810,646	$ 186,712,496	$ 474,508,689
QF and REPS Compliance Purchased Power - Capacity	27,108,225	18,076,112		
Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1	$ 2,032,140,065	**$ 1,361,886,758**		
		Exh. 2, Sch 2 page 3, Line 13		

rounding differences may occur

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Duke Energy Carolinas, LLC **Clark Workpaper 7b**
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Fall 2022 Forecast
Billed Sales Forecast
Sales Forecast - MWhs (000)

		Projected sales for the Billing Period	**Remove impact of SC DERP Net Metered generation**	**Adjusted Sales**
North Carolina:				
	Residential	23,477,265		23,477,265
	General	23,838,527		23,838,527
	Industrial	13,270,457		13,270,457
	Lighting	238,480		238,480
	NC RETAIL	60,824,730	-	60,824,730
South Carolina:				
	Residential	7,223,610	136,278	7,359,888
	General	5,371,691	42,584	5,414,275
	Industrial	9,133,136	429	9,133,565
	Lighting	51,014	0	51,014
	SC RETAIL	21,779,451	179,291	21,958,742
Total Retail Sales				
	Residential	30,700,876	136,278	30,837,154
	General	29,210,218	42,584	29,252,802
	Industrial	22,403,593	429	22,404,022
	Lighting	289,494	-	289,494
	Retail Sales	82,604,181	179,291	82,783,472
	Wholesale	8,227,610	-	8,227,610
	Projected System MWh Sales for Fuel Factor	90,831,791	179,291	91,011,082
	NC as a percentage of total	**66.96%**		**66.83%**
	SC as a percentage of total	23.98%		24.13%
	Wholesale as a percentage of total	9.06%		9.04%
		100.00%		100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	179,291	
Marginal fuel rate per MWh for SC NEM	$ 24.52	
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
System Fuel Expense	$ 2,132,906,715	Clark Exhibit 2 Schedule 3 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 2,137,302,931	Clark Exhibit 2 Schedule 3 Page 3 of 3, Line 5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**
Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1	$ 2,132,906,715			
QF and REPS Compliance Purchased Power - Capacity	$ 27,108,225			
Other fuel costs	$ 2,105,798,490			
SC Net Metering Fuel Allocation adjustment	$ 4,396,215			
Jurisdictional fuel costs after adj.	$ 2,110,194,706			
Allocation to states/classes		66.83%	9.04%	24.13%
Jurisdictional fuel costs	$ 2,110,194,706	$ 1,410,243,122	$ 190,761,601	$ 509,189,982
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)
Total system actual fuel costs	$ 2,105,798,490	$ 1,410,243,122	$ 190,761,601	$ 504,793,767
QF and REPS Compliance Purchased Power - Capacity	27,108,225	18,076,112		
Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1	$ 2,132,906,715	**$ 1,428,319,234**		
		Exh. 2, Sch.3 page 3, Line 13		

rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Annualized Revenue
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 8

	January 2023 Actuals			Normalized Sales	
	Revenue	**kWh Sales**	**Cents/ kWh**	**Clark Exhibit 4**	**Total Annualized Revenues**
	(a)	(b)	(a)/(b) *100 = (c)	(d)	(c) * (d) * 10
Residential	$ 259,112,943	2,404,726,417	10.7752	22,892,401	$ 2,466,691,215
General	$ 161,395,026	2,001,691,757	8.0629	24,448,017	$ 1,971,226,718
Industrial	$ 55,270,705	891,437,613	6.2002	12,219,040	$ 757,602,036
Total	$ 475,778,674	5,297,855,787		59,559,458	$ 5,195,519,969

rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Reagents and ByProducts
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 9

Reagent and ByProduct projections

Date	Ammonia	Urea	Limestone	Magnesium Hydroxide	Calcium Carbonate	Lime	**Reagent Cost**	**Gypsum (Gain)/ Loss**	**Ash (Gain)/Loss**	**Steam (Gain)/Loss**	**Sale of By-Products (Gain)/Loss**
9/1/2023	$ 215,268	$ 20,510	$ 258,314	$ 37,104	$ 22,496	$ 13,158	**$ 566,851**	$ 72,900	$ (11,374)	$ (249,752)	**$ (188,226)**
10/1/2023	$ 126,192	$ 12,023	$ 151,427	$ 20,990	$ 12,726	$ 13,158	**$ 336,516**	$ 42,578	$ (7,798)	$ (249,752)	**$ (214,972)**
11/1/2023	$ 175,908	$ 16,760	$ 211,084	$ 22,395	$ 13,578	$ 13,158	**$ 452,884**	$ 52,334	$ (12,578)	$ (249,752)	**$ (209,995)**
12/1/2023	$ 1,809,326	$ 172,388	$ 2,171,130	$ 139,582	$ 84,629	$ 13,158	**$ 4,390,213**	$ 702,173	$ (219,291)	$ (249,752)	**$ 233,130**
1/1/2024	$ 2,582,989	$ 246,100	$ 3,099,500	$ 205,790	$ 124,770	$ 13,158	**$ 6,272,308**	$ 1,096,545	$ (268,116)	$ (249,752)	**$ 578,677**
2/1/2024	$ 2,113,676	$ 201,385	$ 2,536,340	$ 167,519	$ 101,567	$ 13,158	**$ 5,133,645**	$ 816,993	$ (238,439)	$ (249,752)	**$ 328,803**
3/1/2024	$ 447,777	$ 42,663	$ 537,317	$ 56,469	$ 34,237	$ 13,158	**$ 1,131,622**	$ 144,210	$ (32,598)	$ (249,752)	**$ (138,140)**
4/1/2024	$ 245,737	$ 23,413	$ 294,876	$ 33,856	$ 20,527	$ 13,158	**$ 631,567**	$ 69,849	$ (12,590)	$ (249,752)	**$ (192,493)**
5/1/2024	$ 183,122	$ 17,447	$ 219,740	$ 34,191	$ 20,730	$ 13,158	**$ 488,388**	$ 52,063	$ (3,750)	$ (249,752)	**$ (201,439)**
6/1/2024	$ 544,468	$ 51,875	$ 653,343	$ 56,548	$ 34,285	$ 13,158	**$ 1,353,677**	$ 163,414	$ (51,742)	$ (249,752)	**$ (138,080)**
7/1/2024	$ 916,015	$ 87,275	$ 1,099,187	$ 78,871	$ 47,819	$ 13,158	**$ 2,242,325**	$ 283,833	$ (91,686)	$ (260,498)	**$ (68,352)**
8/1/2024	$ 896,206	$ 85,388	$ 1,075,417	$ 92,289	$ 55,955	$ 13,158	**$ 2,218,412**	$ 292,195	$ (94,322)	$ (260,498)	**$ (62,626)**
	$ 10,256,683	$ 977,229	$ 12,307,675	$ 945,605	$ 573,319	$ 157,896	**$ 25,218,407**	$ 3,789,087	$ (1,044,284)	$ (3,018,514)	**$ (273,711)**

Total Reagent cost and Sale of By-products **$ 24,944,696**

rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2022
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 10

Line No.	Description	Forecast $	(Over)/Under Collection $	Total $
1	Amount in current docket	139,103,703	70,794,129	209,897,832
2	Amount in Sub 1263, prior year docket	100,735,755	13,526,437	114,262,192
3	Increase/(Decrease)	38,367,948	57,267,693	95,635,640
4	2.5% of 2022 NC retail revenue of $4,944,339,147			123,608,479
	Excess of purchased power growth over 2.5% of revenue			0
	E-7, Sub 1282			
WP 4	Purchases for REPS Compliance - Energy	68,790,240	66.83%	45,972,517
WP 4	Purchases for REPS Compliance - Capacity	14,931,581	66.68%	9,956,570
WP 4	Purchases	397,088	66.83%	265,374
WP 4	QF Energy	59,039,401	66.83%	39,456,032
WP 4	QF Capacity	12,176,644	66.68%	8,119,542
WP 4	Allocated Economic Purchase cost	52,870,968	66.83%	35,333,668
		208,205,922		139,103,703
	E-7, Sub 1263			
	Purchases for REPS Compliance	66,782,210	66.08%	44,126,819
	Purchases for REPS Compliance Capacity	14,610,064	66.68%	9,742,178
	Purchases	7,489,994	66.08%	4,949,066
	QF Energy	40,652,503	66.08%	26,861,429
	QF Capacity	8,445,498	66.68%	5,631,567
	Allocated Economic Purchase cost	14,263,480	66.08%	9,424,695
		152,243,749		100,735,755

rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Workpaper 10a

2022	**Jan-22**	**Feb-22**	**Mar-22**	**Apr-22**	**May-22**	**Jun-22**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**	**12 ME**
System KWH Sales - Sch 4, Adjusted	7,587,345,694	7,631,271,992	6,790,067,074	6,455,104,305	6,544,372,277	7,852,382,055	8,386,958,942	8,886,608,895	8,009,959,106	6,516,474,006	6,148,600,623	7,600,126,412	88,409,271,381
NC Retail KWH Sales - Sch 4	4,988,913,451	5,189,555,709	4,642,701,985	4,283,391,409	4,361,033,505	5,223,755,139	5,560,704,210	6,010,616,462	5,369,219,189	4,315,776,539	4,103,701,351	5,009,748,290	59,059,117,240
NC Retail % of Sales, Adjusted (Calc)	65.75%	68.00%	68.37%	66.36%	66.64%	66.52%	66.30%	67.64%	67.03%	66.23%	66.74%	65.92%	66.80%
NC retail production plant %	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%
Fuel and Fuel related component of purchased power													
System Actual $ - Sch 3 Fuel$:	$ 37,348,658	$ 40,334,882	$ 28,936,616	$ 49,553,437	$ 53,977,979	$ 76,187,119	$ 84,243,384	$ 92,288,328	$ 54,398,279	$ 11,798,321	$ 41,689,819	$ 94,911,581	$ 665,668,403
System Actual $ - Sch 3 Fuel-related$; Economic Purchases	7,928,235	(1,570,627)	3,557,135	4,369,558	7,286,679	6,129,379	10,685,578	9,921,881	9,510,435	1,184,100	3,142,043	8,875,341	$ 71,019,737
System Actual $ - Sch 3 Fuel-related$; Purchased Power for REPS Compliance	4,142,352	3,490,134	3,995,856	3,290,332	5,192,821	5,283,840	5,430,924	5,998,047	5,270,163	5,163,446	4,802,114	4,257,583	$ 56,317,611
System Actual$ - Sch 3 Fuel-related$; SC DERP	153,840	153,265	196,932	137,675	248,854	297,053	290,834	285,229	257,994	240,417	248,173	229,623	$ 2,739,889
System Acutal $ - Sch 3 Fuel-related$; HB589 purpa Purchases	1,977,570	1,777,710	2,215,962	1,745,571	2,647,918	3,816,224	3,554,345	3,225,136	3,434,693	3,359,816	3,414,696	2,956,940	$ 34,126,582
Total System Economic & QF$	51,550,655	44,185,364	38,902,502	59,096,573	69,354,250	91,713,615	104,205,065	111,718,622	72,871,564	21,746,101	53,296,844	111,231,068	829,872,222
Less:													
Native Load Transfers, Native Load Transfer Benefit & DE - Progress fees	$ 30,480,569	$ 37,453,029	$ 26,486,545	$ 48,026,753	$ 49,193,125	$ 74,564,244	$ 75,622,595	$ 87,008,500	$ 47,113,469	$ 10,577,023	$ 40,068,662	$ 74,950,979	$ 601,545,494
Total System Economic $ without Native Load Transfers	$ 21,070,086	$ 6,732,335	$ 12,415,956	$ 11,069,820	$ 20,161,125	$ 17,149,371	$ 28,582,470	$ 24,710,121	$ 25,758,095	$ 11,169,078	$ 13,228,182	$ 36,280,089	$ 228,326,728
NC Actual $ (Calc)	$ 13,854,230	$ 4,578,244	$ 8,489,398	$ 7,345,562	$ 13,434,954	$ 11,408,527	$ 18,950,690	$ 16,713,131	$ 17,266,113	$ 7,397,136	$ 8,828,758	$ 23,914,617	$ 152,181,363
Billed rate (¢/kWh):	0.1378	0.1378	0.1378	0.1378	0.1378	0.1378	0.1378	0.1378	0.1367	0.1378	0.1378	0.1378	
Billed $:	$ 6,874,552	$ 7,151,030	$ 6,397,484	$ 5,902,367	$ 6,009,355	$ 7,198,156	$ 7,662,460	$ 8,282,423	$ 7,340,000	$ 5,946,992	$ 5,654,760	$ 6,903,261	$ 81,322,839
(Over)/ Under $:	$ 6,979,678	$ (2,572,786)	$ 2,091,914	$ 1,443,196	$ 7,425,600	$ 4,210,372	$ 11,288,231	$ 8,430,708	$ 9,926,113	$ 1,450,144	$ 3,173,998	$ 17,011,356	$ 70,858,524
Capacity component of purchased power													
System Actual $ - Capacity component of Cherokee County Cogen Purchases	$ -	$ (215,310)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (215,310)
System Actual $ - Capacity component of Purchased Power for REPS Compliance	631,201	645,219	680,737	463,766	802,115	701,461	827,443	2,753,196	2,319,960	2,511,631	2,238,491	639,202	$ 15,214,422
System Actual $ - Capacity component of HB589 Purpa QF purchases	14,255	14,801	19,366	14,471	24,039	29,036	28,404	28,368	25,409	23,627	24,299	22,399	$ 268,474
System Actual $ - Capacity component of SC DERP	312,476	340,840	349,198	316,395	389,774	481,428	581,279	1,661,830	1,443,022	1,553,118	1,525,519	414,939	$ 9,369,818
System Actual $ - Sch 2 pg 1 ANNUAL VIEW	$ 957,932	$ 785,549	$ 1,049,301	$ 794,633	$ 1,215,927	$ 1,211,925	$ 1,437,127	$ 4,443,394	$ 3,788,390	$ 4,088,375	$ 3,788,310	$ 1,076,540	$ 24,637,403
NC Actual $ (Calc) (1)	$ 638,761	$ 523,814	$ 699,688	$ 529,871	$ 810,796	$ 808,127	$ 958,294	$ 2,962,912	$ 2,526,147	$ 2,726,181	$ 2,526,093	$ 717,851	$ 16,428,537
Billed rate (¢/kWh):	0.0279	0.0279	0.0279	0.0279	0.0279	0.0279	0.0279	0.0279	0.0284	0.0279	0.0279	0.0279	
Billed $:	$ 1,390,793	$ 1,446,727	$ 1,294,277	$ 1,194,110	$ 1,215,755	$ 1,456,261	$ 1,550,195	$ 1,675,620	$ 1,525,438	$ 1,203,138	$ 1,144,016	$ 1,396,601	$ 16,492,931
(Over)/Under $:	$ (752,032)	$ (922,913)	$ (594,589)	$ (664,238)	$ (404,959)	$ (648,134)	$ (591,900)	$ 1,287,293	$ 1,000,709	$ 1,523,043	$ 1,382,077	$ (678,751)	$ (64,394)
TOTAL (Over)/ Under $:	**$ 6,227,647**	**$ (3,495,699)**	**$ 1,497,325**	**$ 778,957**	**$ 7,020,641**	**$ 3,562,238**	**$ 10,696,330**	**$ 9,718,001**	**$ 10,926,822**	**$ 2,973,187**	**$ 4,556,076**	**$ 16,332,605**	**$ 70,794,129**

Note: The billed rate for September and October are pro-rated based on number of billing days in cycle on new rate schedules.
(1) January - May NC actual capacity shown herein is adjusted to reflect use of 2021 production plant allocation factor. Actual true-up related to allocator was made as prior period adjustment in May 2022 of Schedule 4.

rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2021
Docket E-7, Sub 1282

Clark Workpaper 10b

2021	**Jan-21**	**Feb-21**	**Mar-21**	**Apr-21**	**May-21**	**Jun-21**	**Jul-21**	**Aug-21**	**Sep-21**	**Oct-21**	**Nov-21**	**Dec-21**	**12 ME**
System KWH Sales - Sch 4, Adjusted	8,623,321,816	7,033,781,083	6,170,273,584	6,357,924,869	5,750,592,351	7,218,972,840	8,473,666,049	8,688,276,000	8,107,525,420	6,609,883,548	6,537,708,709	7,191,590,664	86,763,516,933
NC Retail KWH Sales - Sch 4	5,785,766,552	4,705,197,397	4,216,101,608	4,307,482,408	3,784,759,966	4,813,117,777	5,540,576,171	5,890,178,638	5,517,650,819	4,297,619,492	4,396,624,370	4,888,703,073	58,143,778,271
NC Retail % of Sales, Adjusted (Calc)	67.09%	66.89%	68.33%	67.75%	65.82%	66.67%	65.39%	67.79%	68.06%	65.02%	67.25%	67.98%	67.01%
NC retail production plant %	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%
Fuel and Fuel related component of purchased power													
System Actual $ - Sch 3 Fuel$:	$ 14,110,987	$ 21,997,962	$ 7,288,155	$ 1,159,999	$ 6,909,766	$ 19,650,947	$ 27,256,372	$ 22,941,922	$ 20,301,410	$ 27,877,777	$ 27,842,536	$ 26,295,173	$ 223,633,006
System Actual $ - Sch 3 Fuel-related$; Economic Purchases	1,908,455	2,653,190	897,843	1,159,946	1,043,015	1,716,177	3,233,998	2,658,287	1,580,193	2,101,644	2,163,509	2,417,594	$ 23,533,851
System Actual $ - Sch 3 Fuel-related$; Purchased Power for REPS Compliance	3,836,471	3,851,010	3,578,469	1,634,328	5,557,142	6,244,501	5,777,306	6,144,771	5,617,037	5,684,750	4,972,836	4,406,882	$ 57,305,503
System Actual$ - Sch 3 Fuel-related$; SC DERP	148,221	63,773	117,353	217,851	155,453	263,492	427,484	260,031	242,117	236,248	246,176	205,494	$ 2,583,692
System Acutal $ - Sch 3 Fuel-related$; HB589 purpa Purchases	2,756,782	2,455,383	2,198,548	2,656,105	2,051,181	3,609,263	3,393,224	3,761,968	2,668,737	2,679,082	2,593,637	2,343,504	$ 33,167,413
Total System Economic & QF$	22,760,916	31,021,318	14,080,368	6,828,229	15,716,557	31,484,380	40,088,384	35,766,979	30,409,494	38,579,500	37,818,693	35,668,647	340,223,465
Less:													
Native Load Transfers, Native Load Transfer Benefit & DE - Progress fees	$ 13,085,320	$ 20,311,355	$ 6,186,575	$ 12,225	$ 6,203,819	$ 19,379,239	$ 26,072,774	$ 21,770,863	$ 19,434,801	$ 26,816,502	$ 23,378,784	$ 23,491,467	$ 206,143,723
Total System Economic $ without Native Load Transfers	$ 9,675,596	$ 10,709,964	$ 7,893,793	$ 6,816,004	$ 7,306,104	$ 8,232,386	$ 14,015,610	$ 13,996,116	$ 10,974,693	$ 11,762,998	$ 14,439,909	$ 12,177,179	$ 128,000,354
NC Actual $ (Calc)	$ 6,491,783	$ 7,164,353	$ 5,393,769	$ 4,617,830	$ 4,808,522	$ 5,488,793	$ 9,164,222	$ 9,488,606	$ 7,468,928	$ 7,648,076	$ 9,710,873	$ 8,277,809	$ 85,723,565
Billed rate (¢/kWh):	0.1367	0.1367	0.1367	0.1367	0.1367	0.1367	0.1367	0.1367	0.1363	0.1357	0.1357	0.1357	
Billed $:	$ 7,911,008	$ 6,433,522	$ 5,764,770	$ 5,889,717	$ 5,174,987	$ 6,581,084	$ 7,575,754	$ 8,053,773	$ 7,518,618	$ 5,832,583	$ 5,966,949	$ 6,634,781	$ 79,337,545
(Over)/ Under $:	$ (1,419,225)	$ 730,832	$ (371,001)	$ (1,271,887)	$ (366,465)	$ (1,092,291)	$ 1,588,468	$ 1,434,833	$ (49,690)	$ 1,815,493	$ 3,743,924	$ 1,643,028	$ 6,386,020
Capacity component of purchased power													
System Actual $ - Capacity component of Cherokee County Cogen Purchases	$ 430,619	$ 430,619	$ 215,311	$ 215,310	$ 322,964	$ 1,399,512	$ 3,229,644	$ 3,229,644	$ 645,929	$ 215,310	$ 215,310	$ 215,310	$ 10,765,481
System Actual $ - Capacity component of Purchased Power for REPS Compliance	679,198	657,904	611,495	370,864	1,021,112	874,770	880,403	2,930,150	2,610,093	2,651,828	2,162,592	642,188	$ 16,092,597
System Actual $ - Capacity component of HB589 Purpa QF purchases	401,588	376,607	536,828	347,396	110,548	427,589	1,222,705	1,697,840	1,371,802	1,324,805	834,474	281,956	$ 8,934,138
System Actual $ - Capacity component of SC DERP	14,999	7,491	12,697	15,442	14,837	24,880	38,885	24,278	22,766	22,049	24,646	19,907	$ 242,878
System Actual $ - Sch 2 pg 1 ANNUAL VIEW	$ 1,526,405	$ 1,472,621	$ 1,376,331	$ 949,012	$ 1,469,461	$ 2,726,751	$ 5,371,637	$ 7,881,912	$ 4,650,590	$ 4,213,992	$ 3,237,022	$ 1,159,361	$ 36,035,094
NC Actual $ (Calc) (1)	$ 1,022,340	$ 986,317	$ 921,825	$ 635,619	$ 984,201	$ 1,826,295	$ 3,597,760	$ 5,279,066	$ 3,114,825	$ 2,822,404	$ 2,168,059	$ 776,504	$ 24,135,214
Billed rate (¢/kWh):	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0291	0.0289	0.0289	0.0289	
Billed $:	$ 1,698,557	$ 1,381,329	$ 1,237,743	$ 1,264,570	$ 1,111,112	$ 1,413,012	$ 1,626,576	$ 1,729,210	$ 1,608,069	$ 1,241,743	$ 1,270,349	$ 1,412,529	$ 16,994,798
(Over)/Under $:	$ (676,218)	$ (395,012)	$ (315,918)	$ (628,950)	$ (126,911)	$ 413,283	$ 1,971,184	$ 3,549,856	$ 1,506,756	$ 1,580,661	$ 897,710	$ (636,025)	$ 7,140,416
TOTAL (Over)/ Under $:	**$ (2,095,442)**	**$ 335,820**	**$ (686,918)**	**$ (1,900,837)**	**$ (493,375)**	**$ (679,008)**	**$ 3,559,653**	**$ 4,984,689**	**$ 1,457,065**	**$ 3,396,154**	**$ 4,641,634**	**$ 1,007,003**	**$ 13,526,437**

Note: The billed rate for September and October are pro-rated based on number of billing days in cycle on new rate schedules.
(1) January - May NC actual capacity shown herein is adjusted to reflect use of 2020 production plant allocation factor. Actual true-up related to allocator was made as prior period adjustment in May 2021 of Schedule 4.

rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Actual Sales by Jursidiction - Subject to Weather
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Workpaper 11

Line #	Description	Reference	MWhs NORTH CAROLINA	SOUTH CAROLINA	TOTAL COMPANY	% NC	% SC
1	Residential	Company Records	22,419,810	6,932,595	29,352,406	76.38	23.62
2	Total General Service	Company Records	24,337,421	5,555,439	29,892,860		
3	less Lighting and Traffic Signals		326,292	83,069	409,361		
4	General Service subject to weather		24,011,129	5,472,369	29,483,499	81.44	18.56
5	Industrial	Company Records	12,301,885	8,467,077	20,768,963	59.23	40.77
6	Total Retail Sales	1+2+5	59,059,117	20,955,111	80,014,228		
7	Total Retail Sales subject to weather	1+4+5	58,732,825	20,872,042	79,604,867	73.78	26.22

This does not exclude Greenwood and includes the impact of SC DERP net metering generation
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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Weather Normalization Adjustment
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Workpaper 12
Page 1

Line #	Description	REFERENCE	Total Company MWh	NC RETAIL % To Total	NC RETAIL MWh	SC RETAIL % To Total	SC RETAIL MWh
	Residential						
1	Total Residential		448,056	76.38	342,225	23.62	105,831
	General Service						
2	Total General Service		8,558	81.44	6,970	18.56	1,588
	Industrial						
3	Total Industrial		(19,147)	59.23	(11,341)	40.77	(7,806)
4	Total Retail	L1+ L2+ L3	437,466		337,854		99,613
5	Wholesale		(306)				
6	Total Company	L4 + L5	437,160		337,854		99,613

rounding differences may occur

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Duke Energy Carolinas, LLC | **Clark Workpaper 12**
North Carolina Annual Fuel and Fuel Related Expense | **Page 2**
Weather Normalization Adjustment by Class by Month
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

	Residential	Commercial	Industrial	
2022	**TOTAL MWH ADJUSTMENT**	**TOTAL MWH ADJUSTMENT**	**TOTAL MWH ADJUSTMENT**	
JAN	430,826	41,682	(6,770)	
FEB	26,706	3,498	334	
MAR	196,589	16,797	229	
APR	57,319	1,598	(581)	
MAY	(79,111)	(16,277)	(3,799)	
JUN	(157,659)	(57,717)	(13,625)	
JUL	(87,489)	(31,423)	(6,855)	
AUG	7,117	4,384	604	
SEP	9,348	5,285	898	
OCT	-	26,141	6,943	
NOV	23,449	17,862	5,321	
DEC	20,961	(3,272)	(1,847)	
Total	**448,056**	**8,558**	**(19,147)**	**437,466**

Wholesale

2022	**TOTAL MWH ADJUSTMENT**	Note:	**The Resale customers include:**
JAN	(2,917)	1	Concord[1]
FEB	8,132	2	Dallas
MAR	12,387	3	Forest City
APR	7	4	Kings Mountain[1]
MAY	(4,538)	5	Due West
JUN	(8,323)	6	Prosperity[2]
JUL	(3,594)	7	Lockhart
AUG	2,515	8	Western Carolina University
SEP	1,554	9	City of Highlands
OCT	(8,702)	10	Haywood
NOV	11,971	11	Piedmont
DEC	(8,800)	12	Rutherford
		13	Blue Ridge
Total	**(306)**	14	Greenwood[1]

[1]Wholesale load is no longer being served by Duke as of December 2018.
[2]Wholesale load is no longer being served by Duke as of December 2019.

rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Customer Growth Adjustment to kWh Sales
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Workpaper 13
Page 1

Line	Estimation Method [1]	Rate Schedule	NC Proposed kWh [1] Adjustment	SC Proposed kWh Adjustment	Wholesale Proposed kWh Adjustment	Total Company
1	*Regression*	Residential	130,366,123	72,505,791		
2						
3		**General Service (Excluding Lighting):**				
4	*Customer*	General Service Small and Large	109,009,655	1,179,199		
5	*Regression*	Miscellaneous	(2,444,761)	(1,131,149)		
6		Total General	106,564,894	48,050		
7						
8		**Lighting:**				
9	*Regression*	T & T2 (GL/FL/PL/OL)[2]	(2,957,804)	(1,879,960)		
10	*Regression*	TS	18,088	(14,903)		
11		Total Lighting	(2,939,716)	(1,894,862)		
12						
13		**Industrial:**				
14	*Customer*	I - Textile	(28,808,158)	(776,997)		
15	*Customer*	I - Nontextile	(42,696,403)	(78,201,535)		
16		Total Industrial	(71,504,561)	(78,978,532)		
17						
18						
19		Total	162,486,740	(8,319,553)	5,835,657	160,002,845
					WP 13-2	

Notes:
[1] Two approved methods are used for estimating the growth adjustment depending on the class/schedule:
"Regression" refers to the use of Ordinary Least Squares Regression
"Customer" refers to the use of the Customer by Customer approach.
[2] T and T2 were combined due to North Carolina's FL & GL schedules being merged into OL & PL.
rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Customer Growth Adjustment to kWh Sales-Wholesale
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Workpaper 13
Page 2

Calculation of Customer Growth Adjustment to kWh Sales - Wholesale

Line No.		Reference	
1	Total System Resale (kWh Sales)	Company Records	9,637,002,447
2	Less Intersystem Sales	Exhibit 6, Sch 1	1,193,715,448
3	Total kWh Sales Excluding Intersystem Sales	L1 - L2	8,443,286,999
4	Residential Growth Factor	Line 8	0.6912
5	Adjustment to kWhs - Wholesale	L3 * L4 / 100	5,835,657
6	Total System Retail Residential kWh Sales	Company Records	29,352,405,508
7	2022 Proposed Adjustment kWh - Residential (NC+SC)	WP 13-1	202,871,914
8	Percent Adjustment	L7 / L6 * 100	0.6912

rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Summary Comparison of Fuel and Fuel Related Cost Factors
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Revised Exhibit 1

Line #	Description	Reference	Residential cents/kWh	General cents/kWh	Industrial cents/kWh	Composite cents/kWh
	Current Fuel and Fuel Related Cost Factors (Approved Fuel Rider Docket No. E-7, Sub 1263)					
1	Approved Fuel and Fuel Related Costs Factors	Input	2.0003	1.8217	1.8396	1.9010
2	EMF Increment (Decrement) cents/kWh	Input	0.4863	0.6254	0.5726	0.5597
3	EMF Interest Increment (Decrement) cents/kWh	Input	-	-	-	-
4	Approved Net Fuel and Fuel Related Costs Factors	Sum	**2.4866**	**2.4471**	**2.4122**	**2.4607**
	Fuel and Fuel Related Cost Factors Required by Rule R8-55					
5	Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales	Exh 2 Sch 2 pg 2	**4.3423**	**3.8357**	**3.4800**	**3.9630**
6	NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales	Exh 2 Sch 3 pg 2	**4.4104**	**3.9462**	**3.4575**	**4.0247**
	Proposed Fuel and Fuel Related Cost Factors using Proposed Nuclear Capacity Factor of 93.52%					
7	Fuel and Fuel Related Costs excluding Purchased Capacity cents/kWh	Exh 2 Sch 1 pg 2	2.6761	2.2275	1.6916	2.2905
8	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Exh 2 Sch 1 pg 2	0.0362	0.0279	0.0215	0.0297
9	Total adjusted Fuel and Fuel Related Costs cents/kWh	Sum	2.7123	2.2554	1.7131	2.3202
10	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6635	1.6638	1.7256	1.6764
11	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
12	Net Fuel and Fuel Related Costs Factors cents/kWh	Sum	**4.3758**	**3.9192**	**3.4387**	**3.9966**

Note: Fuel factors exclude regulatory fee

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Exhibit 2
Schedule 1
Page 1 of 3

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,819,128	0.5613	330,162,771
2	Coal	Workpaper 3 & 4	10,320,159	3.8575	398,104,637
3	Gas CT and CC	Workpaper 3 & 4	31,212,640	3.7804	1,179,963,909
4	Reagents and Byproducts	Workpaper 9			24,944,696
5	Total Fossil	Sum	41,532,800		1,603,013,242
6	Hydro	Workpaper 3	5,600,555		
7	Net Pumped Storage	Workpaper 3	(4,083,743)		
8	Total Hydro	Sum	1,516,812		-
9	Solar Distributed Generation	Workpaper 3	358,121		-
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	102,226,860		1,933,176,012
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(25,697,152)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,888,880)		(83,614,236)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum Lines 10-13	86,459,580		1,820,177,243
15	Purchased Power	Workpaper 3 & 4	11,789,258	3.5185	414,804,733
16	JDA Savings Shared	Workpaper 5			(69,598,371)
17	Total Purchased Power		11,789,258		345,206,362
18	Total Generation and Purchased Power	Line 14 + Line 17	98,248,839	2.2040	2,165,383,605
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,148,043)	5.0520	(57,998,825)
20	Line losses and Company use	Line 22-Line 18-Line 19	(6,269,005)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,107,384,780
22	Projected System MWh Sales for Fuel Factor	Workpaper 7	90,831,791		90,831,791
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.3201

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Revised Exhibit 2
Schedule 1
Page 2 of 3

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7	23,477,265	24,077,007	13,270,457	60,824,730
	Calculation of Renewable and Cogeneration Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,931,581
3	QF Purchased Power - Capacity	Workpaper 4				12,176,644
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 27,108,225
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 18,076,112
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 8,503,847	$ 6,713,696	$ 2,858,570	$ 18,076,112
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0362	0.0279	0.0215	0.0297
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	2.6761	2.2275	1.6916	2.2905
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0362	0.0279	0.0215	0.0297
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	2.7123	2.2554	1.7131	2.3202
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6635	1.6638	1.7256	1.6764
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 1 Page 3	4.3758	3.9192	3.4387	3.9966

Note: Rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
Proposed Nuclear Capacity Factor of 93.52%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Rate Class	Projected Billing Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/(Decrease) as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	D	E	F	G
		Workpaper 7	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	23,477,265	$ 2,466,691,215	$ 443,536,022	17.98%	1.8892	2.4866	4.3758
2	General Service/Lighting	24,077,007	1,971,226,718	354,446,496	17.98%	1.4721	2.4471	3.9192
3	Industrial	13,270,457	757,602,036	136,224,506	17.98%	1.0265	2.4122	3.4387
4	NC Retail	60,824,730	$ 5,195,519,969	$ 934,207,024	17.98%			

<u>Total Proposed Composite Fuel Rate:</u>

5	Total Fuel Costs for Allocation	Workpaper 7	$ 2,111,780,996
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 1, Page 2	27,108,225
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,084,672,770
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7	91,011,082
9	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
10	Allocation %	Line 9 / Line 8	66.83%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,393,186,813
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 1, Page 2	18,076,112
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,411,262,925
14	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.3202
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	1.6764
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.9966

<u>Total Current Composite Fuel Rate - Docket E-7 Sub 1263:</u>

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	1.5359
24	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 934,207,025

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

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May 26 2023

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,819,128	0.5613	330,162,771
2	Coal	Calculated	8,369,573	3.8575	322,859,932
3	Gas CT and CC	Workpaper 3 & 4	31,212,640	3.7804	1,179,963,909
4	Reagents and Byproducts	Workpaper 9	-		24,944,696
5	Total Fossil	Sum	39,582,214		1,527,768,538
6	Hydro	Workpaper 3	5,600,555		
7	Net Pumped Storage	Workpaper 3	(4,083,743)		
8	Total Hydro	Sum	1,516,812		
9	Solar Distributed Generation	Workpaper 3	358,121		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	100,276,274		1,857,931,308
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(25,697,152)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,888,880)		(83,614,236)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum	84,508,994		1,744,932,539
15	Purchased Power	Workpaper 3 & 4	11,789,258		414,804,733
16	JDA Savings Shared	Workpaper 5	-		(69,598,371)
17	Total Purchased Power	Sum	11,789,258		345,206,362
18	Total Generation and Purchased Power	Line 14 + Line 17	96,298,253		2,090,138,901
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,148,043)		(57,998,825)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(6,269,005)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,032,140,076
22	Normalized Test Period MWh Sales	Exhibit 4	88,881,205		88,881,205
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.2864

Note: Rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Normalized Test Period MWh Sales	Exhibit 4	22,892,401	24,448,017	12,219,040	59,559,458
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,931,581
3	QF Purchased Power - Capacity	Workpaper 4				12,176,644
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 27,108,225
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 18,076,112
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 8,503,847	$ 6,713,696	$ 2,858,570	$ 18,076,112
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales	Line 8 / Line 1 / 10	0.0371	0.0275	0.0234	0.0303
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	2.6417	2.1444	1.7310	2.2563
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0371	0.0275	0.0234	0.0303
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	2.6788	2.1719	1.7544	2.2866
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6635	1.6638	1.7256	1.6764
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 2 Page 3	4.3423	3.8357	3.4800	3.963

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Rate Class	Normalized Test Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/(Decrease) as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	D	E	F	G
		Exhibit 4	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	22,892,401	$ 2,466,691,215	$ 424,808,475	17.22%	1.8557	2.4866	4.3423
2	General Service/Lighting	24,448,017	$ 1,971,226,718	339,480,601	17.22%	1.3886	2.4471	3.8357
3	Industrial	12,219,040	$ 757,602,036	130,472,661	17.22%	1.0678	2.4122	3.4800
4	NC Retail	59,559,458	$ 5,195,519,969	$ 894,761,737				

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7a	$ 2,036,536,291
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 2, Page 2	27,108,225
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,009,428,066
8	Normalized Test Period System MWh Sales for Fuel Factor	Workpaper 7a	89,060,496
9	NC Retail Normalized Test Period MWh Sales	Exhibit 4	59,559,458
10	Allocation %	Line 9 / Line 8	66.88%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,343,810,646
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 2, Page 2	18,076,112
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,361,886,758
14	NC Retail Normalized Test Period MWh Sales	Line 9	59,559,458
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.2866
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	1.6764
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.9630

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	1.5023
24	NC Retail Normalized Test Period MWh Sales	Exhibit 4	59,559,458
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 894,761,737

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Exhibit 2
Schedule 3

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Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 2	57,782,460	0.5613	324,343,758
2	Coal	Calculated	11,094,415	3.8575	427,971,909
3	Gas CT and CC	Workpaper 3 & 4	31,212,640	3.7804	1,179,963,909
4	Reagents and Byproducts	Workpaper 9	-		24,944,696
5	Total Fossil	Sum	42,307,056		1,632,880,514
6	Hydro	Workpaper 3	5,600,555		
7	Net Pumped Storage	Workpaper 3	(4,083,743)		
8	Total Hydro	Sum	1,516,812		
9	Solar Distributed Generation	Workpaper 3	358,121		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	101,964,448		1,957,224,272
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(25,697,152)
12	Less Catawba Joint Owners	Calculated	(14,626,468)		(82,140,560)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum	86,459,580		1,845,699,178
15	Purchased Power	Workpaper 3 & 4	11,789,258		414,804,733
16	JDA Savings Shared	Workpaper 5	-		(69,598,371)
17	Total Purchased Power	Sum	11,789,258		345,206,362
18	Total Generation and Purchased Power	Line 14 + Line 17	98,248,839		2,190,905,541
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,148,043)		(57,998,825)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(6,269,005)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,132,906,715
22	Projected System MWh Sales for Fuel Factor	Workpaper 7b	90,831,791		90,831,791
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.3482

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

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Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7b	23,477,265	24,077,007	13,270,457	60,824,730
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,931,581
3	QF Purchased Power - Capacity	Workpaper 4				12,176,644
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 27,108,225
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 18,076,112
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 8,503,847	$ 6,713,696	$ 2,858,570	$ 18,076,112
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0362	0.0279	0.0215	0.0297
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	2.7107	2.2545	1.7104	2.3186
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0362	0.0279	0.0215	0.0297
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	2.7469	2.2824	1.7319	2.3483
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6635	1.6638	1.7256	1.6764
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 3 Page 3	4.4104	3.9462	3.4575	4.0247

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Rate Class	Projected Billing Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/Decrease as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	C / B = D	E	F	G
		Workpaper 7b	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	23,477,265	$ 2,466,691,215	$ 451,650,719	18.31%	1.9238	2.4866	4.4104
2	General Service/Lighting	24,077,007	$ 1,971,226,718	$ 360,931,258	18.31%	1.4991	2.4471	3.9462
3	Industrial	13,270,457	$ 757,602,036	$ 138,716,797	18.31%	1.0453	2.4122	3.4575
4	NC Retail	60,824,730	$ 5,195,519,969	$ 951,298,774				

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7b	$ 2,137,302,931
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 3, Page 2	27,108,225
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,110,194,706
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7b	91,011,082
9	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
10	Allocation %	Line 9 / Line 8	66.83%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,410,243,122
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 3, Page 2	18,076,112
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,428,319,234
14	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.3483
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	1.6764
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	4.0247

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	1.5640
24	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 951,298,774

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Proposed Composite
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line No.	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)		NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022				4,988,891	$ 82,008,233
2	February [1]				5,189,525	$ 61,224,070
3	March				4,642,682	$ 16,628,788
4	April				4,283,375	$ 22,131,836
5	May [1]				4,361,034	$ 82,217,312
6	June [1]				5,223,755	$ 115,761,737
7	July				5,560,704	$ 146,325,916
8	August				6,010,616	$ 185,513,643
9	September				5,369,219	$ 84,720,701
10	October				4,315,777	$ 27,143,393
11	November				4,103,701	$ 71,328,379
12	December [1]				5,009,748	$ 186,026,549
13	**Total Test Period**				**59,059,028**	**$ 1,081,030,561**
14	**Adjustment to remove (Over)/Under Recovery - January 2022** [2]					$ 81,987,600
15	**Adjustment for Clemson CHP Steam Revenues**					$ (613,775)
16	**Adjusted (Over)/Under Recovery**					**$ 998,429,186**
17	NC Retail Normalized Test Period MWh Sales			Exhibit 4		59,559,458
18	**Experience Modification Increment (Decrement) cents/kWh**					**1.6764**

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 15.

Rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Residential
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022	2.6880	1.5337	2,129,408	$ 24,579,060
2	February [1]	2.2111	1.5337	2,308,671	$ 15,631,479
3	March	1.8234	1.5337	1,783,273	$ 5,165,674
4	April	2.2527	1.5337	1,441,708	$ 10,365,435
5	May [1]	3.7477	1.5337	1,441,079	$ 31,901,319
6	June [1]	3.6847	1.5337	1,916,024	$ 41,213,674
7	July	3.7644	1.5337	2,208,753	$ 49,270,398
8	August	4.1426	1.5337	2,405,836	$ 62,764,654
9	September	3.7169	1.7555	1,992,460	$ 39,079,833
10	October	3.2667	2.0003	1,373,788	$ 17,397,939
11	November	4.5684	2.0003	1,345,710	$ 34,559,470
12	December [1]	5.2540	2.0003	2,073,011	$ 73,670,397
13	**Total Test Period [3]**			**22,419,721**	**$ 405,599,334**
14	Test Period Wtd Avg. ¢/kWh	3.4346	1.6532		
15	Adjustment to remove (Over)/Under Recovery - January 2022 [2]				$ 24,571,837
16	**Adjustment for Clemson CHP Steam Revenues**				$ (217,439)
17	**Adjusted (Over)/Under Recovery**				**$ 380,810,058**
18	NC Retail Normalized Test Period MWh Sales			Exhibit 4	22,892,401
19	**Experience Modification Increment (Decrement) cents/kWh**				**1.6635**

Notes:

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

[3] North Carolina Residential sales on Exhibit 3, Line 13 differ from North Carolina Residential sales on Workpaper 11, due to an adjustment reported on the June 2022 monthly fuel report.

Rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - GS/Lighting
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022	3.6550	1.6895	1,921,732	$ 37,771,442
2	February [1]	3.2504	1.6895	1,927,508	$ 30,077,232
3	March	2.2020	1.6895	1,808,909	$ 9,269,996
4	April	2.1636	1.6895	1,840,396	$ 8,725,608
5	May [1]	3.4774	1.6895	1,904,671	$ 34,049,947
6	June [1]	3.9661	1.6895	2,184,316	$ 49,730,332
7	July	4.5134	1.6895	2,260,531	$ 63,835,167
8	August	4.9415	1.6895	2,467,241	$ 80,234,867
9	September	2.9735	1.7523	2,309,221	$ 28,198,709
10	October	2.1545	1.8217	1,927,666	$ 6,414,818
11	November	3.2050	1.8217	1,777,613	$ 24,589,863
12	December [1]	5.0399	1.8217	2,007,616	$ 71,896,623
13	**Total Test Period**			**24,337,421**	**$ 444,794,604**
14	Test Period Wtd Avg. ¢/kWh	3.5242	1.7265		
15	Adjustment to remove (Over)/Under Recovery - January 2022 [2]				$ 37,762,562
16	**Adjustment for Clemson CHP Steam Revenues**				$ (263,925)
17	**Adjusted (Over)/Under Recovery**				**$ 406,768,116**
18	NC Retail Normalized Test Period MWh Sales			Exhibit 4	24,448,017
19	**Experience Modification Increment (Decrement) cents/kWh**				**1.6638**

Notes:

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

Rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Industrial
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022	3.8206	1.7243	937,751	$ 19,657,733
2	February [(1)]	3.3522	1.7243	953,346	$ 15,515,360
3	March	1.9331	1.7243	1,050,500	$ 2,193,118
4	April	2.0280	1.7243	1,001,271	$ 3,040,792
5	May [(1)]	3.3268	1.7243	1,015,284	$ 16,266,045
6	June [(1)]	3.9333	1.7243	1,123,416	$ 24,817,732
7	July	4.7681	1.7243	1,091,420	$ 33,220,351
8	August	5.4617	1.7243	1,137,540	$ 42,514,122
9	September	3.4130	1.7791	1,067,538	$ 17,442,158
10	October	2.1680	1.8396	1,014,322	$ 3,330,636
11	November	3.0819	1.8396	980,378	$ 12,179,045
12	December [(1)]	5.7913	1.8396	929,121	$ 40,459,529
13	**Total Test Period**			**12,301,885**	**$ 230,636,623**
14	Test Period Wtd Avg. ¢/kWh	3.6009	1.7565		
15	Adjustment to remove (Over)/Under Recovery - January 2022 [(2)]				$ 19,653,201
16	**Adjustment for Clemson CHP Steam Revenues**				$ (132,411)
17	**Adjusted (Over)/Under Recovery**				**$ 210,851,011**
18	NC Retail Normalized Test Period MWh Sales			Exhibit 4	12,219,040
19	**Experience Modification Increment (Decrement) cents/KWh**				**1.7256**

Notes:

[(1)] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[(2)] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Sales, Fuel Revenue, Fuel Expense and System Peak
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Exhibit 4

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Line #	Description	Reference	Total Company	North Carolina Retail	North Carolina Residential	North Carolina General Service/Lighting	North Carolina Industrial
1	Test Period MWh Sales (excluding inter system sales) [1]	Exhibit 6 Schedule 1 (Line 4) and Workpaper 11 (NC Retail)	88,284,042	59,059,117	22,419,810	24,337,421	12,301,885
2	Customer Growth MWh Adjustment	Workpaper 13 Pg 1	160,003	162,487	130,366	103,625	(71,505)
3	Weather MWh Adjustment	Workpaper 12 Pg 1	437,160	337,854	342,225	6,970	(11,341)
4	Total Normalized MWh Sales	Sum	88,881,205	59,559,458	22,892,401	24,448,017	12,219,040
5	Test Period Fuel and Fuel Related Revenue *		$ 1,606,073,846	$ 1,006,893,394			
6	Test Period Fuel and Fuel Related Expense *		$ 2,966,425,990	$ 2,087,923,955			
7	Test Period Unadjusted (Over)/Under Recovery		$ 1,360,352,144	$ 1,081,030,561			

Line #	Description	2021 Summer Coincidental Peak (CP) kW
8	Total System Peak	17,241,828
9	NC Retail Peak	11,480,608
10	NC Residential Peak	5,400,475
11	NC General Service/Lighting Peak	4,263,819
12	NC Industrial Peak	1,816,314

* Total Company Fuel and Fuel-Related Revenue and Fuel and Fuel-Related Expense are determined based upon the fuel and fuel-related cost recovery mechanism in each of the company's jurisdictions.

(1) North Carolina Residential sales on Exhibit 4, Line 1 differ from North Carolina Residential sales on Exhibit 3, Page 2 of 4 due to an adjustment reported on the June 2022 monthly fuel report.

Rounding differences may occur

Duke Energy Carolinas, LLC **Clark Exhibit 5**
North Carolina Annual Fuel and Fuel Related Expense
Nuclear Capacity Ratings
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

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Unit	Rate Case Docket E-7, Sub 1214	Fuel Docket E-7, Sub 1263	Proposed Capacity Rating MW
Oconee Unit 1	847.0	847.0	847.0
Oconee Unit 2	848.0	848.0	848.0
Oconee Unit 3	859.0	859.0	859.0
McGuire Unit 1	1,158.0	1,158.0	1,158.0
McGuire Unit 2	1,157.6	1,157.6	1,157.6
Catawba Unit 1	1,160.1	1,160.0	1,160.0
Catawba Unit 2	1,150.1	1,150.1	1,150.1
Total Company	7,179.8	7,179.7	7,179.7

Clark Exhibit 6

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DECEMBER 2022 MONTHLY FUEL FILING

Clark Exhibit 6
Schedule 1

DUKE ENERGY CAROLINAS
SUMMARY OF MONTHLY FUEL REPORT

Docket No. E-7, Sub 1260

Line No.		Dec 2022	12 Months Ended Dec 2022
1	Fuel and fuel-related costs	$ 400,088,306	$ 3,125,398,595
	MWH sales:		
2	Total system sales	7,795,402	89,477,757
3	Less intersystem sales	205,952	1,193,715
4	Total sales less intersystem sales	7,589,450	88,284,042
5	Total fuel and fuel-related costs (¢/KWH) (line 1/line 4)	5.2716	3.5402
6	Current fuel and fuel-related cost component (¢/KWH) (per Schedule 4, Line 7a Total)	1.8989	
	Generation Mix (MWH):		
	Fossil (by primary fuel type):		
7	Coal	1,226,989	8,102,494
8	Fuel Oil	78,865	130,190
9	Natural Gas - Combined Cycle	923,129	13,612,829
10	Natural Gas - Combined Heat and Power	7,147	91,218
11	Natural Gas - Combustion Turbine	74,091	1,686,686
12	Natural Gas - Steam	1,243,316	13,557,414
13	Biogas	2,080	18,277
14	Total fossil	3,555,617	37,199,108
15	Nuclear 100%	5,486,217	59,538,303
16	Hydro - Conventional	215,484	1,696,649
17	Hydro - Pumped storage	(34,571)	(697,976)
18	Total hydro	180,913	998,673
19	Solar Distributed Generation	15,173	320,481
20	Total MWH generation	9,237,920	98,056,565
21	Less joint owners' portion - Nuclear	1,417,939	15,313,271
22	Less joint owners' portion - Combined Cycle	(160)	592,719
23	Adjusted total MWH generation	7,820,141	82,150,575

Note: Detail amounts may not add to totals shown due to rounding.

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Clark Exhibit 6
Schedule 2

DUKE ENERGY CAROLINAS
DETAILS OF FUEL AND FUEL-RELATED COSTS

Docket No. E-7, Sub 1260

Fuel and fuel-related costs:	Dec 2022	12 Months Ended Dec 2022
0501110 coal consumed - steam	$ 45,283,039	$ 270,898,099
0501222-0501223 biomass/test fuel consumed	-	
0501310 fuel oil consumed - steam	157,081	1,075,261
0501330 fuel oil light-off - steam	48,166	1,713,942
Total Steam Generation - Account 501	45,488,286	273,687,302
Nuclear Generation - Account 518		
0518100 burnup of owned fuel	21,706,902	247,614,928
Other Generation - Account 547		
0547100, 0547124 - natural gas consumed - Combustion Turbine	11,551,223	129,502,907
0547100 - Combustion Turbine - credit for inefficient fuel cost	-	(2,857,210)
0547100 natural gas consumed - Steam	139,769,907	960,513,825
0547101 natural gas consumed - Combined Cycle	78,921,823	626,119,762
0547101 natural gas consumed - Combined Heat and Power	1,290,155	8,688,719
0547106 biogas consumed - Combined Cycle	112,306	986,012
0547200 fuel oil consumed - Combustion Turbine	13,579,427	20,076,765
Total Other Generation - Account 547	245,224,841	1,743,030,780
Reagents		
Reagents (lime, limestone, ammonia, urea, dibasic acid, and sorbents)	3,579,598	19,538,566
Total Reagents	3,579,598	19,538,566
By-products		
Net proceeds from sale of by-products	451,601	2,946,324
Total By-products	451,601	2,946,324
Total Fossil and Nuclear Fuel Expenses Included in Base Fuel Component	316,451,228	2,286,817,900
Purchased Power and Net Interchange - Account 555		
Capacity component of purchased power (economic)	-	(215,310)
Capacity component of purchased power (renewables)	661,601	15,482,895
Capacity component of purchased power (PURPA)	414,939	9,369,817
Fuel and fuel-related component of purchased power	126,508,359	940,337,520
Total Purchased Power and Net Interchange - Account 555	127,584,899	964,974,922
Less:		
Fuel and fuel-related costs recovered through intersystem sales	43,533,664	122,923,146
Fuel in loss compensation	381,194	2,967,546
Solar Integration Charge	13,226	(4,005)
Lincoln CT marginal fuel revenue	19,737	506,640
Miscellaneous Fees Collected	-	900
Total Fuel Credits - Accounts 447 /456	43,947,821	126,394,227
Total Fuel and Fuel-related Costs	$ 400,088,306	$ 3,125,398,595

Notes: Detail amounts may not add to totals shown due to rounding.
Report reflects net ownership costs of jointly owned facilities.

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DUKE ENERGY CAROLINAS
PURCHASED POWER AND INTERCHANGE
SYSTEM REPORT - NORTH CAROLINA VIEW

DEC 2022

Purchased Power	Total	Capacity	Non-capacity			
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel $ Not Fuel-related $
Alcoa Power Generating Inc.	-	-	-	-	-	
American Electric Power Serv Corp.	-	-	-	-	-	
Associated Electric Cooperative, Inc.	153,251	-	3,154	130,264	22,988	
Blue Ridge Electric Membership Corp.	-	-	-	-	-	
Calpine Energy Services, L.P.	-	-	-	-	-	
Cargill Power Marketers, LLC.	-	-	-	-	-	
Carolina Power Partners, LLC	$ 220,128	-	2,924	$ 187,109	$ 33,019	
Cherokee County Cogeneration Partners	-	$ -	-	-	-	
City of Kings Mountain	-	-	-	-	-	
Constellation	-	-	-	-	-	
Cube Yadkin Generation LLC	115,680	-	723	98,328	17,352	
DE Progress	-	-	-	-	-	
DE Progress - Native Load Transfer	70,200,387	-	466,390	70,248,967	2,377,140	(2,425,721)
DE Progress - Native Load Transfer (Prior Period Adjust)	-	-	-	-	-	
DE Progress - Native Load Transfer Benefit	2,350,019	-	-	2,350,019	-	
DE Progress - Fees	(25,148)	-	-	-	(25,148)	
EDF Trading North America, LLC.	-	-	-	-	-	
Exelon Generation Company, LLC.	-	-	-	-	-	
Florida Power & Light Company	-	-	-	-	-	
Haywood Electric - Economic	32,445	19,590	116	10,927	1,928	
LGE/KU	650,620	-	11,423	553,027	97,593	
Lockhart Power Co.	-	-	-	-	-	
Macquarie Energy, LLC	16,474,177	-	68,687	14,003,050	2,471,127	
Midwest Independent System Operator	-	-	-	-	-	
Morgan Stanley Capital Group	57,600	-	800	48,960	8,640	
NCEMC - Economic	30,628	3,317	611	23,215	4,097	
NCMPA - Economic	1,893,200	-	18,346	1,609,220	283,980	
NCMPA Instantaneous - Economic	7,173,244	-	48,002	4,089,467	3,083,778	
NTE Carolinas LLC	-	-	-	-	-	
Oglethorpe Power	-	-	-	-	-	
Piedmont Electric Membership Corp. - Economic	-	-	-	-	-	
Piedmont Municipal Power Agency	681,363	-	11,318	388,992	292,370	
PJM Interconnection, LLC.	498,917	-	5,150	424,080	74,838	
Rainbow Energy Marketing Corporation	-	-	-	-	-	
Rutherford Electric Membership Corp.	-	-	-	-	-	
South Carolina Electric & Gas Company / Dominion Energy	13,472	-	288	11,451	2,021	
Southern Company Services, Inc.	148,469	-	2,641	126,198	22,270	
Tennesse Valley Authority	700,625	-	12,982	595,531	105,094	
The Energy Authority	15,029	-	386	12,775	2,254	
Town of Dallas	-	-	-	-	-	
Town of Forest City	20,417	20,417	-	-	-	
Westar Energy, Inc.	-	-	-	-	-	
	$ 101,404,524	**$ 43,324**	**653,941**	**$ 94,911,581**	**$ 8,875,341**	**$ (2,425,721)**
Renewable Energy						
REPS	$ 4,896,784.45	$ 639,202	86,592	$ -	$ 4,257,583	
DERP - Purchased Power	$ 342,872.54	22,399	5,884	-	229,623	90,850
DERP - Net Metered Generation	$ 496.80	-	18			497
	$ 5,240,154	**$ 661,601**	**92,494**	**$ -**	**$ 4,487,206**	**$ 91,347**
HB589 PURPA Purchases						
CPRE - Purchased Power	$ 1,214,288.27	-	29,865			1,214,288
Qualifying Facilities	$ 3,465,792.71	414,939	66,488		2,956,940	93,914
	$ 4,680,081	**$ 414,939**	**96,353**	**$ -**	**$ 2,956,940**	**$ 1,308,203**
Non-dispatchable / Other						
Carolina Power & Light (DE Progress) (Emergency)	-	-	-	-		-
South Carolina Public Service Authority - Emergency	-	-	-	-		-
Blue Ridge Electric Membership Corp.	1,573,673	$ 803,142	24,891	654,951		115,580
Cargill Power Marketers, LLC.	-	-	-	-		-
Carolina Power Partners, LLC	-	-	-	-		-
DE Progress - As Available Capacity	-	-	-	-		-
Exelon Generation Company, LLC.	-	-	-	-		-
Haywood Electric	177,287	79,852	3,859	82,820		14,615
Macquarie Energy, LLC	15,571,770	-	35,899	13,236,005		2,335,766
Morgan Stanley Capital Group	-	-	-	-		-
NCEMC - Other	679,250	-	1,235	577,363		101,888
NCMPA	2,097,600	-	2,696	1,782,960		314,640
NTE Carolinas LLC	-	-	-	-		-
Piedmont Electric Membership Corp.	739,661	379,423	11,904	306,202		54,036
PJM Interconnection, LLC - Other	-	-	-	-		-
South Carolina Electric & Gas Company / Dominion Energy	-	-	-	-		-
Southern Company Services, Inc.	-	-	-	-		-
Tennesse Valley Authority	-	-	-	-		-
Generation Imbalance	3,118,465	-	9,905	2,559,774		558,691
Energy Imbalance - Purchases	1,435,304	-	469	1,175,506		259,798
Energy Imbalance - Sales	(4,204,965)	-	-	(3,566,988)		(637,977)
Qualifying Facilities - Pre HB589	-	-	-			-
Other Purchases	472	-	18	-		472
	$ 21,188,517	**$ 1,262,418**	**90,876**	**$ 16,808,592**	**$ -**	**$ 3,117,507**
Total Purchased Power	**$ 132,513,276**	**$ 2,382,281**	**933,664**	**$ 111,720,172**	**$ 16,319,487**	**$ 2,091,335**
Interchanges In						
Other Catawba Joint Owners	6,968,385	-	710,207	4,330,916		2,637,471
WS Lee Joint Owner	170,714		2,953	158,305		12,409
Total Interchanges In	7,139,099	-	713,160	4,489,220	-	2,649,878
Interchanges Out						
Other Catawba Joint Owners	(6,832,104)	(134,209)	(693,600)	(4,230,264)		(2,467,631)
Catawba- Net Negative Generation	-	-	-	-		-
WS Lee Joint Owner	(1,942,451)		(33,801)	(1,790,256)		(152,195)
Total Interchanges Out	(8,774,555)	(134,209)	(727,400)	(6,020,520)	-	(2,619,826)
Net Purchases and Interchange Power	**$ 130,877,820**	**$ 2,248,072**	**919,424**	**$ 110,188,872**	**$ 16,319,487**	**$ 2,121,387**

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DUKE ENERGY CAROLINAS
INTERSYSTEM SALES*
SYSTEM REPORT - NORTH CAROLINA VIEW

DEC 2022

Clark Exhibit 6
Schedule 3 - Sales
Page 2 of 4

	Total	Capacity	Non-capacity		
Sales	**$**	**$**	**mWh**	**Fuel $**	**Non-fuel $**
Utilities:					
Midwest Independent System Operator - Emergency	-	-	-	-	-
DE Progress - Emergency	-	-	-	-	-
SC Public Service Authority - Emergency	-	-	-	(155)	155
SC Electric & Gas / Dominion Energy - Emergency	508,666	-	2,763	2,270,933	(1,762,267)
Tennessee Valley Authority - Emergency	1,924,600	-	8,648	5,948,337	(4,023,737)
Market Based:					
Associated Electric Cooperative, Inc.	2,552	-	41	1,603	949
American Electric Power Services Corp.	-	-	-	-	-
Cargill-Alliant, LLC.	-	-	-	-	-
Carolina Power Partners, LLC	8,800	-	150	8,953	(153)
Central Electric Power Cooperative, Inc.	-	$ -	-	-	-
Constellation Power Sources	-	-	-	-	-
EDF Trading Company	-	-	-	-	-
Evergy Kansas Central	-	-	-	-	-
Exelon Generation Company, LLC.	-	-	-	-	-
Macquarie Energy, LLC	-	-	-	980	(980)
Midwest Independent System Operator	-	-	-	-	-
Morgan Stanley	-	-	-	-	-
NCEMC	-	-	-	-	-
NCEMC (Balancing/Generator)	-	-	-	-	-
NCMPA	127,155	87,500	213	38,688	967
Oglethorpe Power Corporation	-	-	-	-	-
PJM Interconnection, LLC.	17,071	-	200	13,976	3,095
SC Electric & Gas / Dominion Energy	20,383	-	182	4,442	15,941
South Carolina Electric & Gas - T	(4)	-	-	-	(4)
South Carolina Public Service Authority - T	(4)	-	-	-	(4)
Southern Company	90,699	-	1,058	121,282	(30,583)
Tenaska Power Service	-	-	-	-	-
Tennessee Valley Authority	5,926	-	90	3,948	1,978
The Energy Authority	18,112	-	411	10,634	7,479
Westar Energy	-	-	-	-	-
Other:					
Cargill-Alliant, LLC - Mitigation sales	-	-	-	-	-
DE Progress - Native Load Transfer Benefit	1,268,405	-	-	1,268,405	-
DE Progress - Native Load Transfer	32,571,610	-	187,066	32,362,740	208,869
Generation Imbalance	1,777,596	-	5,130	1,478,897	298,699
BPM Transmission	8,535	-			8,535
Total Intersystem Sales	**$ 38,350,103**	**$ 87,500**	**205,952**	**$ 43,533,664**	**$ (5,271,061)**

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DUKE ENERGY CAROLINAS
PURCHASED POWER AND INTERCHANGE
SYSTEM REPORT - NORTH CAROLINA VIEW

Twelve Months Ended
DEC 2022

Purchased Power	Total	Capacity	Non-capacity			
						Not Fuel $
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel-related $
Alcoa Power Generating Inc.	-	-	-	-	-	
American Electric Power Serv Corp.	-	-	-	-	-	
Associated Electric Cooperative, Inc.	163,916	-	3,384	136,769	27,147	
Blue Ridge Electric Membership Corp. - Economic	-	-	-	-	-	
Calpine Energy Services, L.P.	-	-	-	-	-	
Cargill Power Marketers, LLC.	$ -	-	-	$ -	$ -	
Carolina Power Partners, LLC	9,667,773	$ -	128,879	5,950,172	3,717,601	
Cherokee County Cogeneration Partners	(6,400,734)	(215,310)	-	22,574	(6,207,998)	
City of Kings Mountain	-	-	-	-	-	
Constellation	489,570	-	6,659	298,638	190,932	
Cube Yadkin Generation LLC	221,550	-	2,810	162,909	58,641	
DE Progress	-	-	-	-	-	
DE Progress - Native Load Transfer	544,444,833	-	7,369,876	520,344,456	26,483,093	(2,382,715)
DE Progress - Native Load Transfer (Prior Period Adjust)	-	-	-	-	-	
DE Progress - Native Load Transfer Benefit	54,871,210	-	-	54,871,210	-	
DE Progress - Fees	(153,265)	-	-	-	(153,265)	
EDF Trading North America, LLC.	-	-	-	-	-	
Exelon Generation Company, LLC.	-	-	-	-	-	
Florida Power & Light Company	-	-	-	-	-	
Haywood Electric - Economic	958,305	242,809	6,962	439,537	275,958	
LGE/KU	785,194	-	14,077	635,117	150,077	
Lockhart Power Co.	-	-	-	-	-	
Macquarie Energy, LLC	51,250,548	-	486,963	35,216,637	16,033,911	
Midwest Independent System Operator	-	-	-	-	-	
Morgan Stanley Capital Group	72,600	-	1,100	58,110	14,490	
NCEMC	970,306	3,317	15,767	596,418	370,571	
NCMPA	14,524,190	-	220,006	9,314,124	5,210,066	
NCMPA Load Following Economic	37,141,682	-	465,009	21,929,915	15,211,767	
NTE Carolinas LLC	-	-	-	-	-	
Oglethorpe Power	-	-	-	-	-	
Piedmont Electric Membership Corp. - Economic	-	-	-	-	-	
Piedmont Municipal Power Agency	5,268,496	-	102,863	3,124,813	2,143,684	
PJM Interconnection, LLC.	14,064,189	-	192,441	8,698,896	5,365,294	
Rainbow Energy Marketing Corporation	-	-	-	-	-	
Rutherford Electric Membership Corp.	-	-	-	-	-	
South Carolina Electric & Gas Company / Dominion Energy	13,472	-	288	11,451	2,021	
Southern Company Services, Inc.	557,481	-	9,748	375,696	181,785	
Tennessee Valley Authority	5,408,020	-	84,497	3,467,042	1,940,978	
The Energy Authority	16,905	-	424	13,919	2,986	
Town of Dallas	-	-	-	-	-	
Town of Forest City	**$ 244,999**	**$ 244,999**	**-**	**$ -**	**$ -**	
Westar Energy, Inc.	$ -	$ -	-	$ -	$ -	
	734581242	275815.11	9111753	665668404.2	71019738.84	-2382715.37
Renewable Energy						
REPS	71,532,035	15,214,422	1,148,827	-	56,317,611	-
DERP - Purchased Power	4,025,008	268,474	69,800	-	2,739,889	1,016,646
DERP - Purchased Power - Pre HB589	$ -	$ -	-	$ -		$ -
DERP - Net Metered Generation	124,177.1400	0.0000	4,598.5974	0.0000		124,177.1400
	$ 75,681,220	15,482,895	1223226	$ -	$ 59,057,500	1,140,823
	ok	ok	ok		ok	
HB589 PURPA Purchases						
CPRE - Purchased Power	**$ 6,118,008**	**$ -**	**301,278**			**$ 6,118,008**

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Qualifying Facilities	**$ 44,602,804 OK**	**$ 9,369,818 OK**	**747,251**		**$ 34,126,582**	**1106408.62**
	$ 50,720,812	**$ 9,369,818**	**1,048,529**	**$ -**	**$ 34,126,582**	**7224417**
Non-dispatchable / Other						
Carolina Power & Light (DE Progress) - Emergency	$ 30,606	$ -	177	$ 26,015		$ 4,591
South Carolina Public Service Authority - Emergency	-	-	-	-		-
Blue Ridge Electric Membership Corp.	12,234,125	5,929,525	293,671	5,358,911		945,690
City of Concord	-	-	-	-		-
Cargill Power Marketers, LLC.	-	-	-	-		-
Carolina Power Partners, LLC	5,412,299	-	53,596	4,600,454		811,845
DE Progress - As Available Capacity	400,501	400,501	-	-		-
Exelon Generation Company, LLC.	-	-	-	-		-
Haywood Electric	2,184,429	978,976	45,858	1,024,635		180,818
Macquarie Energy, LLC	95,814,395	-	573,508	81,442,236		14,372,159
Morgan Stanley Capital Group	-	-	-	-		-
NCEMC - Other	9,311,412	36,488	51,330	7,883,685		1,391,239
NCMPA - Reliability	6,533,220	-	39,228	5,553,237		979,983
NTE Carolinas LLC	-	-	-	-		-
Piedmont Electric Membership Corp.	5,818,999	2,826,296	140,160	2,543,798		448,905
PJM Interconnection, LLC - Other	-	-	-	-		-
South Carolina Electric & Gas Company	-	-	-	-		-
Southern Company Services, Inc.	-	-	-	-		-
Tennesse Valley Authority	-	-	-	-		-
Generation Imbalance	9,288,793		69,713	6,023,880		3,264,913
Energy Imbalance - Purchases	2,954,691		(19,820)	2,284,580		670,111
Energy Imbalance - Sales	(7,911,557)		-	(7,181,724)		(729,833)
Qualifying Facilities - Pre HB589	-	-	-	-		-
Other Purchases	6,318	-	233	-		6,318
	$ 142,078,232	**$ 10,171,786**	**1,247,654**	**$ 109,559,706**	**$ -**	**$ 22,346,739**
Total Purchased Power	**$ 1,003,061,506**	**$ 35,300,314**	**12,631,162**	**$ 775,228,110**	**$ 164,203,821**	**$ 28,329,264**
						2
<u>Interchanges In</u>						
Other Catawba Joint Owners	73,411,183	-	7,683,448	45,957,871		27,453,312
WS Lee Joint Owner	27,399,050	-	421,179	25,673,117		1,725,933
Total Interchanges In	100,810,232	-	8,104,626	71,630,988	-	29,179,244
<u>Interchanges Out</u>						
Other Catawba Joint Owners	(72,945,394)	(1,580,207)	(7,598,655)	(45,548,810)		(25,816,377)
Catawba- Net Negative Generation	(452,734)	-	(13,562)	(391,439)		(61,295)
WS Lee Joint Owner	(26,616,561)	-	(411,650)	(24,785,151)		(1,831,410)
Total Interchanges Out	(100,014,689)	(1,580,207)	(8,023,867)	(70,725,400)	-	(27,709,082)
Net Purchases and Interchange Power	**$ 1,003,857,049**	**$ 33,720,107**	**12,711,921**	**$ 776,133,698**	**$ 164,203,821**	**$ 29,799,426**

NOTES: Detail amounts may not add to totals shown due to rounding.
CPRE purchased power amounts are recovered through the CPRE Rider.

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Clark Exhibit 6
Schedule 3 - Sales
Page 5 of 5

DUKE ENERGY CAROLINAS
INTERSYSTEM SALES*
SYSTEM REPORT - NORTH CAROLINA VIEW

Twelve Months Ended DEC 2022

Sales	Total $	Capacity $	Non-capacity mWh	Non-capacity Fuel $	Non-capacity Non-fuel $
Utilities:					
Midwest Independent System Operator - Emergency	-	-	-	-	-
DE Progress - Emergency	$ 106,271	-	1,150	$ 101,064	$ 5,207
SC Public Service Authority - Emergency	417,282	-	4,767	389,377	27,905
SC Electric & Gas / Dominion Energy - Emergency	522,805	-	3,020	2,283,300	(1,760,495)
Tennessee Valley Authority - Emergency	1,924,600	-	8,648	5,948,337	(4,023,737)
Market Based:					
Associated Electric Cooperative, Inc.	2,552	-	41	1,603	949
American Electric Power Services Corp.	-	-	-	-	-
Cargill-Alliant, LLC.	-	-	-	-	-
Carolina Power Partners, LLC	8,800	-	150	8,953	(153)
Central Electric Power Cooperative, Inc.	5,538,111	$ 5,267,000	3,450	265,640	5,471
Constellation Power Sources	-	-	-	-	-
EDF Trading Company	-	-	-	-	-
Evergy Kansas Central (BPM)	-	-	-	-	-
Exelon Generation Company, LLC.	-	-	-	-	-
Macquarie Energy, LLC	1,459,360	-	20,545	1,456,745	2,615
Midwest Independent System Operator	-	-	-	-	-
Morgan Stanley	-	-	-	-	-
NCEMC	-	-	-	-	-
NCEMC (Balancing/Generator)	-	-	-	-	-
NCMPA	1,764,061	1,050,000	6,341	686,859	27,202
Oglethorpe Power Corporation	-	-	-	-	-
PJM Interconnection, LLC.	16,952	-	200	13,976	2,976
SC Electric & Gas / Dominion Energy	209,983	-	1,382	147,017	62,966
South Carolina Electric & Gas - T	(4)	-	-	-	(4)
South Carolina Public Service Authority - T	(4)	-	-	-	(4)
Southern Company	112,627	-	1,409	136,190	(23,563)
Tenaska Power Service	-	-	-	-	-
Tennesse Valley Authority	5,926	-	90	3,948	1,978
The Energy Authority	83,368	-	1,474	62,119	21,250
Westar Energy	-	-	-	-	-
Other:					
Cargill-Alliant, LLC - Mitigation sales	-	-	-	-	-
DE Progress - Native Load Transfer Benefit	10,826,966	-	-	10,826,966	-
DE Progress - Native Load Transfer	98,082,917	17,512	1,104,079	96,983,455	1,081,950
Generation Imbalance	4,126,628	-	36,969	3,607,599	519,029
BPM Transmission	(289,990)	-	-	-	(289,990)
Total Intersystem Sales	**$ 124,919,210**	**$ 6,334,512**	**1,193,715**	**$ 122,923,146**	**$ (4,338,447)**

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Schedule 4
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Duke Energy Carolinas
(Over) / Under Recovery of Fuel Costs
Dec-22

Line No.			Residential	Commercial	Industrial	Total
1	Actual System kWh sales	Input				7,589,450,642
2	DERP Net Metered kWh generation	Input				10,675,770
3	Adjusted System kWh sales	L1 + L2				7,600,126,412
4	N.C. Retail kWh sales	Input	2,073,010,864	2,007,616,467	929,120,959	5,009,748,290
5	NC kWh sales % of actual system kWh sales	L4 T / L1				66.01%
6	NC kWh sales % of adjusted system kWh sales	L4 T / L3				65.92%
7	Approved fuel and fuel related rates (¢/kWh)					
	7a Billed rates by class (¢/kWh)	L7g	2.0003	1.8217	1.8396	1.8989
	7b Billed fuel expense	L7a * L4 / 100	$41,466,436	$36,572,749	$17,092,109	$95,131,294
	Rate changes:		Agrees to CY Rate	Agrees to CY Rate	Agrees to CY Rate	ate with Annual Fuel Filings.
	7c New approved rates	Input	2.0003	1.8217	1.8396	
	7d Ratio of days to rate	Input	100.00%	100.00%	100.00%	
	7e Prior approved rates	Input	1.5337	1.6895	1.7243	
	7f Ratio of days to rate	Input	$0	$0	$0	
	7g Total prorated ¢/KWH	(L7c * L7d) + (L7e * L7f)	2.0003	1.8217	1.8396	
8	Incurred base fuel and fuel related (¢/kWh) (less renewable purchased power capacity)					
	Allocation changes:					
	8a New approved Docket E-7, Sub 1263 allocation factor	Input	41.25%	38.34%	20.40%	ate with Annual Fuel Filings.
	8b System incurred expense	Input				$399,273,363
	8c Incurred base fuel and fuel related expense	L8b * L6 * 8a	$108,577,957	$100,915,104	$53,694,541	$263,187,602
	8d Incurred base fuel rates by class (¢/kWh)	L8c / L4 * 100	5.2377	5.0266	5.7791	5.2535
9	Incurred renewable purchased power capacity rates (¢/kWh)					
	9a NC retail production plant %	Input				0.6668
	9b Production plant allocation factors	Input	$0	$0	$0	$1
	9c System incurred expense	Input				1,076,540
	9d Incurred renewable capacity expense	L9a * L9b * L9c	337,710	266,619	113,521	717,851
	9e Incurred renewable capacity rates by class (¢/kWh)	((L9a * L9c) * L9b) / L4 * 100	$0	$0	$0	$0
10	Total incurred rates by class (¢/kWh)	L8h + 9e	$5	$5	$6	$5
11	Difference in ¢/kWh (incurred - billed)	L10 - L7a	$3	$3	$4	3
12	(Over) / under recovery [See footnote]	(L4 * L11) / 100	$67,449,231	$64,608,974	$36,715,953	$168,774,159
13	Prior period adjustments	Input	$ 6,221,166	$ 7,287,649	$ 3,743,576	$ 17,252,391
14	Total (over) / under recovery	L12 + L13	$ 73,670,398	$ 71,896,623	$ 40,459,529	$ 186,026,550
15	Total system incurred expense	L8f + L9c				$ 400,349,903
16	Less: Jurisdictional allocation adjustment(s)	Input				$ 261,597
17	Total Fuel and Fuel-related Costs per Schedule 2	L15 + L16				$ 400,088,306

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Schedule 4
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	Year 2022	(Over) / Under Recovery Total To Date	Residential	Commercial	Industrial	Total Company
	January	$82,008,235	$24,579,060	$37,771,442	$19,657,733	$82,008,235
	February	$143,232,306	$15,631,479	$30,077,232	$15,515,360	$61,224,071
_/1	March	$159,861,094	$5,165,674	$9,269,996	$2,193,118	$16,628,788
	April	$181,992,930	$10,365,435	$8,725,608	$3,040,792	$22,131,835
_/1	May	$264,210,240	$31,901,319	$34,049,947	$16,266,045	$82,217,311
	June	$379,971,976	$41,213,673	$49,730,332	$24,817,731	$115,761,736
	July	$526,297,892	$49,270,398	$63,835,167	$33,220,351	$146,325,916
	August	$711,811,535	$62,764,654	$80,234,867	$42,514,122	$185,513,643
	September	796,532,236	$39,079,834	$28,198,709	$17,442,158	$84,720,701
	October	823,675,629	$17,397,939	$6,414,818	$3,330,636	$27,143,393
	November	$895,004,007	34,559,470	24,589,863	12,179,045	$71,328,378
	December	$1,081,030,557	$73,670,398	$71,896,623	$40,459,529	$186,026,550
			$405,599,335	$444,794,603	$230,636,622	$1,081,030,557

Notes:
Detail amounts may not recalculate due to percentages presented as rounded.
Presentation of over or under collected amounts reflects a regulatory asset or liability. Over collections, or regulatory liabilities, are shown as negative amounts.
Under collections, or regulatory assets, are shown as positive amounts.
Includes prior period adjustments.
_/1 Reflects a prorated rate and prorated allocation factor for periods in which the approved rates changed.

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DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED COST REPORT
December 2022

Description	Buck	Dan River	Lee	Clemson	Lee	Lincoln	(A) Lincoln (Unit17)	Mill Creek	Rockingham
	CC	CC	CC	CHP	Steam/CT	CT	CT	CT	CT
Cost of Fuel Purchased ($)									
Coal									
Oil	-	-	-		581,554	-	-	4,046,679	4,504,834
Gas - CC	$40,036,410	$38,694,262	$221,226						
Gas - CHP				$1,290,155					
Gas - CT					$339,173	$1,752,935	$247	$1,301,300	$8,157,569
Gas - Steam					-				
Biogas	-	379,200	-						
Total	$40,036,410	$39,073,462	$221,226	$1,290,155	$920,726	$1,752,935	$247	$5,347,979	$12,662,402
Average Cost of Fuel Purchased (¢/MBTU)									
Coal		-							
Oil					2,568.26	-	-	2,253.14	2,410.28
Gas - CC	1,210.54	1,211.01	2,080.56						
Gas - CHP				1,297.62					
Gas - CT					1,277.34	1,215.43	(1,129.41)	1,212.99	1,217.66
Gas - Steam					-				
Biogas	-	2,595.49	-						
Weighted Average	1,210.54	1,217.31	2,080.56	1,297.62	1,871.51	1,215.43	(1,129.41)	1,864.18	1,477.81
Cost of Fuel Burned ($)									
Coal		-	-		-				
Oil - CC	-	-	-						
Oil - Steam/CT					$288,821	4,242,357	-	5,012,521	4,035,727
Gas - CC	$40,036,410	$38,694,262	$221,226						
Gas - CHP				$1,290,155					
Gas - CT					339,173	$1,752,935	$247	$1,301,300	$8,157,569
Gas - Steam					-				
Biogas	-	379,200	-						
Nuclear									
Total	$40,036,410	$39,073,462	$221,226	$1,290,155	$627,994	$5,995,292	$247	$6,313,821	$12,193,296
Average Cost of Fuel Burned (¢/MBTU)									
Coal					-				
Oil - CC									
Oil - Steam/CT					1,751.81	1,517.46	-	1,952.52	1,856.01
Gas - CC	1,210.54	1,211.01	2,080.56						
Gas - CHP				1,297.62					
Gas - CT					1,277.34	1,215.43	(1,129.41)	1,212.99	1,217.66
Gas - Steam					-				
Biogas	-	2,595.49	-						
Nuclear									
Weighted Average	1,210.54	1,217.31	2,080.56	1,297.62	1,459.09	1,414.68	(1,129.41)	1,734.56	1,374.08
Average Cost of Generation (¢/kWh)									
Coal		-	-		-	-	-		
Oil - CC	-	-	-						
Oil - Steam/CT		-	-		17.56	12.13	-	23.53	20.14
Gas - CC	8.53	8.51	-						
Gas - CHP				18.05					
Gas - CT					12.54	291,185.15	-	14.61	12.95
Gas - Steam					-	-	-	-	-
Biogas	-	18.23	-						
Nuclear									
Weighted Average	8.53	8.55	-	18.05	14.44	17.14	-	20.90	14.68
Burned MBTU's									
Coal					-				
Oil - CC									
Oil - Steam/CT					16,487	279,569	-	256,721	217,441
Gas - CC	3,307,314	3,195,214	10,633						
Gas - CHP				99,425					
Gas - CT					26,553	144,223	(22)	107,280	669,936
Gas - Steam					-				
Biogas	-	14,610	-						
Nuclear									
Total	3,307,314	3,209,824	10,633	99,425	43,040	423,792	(22)	364,001	887,377
Net Generation (mWh)									
Coal									
Oil - CC									
Oil - Steam/CT		-	-		1,644	34,986	-	21,307	20,035
Gas - CC	469,549	454,840	(1,260)		-				
Gas - CHP				7,147					
Gas - CT					2,705	1	(523)	8,908	63,001
Gas - Steam					-				
Biogas	-	2,080	-						
Nuclear 100%									
Hydro (Total System)									
Solar (Total System)									
Total	469,549	456,920	(1,260)	7,147	4,349	34,987	(523)	30,215	83,036
Cost of Reagents Consumed ($)									
Ammonia	$48,324	$0	$6,766						
Limestone									
Sorbents									
Urea									
Re-emission Chemical									
Dibasic Acid									
Activated Carbon									
Lime (water emissions)									
Total	$48,324	$0	$6,766						

Notes:
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
Detail amounts may not add to totals shown due to rounding.
Data is reflected at 100% ownership.
Schedule excludes in-transit and terminal activity.
Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.
Re-emission chemical reagent expense is not recoverable in NC.
Lime (water emissions) expense is not recoverable in SC fuel clause.

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DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED COST REPORT
December 2022

Description	Allen	Marshall	Belews Creek	Cliffside	Catawba	McGuire	Retail	onee	Current Month
	Steam	Steam - Dual Fuel	Steam - Dual Fuel	Steam - Dual Fuel	Nuclear	Nuclear		Nuclear	
Cost of Fuel Purchased ($)									
Coal	$8,397	$22,275,183	$13,005,647	$4,159,826					39449052.41
Oil	-	-	43,134	195,355					9371554.83
Gas - CC									78951896.85
Gas - CHP									1290154.86
Gas - CT									11551223.21
Gas - Steam		23,192,605	89,015,098	27,562,204					139769906.7
Biogas									379200.4585
Total	$8,397	$45,467,788	$102,063,879	$31,917,385					280762989.3
Average Cost of Fuel Purchased (¢/MBTU)									
Coal	-	556.38	405.58	529.76					493.39
Oil	-	-	2,094.23	2,358.10					2345.876765
Gas - CC									1212.190124
Gas - CHP									1297.616153
Gas - CT									1218.467781
Gas - Steam		1,212.83	1,212.32	1,219.81					1213.873974
Biogas				.					2595.485685
Weighted Average	-	768.58	967.31	1,045.42					1021.532064
Cost of Fuel Burned ($)									
Coal	$0	$20,049,558	$15,376,945	$9,856,536					45283038.68
Oil - CC									0
Oil - Steam/CT	-	2,092	-	203,154			-		13784673.86
Gas - CC									78951896.85
Gas - CHP									1290154.86
Gas - CT							-		11551223.21
Gas - Steam		23,192,605	89,015,098	27,562,204					139769906.7
Biogas									379200.4585
Nuclear					$9,964,761	$9,371,945			29753844.93
Total	$0	$43,244,255	$104,392,043	$37,621,894	$9,964,761	$9,371,945	$0 #		320763940
Average Cost of Fuel Burned (¢/MBTU)									
Coal	-	418.68	345.25	368.79					380.0415591
Oil - CC									0
Oil - Steam/CT	-	1,442.88	-	2,545.79			-		1771.028179
Gas - CC									1212.190124
Gas - CHP									1297.616153
Gas - CT							-		1218.467781
Gas - Steam		1,212.83	1,212.32	1,219.81					1213.873974
Biogas									2595.485685
Nuclear					57.13	53.27			54.49758916
Weighted Average	-	645.32	884.95	761.55	57.13	53.27	-		371.3414283
Average Cost of Generation (¢/kWh)									
Coal	-	4.02	3.37	3.57					3.690582692
Oil - CC									-
Oil - Steam/CT	-	13.67	-	23.16			-		17.47873714
Gas - CC									8.552637244
Gas - CHP									18.05169806
Gas - CT							-		15.59056553
Gas - Steam		11.10	11.18	11.55					11.24170747
Biogas									18.2330654
Nuclear					0.57	0.53			0.542338098
Weighted Average	-	6.11	8.34	7.29	0.57	0.53			3.472252469
Burned MBTU's									
Coal	-	4,788,789	4,453,853	2,672,644					11915286
Oil - CC									0
Oil - Steam/CT	-	145	-	7,980			-		778343
Gas - CC									6513161.2
Gas - CHP									99425
Gas - CT							-		947970
Gas - Steam		1,912,266	7,342,548	2,259,553					11514367.2
Biogas									14610
Nuclear					17,441,277	17,594,902			54596626
Total	-	6,701,200	11,796,401	4,940,177	17,441,277	17,594,902	-		86379788.4
Net Generation (mWh)									
Coal	(3,652)	498,367	455,930	276,344					1226988.865
Oil - CC									0
Oil - Steam/CT	-	15	-	877			-		78865.388
Gas - CC									923129.2594
Gas - CHP									7147
Gas - CT							-		74091.111
Gas - Steam		208,863	795,860	238,593					1243315.636
Biogas									2079.740571
Nuclear 100%					1,755,875	1,777,031			5486217
Hydro (Total System)									180912.503
Solar (Total System)									15173.19
Total	(3,652)	707,245	1,251,790	515,814	1,755,875	1,777,031	-		9237921
Cost of Reagents Consumed ($)									
Ammonia			$1,573,130	$112,122					1740341.44
Limestone	$0	$463,125	669,388	417,704					1550217.58
Sorbents	-	135,320	-						135319.92
Urea	-	135,168							135167.6
Re-emission Chemical	-	-	-	-					0
Dibasic Acid	-								0
Activated Carbon	19,413	-							19413
Lime (water emissions)	-	-	-						0
Total	19,413	733,613	$2,242,518	$529,827					3580459.54

Notes:
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
Detail amounts may not add to totals shown due to rounding.
Data is reflected at 100% ownership.
Schedule excludes in-transit and terminal activity.
Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.
Re-emission chemical reagent expense is not recoverable in NC.
Lime (water emissions) expense is not recoverable in SC fuel clause.

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Clark Exhibit 6
Schedule 6

DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED CONSUMPTION AND INVENTORY REPORT
December 2022

Description	Buck	Dan River	Lee	Clemson	Lee	Lincoln	(A) Lincoln (Unit17)	Mill Creek	Rockingham	Allen	Marshall	Belews Creek	Cliffside	Current Month	Total 12 ME December 2022
	CC	CC	CC	CHP	Steam/CT	CT	CT	CT	CT	Steam	Steam - Dual Fuel	Steam - Dual Fuel	Steam - Dual Fuel		
Coal Data:															
Beginning balance					-					74,257	942,182	1,063,230	560,022	2,639,691	2,249,850.29
Tons received during period										-	160,876	126,317	34,519	321,712	3,321,481.00
Inventory adjustments					-					-	-	-	-	-	87,264.42
Tons burned during period					-					-	188,294	175,590	106,421	470,305	3,167,498.27
Ending balance					-					74,257	914,764	1,013,957	488,120	2,491,098	2,491,097.54
MBTUs per ton burned					-					-	25.43	25.37	25.11	25.34	25.14
Cost of ending inventory ($/ton)					-					76.97	106.48	87.57	92.62	95.19	95.19
Oil Data:															
Beginning balance	-	-	-		676,615	8,412,634	815,389	2,345,685	2,482,428	97,085	278,522	19,411	189,712	15,317,480	17,610,506
Gallons received during period	-	-	-		164,086	-	-	1,301,461	1,354,355	-	-	14,925	60,032	2,894,859	4,430,957
Miscellaneous adjustments	-	-	-		-	-	-	-	-	-	-	(12,217)	(7,796)	(18,962)	(283,590)
Gallons burned during period		-	-		119,913	2,024,251	-	1,863,711	1,584,733	-	1,055	-	57,940	5,652,654	9,217,150
Ending balance	-	-	-		720,788	6,388,383	815,389	1,783,435	2,252,050	97,085	277,467	22,119	184,008	12,540,723	12,540,723
Cost of ending inventory ($/gal)	-	-	-		2.41	2.10	2.40	2.69	2.55	3.67	1.98	2.92	3.51	2.33	2.33
Natural Gas Data:															
Beginning balance															
MCF received during period	3,201,724	3,078,374	10,314	96,396	25,719	139,785	(21)	103,973	645,289		1,854,024	7,076,232	2,186,597	18,418,406	245,725,869
MCF burned during period	3,201,724	3,078,374	10,314	96,396	25,719	139,785	(21)	103,973	645,289		1,854,024	7,076,232	2,186,597	18,418,406	245,725,869
Ending balance															
Biogas Data:															
Beginning balance															
MCF received during period	-	14,075	-											14,075	125,074
MCF burned during period	-	14,075	-											14,075	125,074
Ending balance															
Limestone Data:															
Beginning balance										17,697	69,262	39,265	31,093	157,316	158,739
Tons received during period										-	-	-	-	-	163,156
Inventory adjustments										-	-	-	-	-	(9,121)
Tons consumed during period										-	10,150	11,833	7,544	29,527	184,984
Ending balance										17,697	59,112	27,432	23,549	127,789	127,789
Cost of ending inventory ($/ton)										55.11	45.63	55.25	47.15	49.29	49.29
														Qtr Ending December 2022	Total 12 ME December 2022
Ammonia Data: (B)															
Beginning balance	3,836													3,836	2,761
Tons received during period	925													925	5,319
Tons consumed during period	1,127													1,127	4,446
Ending balance	3,634													3,634	3,634
Cost of ending inventory ($/ton)	339.09													339.09	339.09

Notes:
Detail amounts may not add to totals shown due to rounding.
Schedule excludes in-transit and terminal activity.
Gas is burned as received; therefore, inventory balances are not maintained.
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
(B) Quarterly ammonia inventory amounts are revised to reflect a correction to June quantities, affecting the quarter ending September 2021 beginning balance. Revised amounts for quarter ending June 2021 are revised above.

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Schedule 7

DUKE ENERGY CAROLINAS
ANALYSIS OF COAL PURCHASED
'December 2022

STATION	TYPE	QUANTITY OF TONS DELIVERED	DELIVERED COST	DELIVERED COST PER TON
ALLEN	SPOT	-	$ -	$ -
	CONTRACT	-	7,786	-
	FUEL MANAGEMENT AGREEMENT		(7,786)	
	FIXED TRANSPORTATION / ADJUSTMENTS	-	8,397	-
	TOTAL	0	8,397	-
BELEWS CREEK	SPOT	-	-	-
	CONTRACT	126,317	11,773,259	93.20
	FUEL MANAGEMENT AGREEMENT		814,231	
	FIXED TRANSPORTATION / ADJUSTMENTS	-	418,157	-
	TOTAL	126,317	13,005,647	102.96
BUCK	SPOT	-	-	-
CLIFFSIDE	SPOT	-	-	-
	CONTRACT	34,519	3,969,974	115.01
	FUEL MANAGEMENT AGREEMENT			
	FIXED TRANSPORTATION / ADJUSTMENTS	-	189,852	-
	TOTAL	34,519	4,159,826	120.51
	TOTAL	-	-	-
MARSHALL	SPOT	60,317	11,977,372	198.57
	CONTRACT	100,559	11,121,036	110.59
	FUEL MANAGEMENT AGREEMENT		(1,413,676)	
	FUEL MANAGEMENT AGREEMENT			
	FIXED TRANSPORTATION / ADJUSTMENTS	-	-	-
	TOTAL	-	(0)	-

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Clark Exhibit 6
Schedule 8

DUKE ENERGY CAROLINAS
ANALYSIS OF COAL QUALITY RECEIVED
December 2022

STATION	PERCENT MOISTURE	PERCENT ASH	HEAT VALUE	PERCENT SULFUR
ALLEN	-	-	-	-
BELEWS CREEK	6.68	9.63	12,693	1.84
CLIFFSIDE	13.99	8.16	11,374	1.99
LEE	-	-	-	-
MARSHALL	7.56	9.61	12,443	1.39

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Clark Exhibit 6
Schedule 9

DUKE ENERGY CAROLINAS
ANALYSIS OF OIL PURCHASED
DECEMBER 2022

	ALLEN	BELEWS CREEK
VENDOR	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract
SULFUR CONTENT %	-	-
GALLONS RECEIVED	-	14,925
TOTAL DELIVERED COST	$ -	$ 43,134
DELIVERED COST/GALLON	$ -	$ 2.89
BTU/GALLON	138,000	138,000

	CLIFFSIDE	MARSHALL
VENDOR	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract
SULFUR CONTENT %	-	-
GALLONS RECEIVED	60,032	-
TOTAL DELIVERED COST	$ 195,355	$ -
DELIVERED COST/GALLON	$ 3.25	$ -
BTU/GALLON	138,000	138,000

	LEE	MILL CREEK	ROCKINGHAM
VENDOR	HighTowers	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract	Contract
SULFUR CONTENT %	-	-	-
GALLONS RECEIVED	164,086	1,301,461	1,354,355
TOTAL DELIVERED COST	$ 581,554	$ 4,046,679	$ 4,504,834
DELIVERED COST/GALLON	$ 3.54	$ 3.11	$ 3.33
BTU/GALLON	138,000	138,000	138,000

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Duke Energy Carolinas Base Load Power Plant Performance Review Plan

Report Period: December 2022 - December 2022

Station	Unit	Date of Outage	Duration of Outage (Hours)	Scheduled / Unscheduled	Cause of Outage	Reason Outage Occurred	Remedial Actions Taken
Oconee	1						
	2						
	3						
McGuire	1						
	2						
Catawba	1						
	2						

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022

Belews Creek Station

No Outages at Baseload Units During the Month.

Buck Combined Cycle Station

No Outages at Baseload Units During the Month.

Clemson CHP

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1	12/12/2022 8:13:00 AM To 12/21/2022 7:52:00 AM	Sch	3999	Other miscellaneous balance of plant problems	Planned outage to repair duct work damage.	
1	12/24/2022 7:59:00 AM To 12/24/2022 3:05:00 PM	Unsch	5041	Fuel piping and valves	Gas Turbine trip due to reduced gas pressure from Fort Hill.	

Dan River Combined Cycle Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
9	12/23/2022 11:51:00 PM To 12/24/2022 1:56:00 AM	Unsch	1740	Boiler drum gage glasses / level indicator	HRSG 9 LP Drum Level Transmitters froze and lost indication on the Drum level transmitters.	
9	12/24/2022 1:56:00 AM To 12/25/2022 12:08:00 AM	Unsch	5016	High pressure compressor bleed valves	Started the GT9 and unit failed to start due to a faulty Compressor Blead valve switch.	

Marshall Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
4	12/2/2022 10:55:00 PM To 12/9/2022 9:53:00 PM	Sch	8140	Reaction tanks including agitators	Maintenance outage to repair leaking reaction tank agitators "A" and "E".	
4	12/30/2022 2:56:00 PM To 12/31/2022 11:59:00 PM	Sch	0920	Other slag and ash removal problems	Clinker Removal from Bottom Ash Hopper.	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022

WS Lee Combined Cycle

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
WS Lee CC ST 10	11/3/2022 3:34:00 AM To 12/11/2022 3:07:00 AM	Sch	4640	Seal oil system and seals	Generator inspection.	
WS Lee CC ST 10	12/11/2022 3:07:00 AM To 12/31/2022 11:59:00 PM	Unsch	4410	Turning gear and motor	Fire damage discovered in the ST compartment.	
WS Lee CC GT 11	11/3/2022 3:48:00 AM To 12/10/2022 8:44:00 AM	Sch	5272	Boroscope inspection	Gas turbine 11 borscope inspection.	
WS Lee CC GT 11	12/10/2022 8:56:00 AM To 12/10/2022 7:19:00 PM	Sch	1740	Boiler drum gage glasses / level indicator	Test fired unit coming out of PO. (HRSG drum levels)	
WS Lee CC GT 11	12/11/2022 3:07:00 AM To 12/31/2022 11:59:00 PM	Unsch	4410	Turning gear and motor	Fire damage in the ST compartment.	
WS Lee CC GT 12	11/3/2022 3:47:00 AM To 12/10/2022 3:55:00 PM	Sch	5260	Major overhaul (use for non-specific overhaul only; see page B-CCGT-2)	GT12 HGP overhaul.	
WS Lee CC GT 12	12/10/2022 5:05:00 PM To 12/11/2022 3:07:00 AM	Sch	5048	Gas fuel system including controls and instrumentation	Unit testing coming out of outage - (ACDMS not available for tuning).	
WS Lee CC GT 12	12/11/2022 3:07:00 AM To 12/31/2022 11:59:00 PM	Unsch	4410	Turning gear and motor	Fire damage located in the ST compartment.	

Notes:

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- Data is reflected at 100% ownership.

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Duke Energy Carolinas Base Load Power Plant Performance Review Plan
Report Period: December 2022

	Oconee 1	Oconee 2	Oconee 3	McGuire 1	McGuire 2	Catawba 1	Catawba 2
(A) MDC (MW)	847	848	859	1158	1158	1160	1150
(B) Period Hours	744	744	744	744	744	744	744
(C1) Net Gen (MWH)	647,998	651,793	653,520	889,246	887,785	880,020	875,855
(C2) Capacity Factor (%)	102.83	103.31	102.26	103.21	103.04	101.97	102.37
(D1) Net MWH Not Gen. Due to Full Schedule Outages	0	0	0	0	0	0	0
(D2) % Net MWH Not Gen. Due to Full Schedule Outages	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(E1) Net MWH Not Gen. Due to Partial Scheduled Outages	0	0	0	0	0	0	0
(E2) % Net MWH Not Gen. Due to Partial Scheduled Outages	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(F1) Net MWH Not Gen Due to Full Forced Outages	0	0	0	0	0	0	0
(F2) % Net MWH Not Gen Due to Full Forced Outages	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(G1) Net MWH Not Gen due to Partial Forced Outages	-17,830	-20,881	-14,424	-27,694	-26,233	-16,980	-20,255
(G2) % Net MWH Not Gen Due to Partial Forced Outages	-2.83	-3.31	-2.26	-3.21	-3.04	-1.97	-2.37
(H1) Net MWH Not Gen Due to Economic Dispatch	0	0	0	0	0	0	0
(H2) %Net MWH Not Gen Due to Economic Dispatch	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(I1) Core Conservation	0	0	0	0	0	0	0
(I2) % Core Conservation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(J1) Net MWH Possible in Period	630,168	630,912	639,096	861,552	861,552	863,040	855,600
(J2) % Net mwh Possible in Period	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
(K) Equivalent Availability (%)	100	100	100	100	100	100	100
(L) Output Factor (%)	102.83	103.31	102.26	103.21	103.04	101.97	102.37
(M) Heat Rate (BTU/Net KWH)	10,060	10,004	9,978	9,893	9,909	9,993	9,873

Notes:
1) Fields (E1), (E2), (G1), (G2), (H1), (H2), (I1) and (I2) are estimates
2) Fields (D1), (D2), (F1) and (F2) include ramping losses
EAF is calculated using Standard NERC calculation and excludes OMC events

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Belews Creek Station

	Unit 1	Unit 2
(A) MDC (mW)	1,110	1,110
(B) Period Hrs	744	744
(C) Net Generation (mWh)	595,517	656,273
(D) Capacity Factor (%)	72.11	79.47
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	61,727	44,766
(H) Scheduled Derates: percent of Period Hrs	7.47	5.42
(I) Net mWh Not Generated due to Full Forced Outages	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	38,639	0
(L) Forced Derates: percent of Period Hrs	4.68	0.00
(M) Net mWh Not Generated due to Economic Dispatch	129,957	124,801
(N) Economic Dispatch: percent of Period Hrs	15.74	15.11
(O) Net mWh Possible in Period	825,840	825,840
(P) Equivalent Availability (%)	87.85	94.58
(Q) Output Factor (%)	72.11	79.47
(R) Heat Rate (BTU/NkWh)	9,723	9,803

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Buck Combined Cycle Station

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	206	206	306	718
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	135,615	135,779	198,155	469,549
(D) Capacity Factor (%)	88.48	88.59	87.04	87.90
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	636	636
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.28	0.12
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	152	152	3,216	3,521
(L) Forced Derates: percent of Period Hrs	0.10	0.10	1.41	0.66
(M) Net mWh Not Generated due to Economic Dispatch	17,497	17,333	25,656	60,486
(N) Economic Dispatch: percent of Period Hrs	11.42	11.31	11.27	11.32
(O) Net mWh Possible in Period	153,264	153,264	227,664	534,192
(P) Equivalent Availability (%)	99.90	99.90	98.31	99.22
(Q) Output Factor (%)	88.48	88.59	87.04	87.90
(R) Heat Rate (BTU/NkWh)	10,371	10,176	2,649	7,056

Notes:

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- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Clemson CHP

	Clemson CHP1
(A) MDC (mW)	16
(B) Period Hrs	744
(C) Net Generation (mWh)	7,147
(D) Capacity Factor (%)	61.98
(E) Net mWh Not Generated due to Full Scheduled Outages	3,343
(F) Scheduled Outages: percent of Period Hrs	28.99
(G) Net mWh Not Generated due to Partial Scheduled Outages	0
(H) Scheduled Derates: percent of Period Hrs	0.00
(I) Net mWh Not Generated due to Full Forced Outages	110
(J) Forced Outages: percent of Period Hrs	0.95
(K) Net mWh Not Generated due to Partial Forced Outages	0
(L) Forced Derates: percent of Period Hrs	0.00
(M) Net mWh Not Generated due to Economic Dispatch	932
(N) Economic Dispatch: percent of Period Hrs	8.09
(O) Net mWh Possible in Period	11,532
(P) Equivalent Availability (%)	70.06
(Q) Output Factor (%)	88.46
(R) Heat Rate (BTU/NkWh)	13,906

Notes:

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- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Dan River Combined Cycle Station

	Unit 8	Unit 9	Unit ST07	Block Total
(A) MDC (mW)	206	206	308	720
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	131,290	127,576	198,054	456,920
(D) Capacity Factor (%)	85.66	83.24	86.43	85.30
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	0	0
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(I) Net mWh Not Generated due to Full Forced Outages	0	5,002	0	5,002
(J) Forced Outages: percent of Period Hrs	0.00	3.26	0.00	0.93
(K) Net mWh Not Generated due to Partial Forced Outages	457	457	5,331	6,246
(L) Forced Derates: percent of Period Hrs	0.30	0.30	2.33	1.17
(M) Net mWh Not Generated due to Economic Dispatch	21,517	20,229	25,767	67,512
(N) Economic Dispatch: percent of Period Hrs	14.04	13.20	11.24	12.60
(O) Net mWh Possible in Period	153,264	153,264	229,152	535,680
(P) Equivalent Availability (%)	99.70	96.44	97.67	97.90
(Q) Output Factor (%)	85.66	86.05	86.43	86.10
(R) Heat Rate (BTU/NkWh)	10,567	10,487	2,708	7,138

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Marshall Station

	Unit 3	Unit 4
(A) MDC (mW)	658	660
(B) Period Hrs	744	744
(C) Net Generation (mWh)	358,385	297,208
(D) Capacity Factor (%)	73.21	60.53
(E) Net mWh Not Generated due to Full Scheduled Outages	0	132,020
(F) Scheduled Outages: percent of Period Hrs	0.00	26.89
(G) Net mWh Not Generated due to Partial Scheduled Outages	6,231	0
(H) Scheduled Derates: percent of Period Hrs	1.27	0.00
(I) Net mWh Not Generated due to Full Forced Outages	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	5,409	0
(L) Forced Derates: percent of Period Hrs	1.10	0.00
(M) Net mWh Not Generated due to Economic Dispatch	119,527	61,812
(N) Economic Dispatch: percent of Period Hrs	24.42	12.59
(O) Net mWh Possible in Period	489,552	491,040
(P) Equivalent Availability (%)	97.62	73.11
(Q) Output Factor (%)	73.21	82.78
(R) Heat Rate (BTU/NkWh)	9,494	9,365

Notes:

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- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
WS Lee Combined Cycle

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	248	248	313	809
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	-376	-884	0	-1,260
(D) Capacity Factor (%)	0.00	0.00	0.00	-0.21
(E) Net mWh Not Generated due to Full Scheduled Outages	58,307	60,004	76,097	194,407
(F) Scheduled Outages: percent of Period Hrs	31.60	32.52	32.68	32.30
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	0	0
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(I) Net mWh Not Generated due to Full Forced Outages	124,218	124,218	156,775	405,212
(J) Forced Outages: percent of Period Hrs	67.32	67.32	67.32	67.32
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	0	1,174	0	1,174
(N) Economic Dispatch: percent of Period Hrs	0.00	0.64	0.00	0.20
(O) Net mWh Possible in Period	184,512	184,512	232,872	601,896
(P) Equivalent Availability (%)	0.00	0.00	0.00	0.38
(Q) Output Factor (%)	0.00	0.00	0.00	-55.41
(R) Heat Rate (BTU/NkWh)	0	0	0	-14,135

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Intermediate Power Plant Performance Review Plan
December 2022

		Cliffside Station
		Cliffside 6
(A)	**MDC (mW)**	849
(B)	**Period Hrs**	744
(C)	**Net Generation (mWh)**	427,074
(D)	**Net mWh Possible in Period**	631,656
(E)	**Equivalent Availability (%)**	79.65
(F)	**Output Factor (%)**	84.32
(G)	**Capacity Factor (%)**	67.61

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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Duke Energy Carolinas
Peaking Power Plant Performance Review Plan
December 2022

		Cliffside Station
		Unit 5
(A)	MDC (mW)	546
(B)	Period Hrs	744
(C)	Net Generation (mWh)	88,740
(D)	Net mWh Possible in Period	406,224
(E)	Equivalent Availability (%)	95.43
(F)	Output Factor (%)	68.09
(G)	Capacity Factor (%)	21.85

Notes:

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Duke Energy Carolinas Base Load Power Plant Performance Review Plan
Report Period: January 2022 - December 2022

	Oconee 1	Oconee 2	Oconee 3	McGuire 1	McGuire 2	Catawba 1	Catawba 2
(A) MDC (MW)	847	848	859	1158	1158	1160	1150
(B) Period Hours	8,760	8,760	8,760	8,760	8,760	8,760	8,760
(C1) Net Gen (MWH)	6,988,171	7,123,871	7,013,087	9,221,671	10,228,639	10,277,595	8,685,269
(C2) Capacity Factor (%)	94.18	95.9	93.2	90.91	100.83	101.14	86.21
(D1) Net MWH Not Gen. Due to Full Schedule Outages	544,917	0	486,752	805,968	0	0	1,159,200
(D2) % Net MWH Not Gen. Due to Full Schedule Outages	7.34	0.00	6.47	7.95	0.00	0.00	11.51
(E1) Net MWH Not Gen. Due to Partial Scheduled Outages	20,893	2,936	98,689	51,931	0	1,094	42,417
(E2) % Net MWH Not Gen. Due to Partial Scheduled Outages	0.28	0.04	1.31	0.51	0.00	0.01	0.42
(F1) Net MWH Not Gen Due to Full Forced Outages	0	443,928	0	227,682	111,593	0	259,478
(F2) % Net MWH Not Gen Due to Full Forced Outages	0.00	5.98	0.00	2.24	1.10	0.00	2.58
(G1) Net MWH Not Gen due to Partial Forced Outages	-134,261	-142,255	-73,688	-163,172	-196,152	-117,089	-72,364
(G2) % Net MWH Not Gen Due to Partial Forced Outages	-1.80	-1.92	-0.98	-1.61	-1.93	-1.15	-0.72
(H1) Net MWH Not Gen Due to Economic Dispatch	0	0	0	0	0	0	0
(H2) %Net MWH Not Gen Due to Economic Dispatch	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(I1) Core Conservation	0	0	0	0	0	0	0
(I2) % Core Conservation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(J1) Net MWH Possible in Period	7,419,720	7,428,480	7,524,840	10,144,080	10,144,080	10,161,600	10,074,000
(J2) % Net mwh Possible in Period	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
(K) Equivalent Availability (%)	92.38	93.81	92.16	89.24	98.76	99.99	85.38
(L) Output Factor (%)	101.65	101.99	99.64	101.22	101.96	101.14	100.25
(M) Heat Rate (BTU/Net KWH)	10,148	10,114	10,091	10,005	10,003	10,073	10,033

Notes:
1) Fields (E1), (E2), (G1), (G2), (H1), (H2), (I1) and (I2) are estimates
2) Fields (D1), (D2), (F1) and (F2) include ramping losses
EAF is calculated using Standard NERC calculation and excludes OMC events

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Belews Creek Station

	Unit 1	Unit 2
(A) MDC (mW)	1,110	1,110
(B) Period Hrs	8,760	8,760
(C) Net Generation (mWh)	5,464,278	3,779,808
(D) Capacity Factor (%)	56.20	38.87
(E) Net mWh Not Generated due to Full Scheduled Outages	682,961	1,672,770
(F) Scheduled Outages: percent of Period Hrs	7.02	17.20
(G) Net mWh Not Generated due to Partial Scheduled Outages	82,895	84,005
(H) Scheduled Derates: percent of Period Hrs	0.85	0.86
(I) Net mWh Not Generated due to Full Forced Outages	687,179	2,163,967
(J) Forced Outages: percent of Period Hrs	7.07	22.25
(K) Net mWh Not Generated due to Partial Forced Outages	251,493	60,684
(L) Forced Derates: percent of Period Hrs	2.59	0.62
(M) Net mWh Not Generated due to Economic Dispatch	2,554,795	1,962,366
(N) Economic Dispatch: percent of Period Hrs	26.27	20.18
(O) Net mWh Possible in Period	9,723,600	9,723,600
(P) Equivalent Availability (%)	82.47	59.05
(Q) Output Factor (%)	65.99	65.86
(R) Heat Rate (BTU/NkWh)	9,021	9,783

Notes:

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Buck Combined Cycle Station

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	206	206	306	718
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,406,294	1,403,629	2,056,915	4,866,838
(D) Capacity Factor (%)	77.93	77.78	76.73	77.38
(E) Net mWh Not Generated due to Full Scheduled Outages	127,024	132,116	189,644	448,783
(F) Scheduled Outages: percent of Period Hrs	7.04	7.32	7.07	7.14
(G) Net mWh Not Generated due to Partial Scheduled Outages	115,863	114,594	18,320	248,777
(H) Scheduled Derates: percent of Period Hrs	6.42	6.35	0.68	3.96
(I) Net mWh Not Generated due to Full Forced Outages	0	6,355	0	6,355
(J) Forced Outages: percent of Period Hrs	0.00	0.35	0.00	0.10
(K) Net mWh Not Generated due to Partial Forced Outages	152	152	13,415	13,720
(L) Forced Derates: percent of Period Hrs	0.01	0.01	0.50	0.22
(M) Net mWh Not Generated due to Economic Dispatch	155,227	147,714	402,266	705,207
(N) Economic Dispatch: percent of Period Hrs	8.60	8.19	15.01	11.21
(O) Net mWh Possible in Period	1,804,560	1,804,560	2,680,560	6,289,680
(P) Equivalent Availability (%)	86.53	85.97	91.74	88.59
(Q) Output Factor (%)	83.83	84.35	82.58	83.44
(R) Heat Rate (BTU/NkWh)	10,472	10,245	2,388	6,990

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Clemson CHP

	Clemson CHP1
(A) MDC (mW)	15
(B) Period Hrs	8,760
(C) Net Generation (mWh)	91,218
(D) Capacity Factor (%)	67.66
(E) Net mWh Not Generated due to Full Scheduled Outages	7,454
(F) Scheduled Outages: percent of Period Hrs	5.53
(G) Net mWh Not Generated due to Partial Scheduled Outages	14,157
(H) Scheduled Derates: percent of Period Hrs	10.50
(I) Net mWh Not Generated due to Full Forced Outages	10,738
(J) Forced Outages: percent of Period Hrs	7.97
(K) Net mWh Not Generated due to Partial Forced Outages	0
(L) Forced Derates: percent of Period Hrs	0.00
(M) Net mWh Not Generated due to Economic Dispatch	11,246
(N) Economic Dispatch: percent of Period Hrs	8.34
(O) Net mWh Possible in Period	134,813
(P) Equivalent Availability (%)	76.08
(Q) Output Factor (%)	78.22
(R) Heat Rate (BTU/NkWh)	12,264

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Dan River Combined Cycle Station

	Unit 8	Unit 9	Unit ST07	Block Total
(A) MDC (mW)	206	206	308	720
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,158,153	1,172,815	1,779,047	4,110,015
(D) Capacity Factor (%)	64.18	64.99	65.94	65.16
(E) Net mWh Not Generated due to Full Scheduled Outages	362,259	372,530	559,938	1,294,727
(F) Scheduled Outages: percent of Period Hrs	20.07	20.64	20.75	20.53
(G) Net mWh Not Generated due to Partial Scheduled Outages	107,474	107,353	9,098	223,925
(H) Scheduled Derates: percent of Period Hrs	5.96	5.95	0.34	3.55
(I) Net mWh Not Generated due to Full Forced Outages	25,190	20,771	24,126	70,086
(J) Forced Outages: percent of Period Hrs	1.40	1.15	0.89	1.11
(K) Net mWh Not Generated due to Partial Forced Outages	457	457	5,686	6,600
(L) Forced Derates: percent of Period Hrs	0.03	0.03	0.21	0.10
(M) Net mWh Not Generated due to Economic Dispatch	151,026	130,634	320,186	601,845
(N) Economic Dispatch: percent of Period Hrs	8.37	7.24	11.87	9.54
(O) Net mWh Possible in Period	1,804,560	1,804,560	2,698,080	6,307,200
(P) Equivalent Availability (%)	72.55	72.23	77.80	74.71
(Q) Output Factor (%)	82.36	83.10	84.15	83.34
(R) Heat Rate (BTU/NkWh)	10,691	10,619	2,489	7,120

Notes:

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Marshall Station

	Unit 3	Unit 4
(A) MDC (mW)	658	660
(B) Period Hrs	8,760	8,760
(C) Net Generation (mWh)	3,101,170	2,712,398
(D) Capacity Factor (%)	53.80	46.91
(E) Net mWh Not Generated due to Full Scheduled Outages	586,574	1,467,292
(F) Scheduled Outages: percent of Period Hrs	10.18	25.38
(G) Net mWh Not Generated due to Partial Scheduled Outages	10,850	0
(H) Scheduled Derates: percent of Period Hrs	0.19	0.00
(I) Net mWh Not Generated due to Full Forced Outages	101,148	149,140
(J) Forced Outages: percent of Period Hrs	1.75	2.58
(K) Net mWh Not Generated due to Partial Forced Outages	235,834	146,348
(L) Forced Derates: percent of Period Hrs	4.09	2.53
(M) Net mWh Not Generated due to Economic Dispatch	1,728,504	1,306,421
(N) Economic Dispatch: percent of Period Hrs	29.99	22.60
(O) Net mWh Possible in Period	5,764,080	5,781,600
(P) Equivalent Availability (%)	83.79	69.51
(Q) Output Factor (%)	61.49	65.12
(R) Heat Rate (BTU/NkWh)	10,369	9,782

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
WS Lee Combined Cycle

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	248	248	313	809
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,172,874	1,533,260	1,948,119	4,654,253
(D) Capacity Factor (%)	53.99	70.58	71.05	65.67
(E) Net mWh Not Generated due to Full Scheduled Outages	306,173	307,959	392,464	1,006,597
(F) Scheduled Outages: percent of Period Hrs	14.09	14.18	14.31	14.20
(G) Net mWh Not Generated due to Partial Scheduled Outages	38,348	53,273	0	91,621
(H) Scheduled Derates: percent of Period Hrs	1.77	2.45	0.00	1.29
(I) Net mWh Not Generated due to Full Forced Outages	537,604	152,289	194,999	884,893
(J) Forced Outages: percent of Period Hrs	24.75	7.01	7.11	12.49
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	147,623	147,623
(L) Forced Derates: percent of Period Hrs	0.00	0.00	5.38	2.08
(M) Net mWh Not Generated due to Economic Dispatch	117,480	125,699	58,674	301,853
(N) Economic Dispatch: percent of Period Hrs	5.41	5.79	2.14	4.26
(O) Net mWh Possible in Period	2,172,480	2,172,480	2,741,880	7,086,840
(P) Equivalent Availability (%)	59.40	76.36	73.19	69.93
(Q) Output Factor (%)	88.31	90.01	90.42	89.75
(R) Heat Rate (BTU/NkWh)	10,787	10,488	2,522	7,229

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Intermediate Power Plant
Performance Review Plan
January, 2022 through December, 2022

Cliffside Station

Units		Unit 6
(A)	MDC (mW)	849
(B)	Period Hrs	8,760
(C)	Net Generation (mWh)	4,410,848
(D)	Net mWh Possible in Period	7,437,240
(E)	Equivalent Availability (%)	71.91
(F)	Output Factor (%)	82.25
(G)	Capacity Factor (%)	59.31

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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Duke Energy Carolinas
Peaking Power Plant
Performance Review Plan
January, 2022 through December, 2022

Cliffside Station

Units		Unit 5
(A)	MDC (mW)	546
(B)	Period Hrs	8,760
(C)	Net Generation (mWh)	600,803
(D)	Net mWh Possible in Period	4,782,960
(E)	Equivalent Availability (%)	57.36
(F)	Output Factor (%)	38.11
(G)	Capacity Factor (%)	12.56

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Proposed Nuclear Capacity Factor
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 1

	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs	10,026,652	9,119,788	8,799,414	9,938,344	7,338,135	6,713,739	6,883,057	58,819,128
Cost (Gross of Joint Owners)	$ 62,355,885	$ 50,162,610	$ 46,520,487	$ 54,060,516	$ 41,917,165	$ 34,438,133	$ 40,707,973	$ 330,162,771
$/MWh	6.2190	5.5004	5.2868	5.4396	5.7122	5.1295	5.9142	
Avg $/MWh		**5.6132**						
Cents per kWh		**0.5613**						

			Sept 2023 - August 2024
MDC			
CATA_UN01	Catawba	MW	1,160.0
CATA_UN02	Catawba	MW	1,150.1
MCGU_UN01	McGuire	MW	1,158.0
MCGU_UN02	McGuire	MW	1,157.6
OCON_UN01	Oconee	MW	847.0
OCON_UN02	Oconee	MW	848.0
OCON_UN03	Oconee	MW	859.0
			7,179.7
Hours In Year			8,760
Generation GWhs			
CATA_UN01	Catawba	GWh	10,027
CATA_UN02	Catawba	GWh	9,120
MCGU_UN01	McGuire	GWh	8,799
MCGU_UN02	McGuire	GWh	9,938
OCON_UN01	Oconee	GWh	7,338
OCON_UN02	Oconee	GWh	6,714
OCON_UN03	Oconee	GWh	6,883
			58,819
	Proposed Nuclear Capacity Factor		93.52%

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Duke Energy Carolinas, LLC | **Clark Workpaper 2**
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs with NERC applied	9,272,460	9,193,324	9,256,473	9,253,276	6,900,340	6,908,486	6,998,101	57,782,460
Hours	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760
MDC	1,160.0	1,150.1	1,158.0	1,157.6	847.0	848.0	859.0	7,179.7
Capacity factor	91.25%	91.25%	91.25%	91.25%	93.00%	93.00%	93.00%	91.87%
Cost	$ 52,048,053	$ 51,603,849	$ 51,958,314	$ 51,940,367	$ 38,732,897	$ 38,778,626	$ 39,281,651	$ 324,343,758

Avg $/MWh	**5.6132**
Cents per kWh	**0.5613**

2017-2021	Capacity Rating	NCF Rating	Weighted Average	
Oconee 1	847.0	93.00	10.97%	
Oconee 2	848.0	93.00	10.98%	
Oconee 3	859.0	93.00	11.13%	
McGuire 1	1,158.0	91.25	14.72%	
McGuire 2	1,157.6	91.25	14.71%	
Catawba 1	1,160.0	91.25	14.74%	
Catawba 2	1,150.1	91.25	14.62%	
	7,179.7		**91.87%**	Wtd Avg on Capacity Rating

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Duke Energy Carolinas, LLC **Clark Workpaper 3**
North Carolina Annual Fuel and Fuel Related Expense
North Carolina Generation and Purchased Power in MWhs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Resource Type	Sept 2023 - August 2024	
NUC Total (Gross)	58,819,128	
COAL Total	10,320,159	
Gas CT and CC total (Gross)	31,212,640	
Run of River	5,600,555	
Net pumped Storage	(4,083,743)	
Total Hydro	1,516,812	
Catawba Joint Owners	(14,888,880)	
Lee CC Joint Owners	(878,400)	
DEC owned solar	358,121	
Total Generation		86,459,580
Purchases for REPS Compliance	1,438,042	
Qualifying Facility Purchases - Non-REPS compliance	2,389,958	
Other Purchases	164,878	
Allocated Economic Purchases	1,329,474	
Joint Dispatch Purchases	6,466,906	
	11,789,258	
Total Generation and Purchased Power		98,248,839
Fuel Recovered Through Intersystem Sales	(1,148,043)	

rounding differences may occur

Duke Energy Carolinas, LLC **Clark Workpaper 4**
North Carolina Annual Fuel and Fuel Related Expense
Projected Fuel and Fuel Related Costs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Resource Type	Sept 2023 - August 2024	
Nuclear Total (Gross)	$ 330,162,771	
COAL Total	398,104,637	
Gas CT and CC total (Gross)	1,179,963,909	
Catawba Joint Owner costs	(83,614,236)	
CC Joint Owner costs	(25,697,152)	
Non-Economic Fuel Expense Recovered through Reimbursement	(3,687,381)	
Reagents and gain/loss on sale of By-Products	24,944,696	Workpaper 9
Purchases for REPS Compliance - Energy	68,790,240	
Purchases for REPS Compliance - Capacity	14,931,581	
Purchases of Qualifying Facilities - Energy	59,039,401	
Purchases of Qualifying Facilities - Capacity	12,176,644	
Other Purchases	397,088	
JDA Savings Shared	(69,598,371)	Workpaper 5
Allocated Economic Purchase cost	52,870,968	Workpaper 5
Joint Dispatch purchases	206,598,811	Workpaper 6
Total Purchases	345,206,362	
Fuel Expense recovered through intersystem sales	(57,998,825)	Workpaper 5
Total System Fuel and Fuel Related Costs	**$ 2,107,384,780**	

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Duke Energy Carolinas, LLC **Clark Workpaper 5**
North Carolina Annual Fuel and Fuel Related Expense
Projected Joint Dispatch Fuel Impacts
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

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Positive numbers represent costs to ratepayers, Negative numbers represent removal of costs to ratepayers

	Allocated Economic Purchase Cost		**Economic Sales Cost**		**Fuel Transfer Payment**		**JDA Savings Payment**	
	DEP	**DEC**	**DEP**	**DEC**	**DEP**	**DEC**	**DEP**	**DEC**
9/1/2023	$ 4,976,440	$ 7,317,885	$ (674,018)	$ (305,418)	$ (23,724,256)	$ 23,724,256	$ 6,910,581	$ (6,910,581)
10/1/2023	$ 5,904,520	$ 6,517,440	$ (69,203)	$ (114,170)	$ (15,802,316)	$ 15,802,316	$ 11,215,995	$ (11,215,995)
11/1/2023	$ 2,503,327	$ 3,105,057	$ (1,223,486)	$ (674,629)	$ (18,519,025)	$ 18,519,025	$ 10,008,333	$ (10,008,333)
12/1/2023	$ 762,505	$ 1,041,966	$ (5,872,462)	$ (1,890,081)	$ (15,722,366)	$ 15,722,366	$ 4,518,477	$ (4,518,477)
1/1/2024	$ 2,893,193	$ 2,042,582	$ (10,525,081)	$ (11,843,518)	$ (13,602,107)	$ 13,602,107	$ 4,544,884	$ (4,544,884)
2/1/2024	$ 315,449	$ 384,533	$ (10,078,466)	$ (13,200,189)	$ (6,837,056)	$ 6,837,056	$ 2,614,179	$ (2,614,179)
3/1/2024	$ 1,955,226	$ 2,816,591	$ (622,625)	$ (648,265)	$ (10,251,414)	$ 10,251,414	$ 1,341,892	$ (1,341,892)
4/1/2024	$ 3,952,712	$ 6,000,661	$ (639,409)	$ (211,299)	$ (12,097,213)	$ 12,097,213	$ 1,413,004	$ (1,413,004)
5/1/2024	$ 654,154	$ 713,694	$ (1,763,746)	$ (237,095)	$ (14,639,411)	$ 14,639,411	$ 6,435,252	$ (6,435,252)
6/1/2024	$ 4,153,979	$ 5,991,152	$ (1,260,436)	$ (644,515)	$ (21,582,339)	$ 21,582,339	$ 3,725,538	$ (3,725,538)
7/1/2024	$ 3,609,443	$ 5,189,561	$ (2,532,634)	$ (1,768,613)	$ (17,455,853)	$ 17,455,853	$ 14,114,687	$ (14,114,687)
8/1/2024	$ 8,014,976	$ 11,749,845	$ (1,306,118)	$ (1,592,378)	$ (11,496,801)	$ 11,496,801	$ 2,755,548	$ (2,755,548)
Sept 23 - Aug 24		$ 52,870,968		$ (33,130,170)		$ 181,730,155		$ (69,598,371)

rounding differences may occur

$ 206,598,811	Workpaper 6 - Transfer - Purchases
$ (24,868,655)	Workpaper 6 - Transfer - Sales
$ 181,730,155	Sept 22-Aug 23 Net Fuel Transfer Payment
$ (24,868,655)	Workpaper 6 - Transfer - Sales
$ (33,130,170)	Sept 23-Aug 24 Economic Sales Cost
$ (57,998,825)	**Total Fuel expense recovered through intersystem sales**

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Merger Payments
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 6

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	Transfer Projection		Purchase Allocation Delta		Purchase Adjusted Transfer	Sale	Fossil Gen Cost		Sale Pre-Net Payments	Purchase
	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC
9/1/2023	606,726	20,805	50,315	(50,315)	657,041	20,805	$ 36.94	$ 26.37	$ 548,621.47	$ 24,272,877.11
10/1/2023	619,535	32,076	95,370	(95,370)	714,904	32,076	$ 28.43	$ 141.02	$ 4,523,430.43	$ 20,325,746.34
11/1/2023	744,209	8,765	33,471	(33,471)	777,680	8,765	$ 25.47	$ 147.32	$ 1,291,175.66	$ 19,810,200.86
12/1/2023	558,288	34,315	(6,026)	6,026	558,288	40,342	$ 33.48	$ 73.65	$ 2,971,154.85	$ 18,693,520.46
1/1/2024	364,075	36,080	10,140	(10,140)	374,215	36,080	$ 40.82	$ 46.37	$ 1,673,120.48	$ 15,275,227.51
2/1/2024	261,473	47,009	(1,221)	1,221	261,473	48,231	$ 36.72	$ 57.30	$ 2,763,602.82	$ 9,600,659.02
3/1/2024	395,731	100,349	(4,372)	4,372	395,731	104,721	$ 34.26	$ 31.57	$ 3,306,397.03	$ 13,557,810.67
4/1/2024	400,208	82,708	30,753	(30,753)	430,962	82,708	$ 33.12	$ 26.32	$ 2,176,581.75	$ 14,273,794.40
5/1/2024	682,741	36,797	7,545	(7,545)	690,286	36,797	$ 22.54	$ 25.00	$ 919,824.47	$ 15,559,235.66
6/1/2024	551,409	42,848	67,925	(67,925)	619,334	42,848	$ 36.79	$ 28.05	$ 1,201,775.15	$ 22,784,113.70
7/1/2024	501,238	41,647	55,203	(55,203)	556,441	41,647	$ 33.71	$ 31.28	$ 1,302,736.04	$ 18,758,588.73
8/1/2024	328,372	64,562	102,180	(102,180)	430,552	64,562	$ 31.79	$ 33.92	$ 2,190,235.09	$ 13,687,036.24
Sept 23 - Aug 24	6,014,005	547,961	441,282	(441,282)	6,466,906	559,580			$ 24,868,655	$ 206,598,811
									Net Pre-Net Payments	$ 181,730,155

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.52%
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 7

Fall 2022 Forecast
Billed Sales Forecast
Sales Forecast - MWhs (000)

		Projected sales for the Billing Period	Remove impact of SC DERP Net Metered Generation	Adjusted Sales
North Carolina:				
	Residential	23,477,265		23,477,265
	General	23,838,527		23,838,527
	Industrial	13,270,457		13,270,457
	Lighting	238,480		238,480
	NC RETAIL	60,824,730	-	60,824,729
South Carolina:				
	Residential	7,223,610	136,278	7,359,888
	General	5,371,691	42,584	5,414,275
	Industrial	9,133,136	429	9,133,565
	Lighting	51,014	-	51,014
	SC RETAIL	21,779,451	179,291	21,958,742
Total Retail Sales				
	Residential	30,700,876	136,278	30,837,153
	General	29,210,218	42,584	29,252,802
	Industrial	22,403,593	429	22,404,022
	Lighting	289,494	-	289,494
	Retail Sales	82,604,181	179,291	82,783,471
	Wholesale	8,227,610	-	8,227,610
	Projected System MWH Sales for Fuel Factor	90,831,791	179,291	91,011,082
	NC as a percentage of total	**66.96%**		**66.83%**
	SC as a percentage of total	23.98%		24.13%
	Wholesale as a percentage of total	9.06%		9.04%
		100.00%		100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	179,291	
Marginal fuel rate per MWh for SC NEM	$ 24.52	
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
System Fuel Expense	$ 2,107,384,780	Clark Exhibit 2 Schedule 1 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 2,111,780,996	Clark Exhibit 2 Schedule 1 Page 3 of 3, L5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**	
Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1	$ 2,107,384,780				
QF and REPS Compliance Purchased Power - Capacity	$ 27,108,225				
Other fuel costs	$ 2,080,276,555				
SC Net Metering Fuel Allocation adjustment	$ 4,396,215				
Jurisdictional fuel costs after adj.	$ 2,084,672,770				
Allocation to states/classes		66.83%	9.04%	24.13%	
Jurisdictional fuel costs	$ 2,084,672,770	$ 1,393,186,813	$ 188,454,418	$ 503,031,540	66.68%
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)	
Total system actual fuel costs	$ 2,080,276,555	$ 1,393,186,813	$ 188,454,418	$ 498,635,324	
QF and REPS Compliance Purchased Power - Capacity	27,108,225	18,076,112			
Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1	$ 2,107,384,780	**$ 1,411,262,925**			
		Exh.2, Sch. 1 page 3, Line 13			

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Duke Energy Carolinas, LLC — **Clark Workpaper 7a**
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Fall 2022 Forecast
Billed Sales Forecast - Normalized Test Period Sales
Sales Forecast - MWhs (000)

	Test Period Sales	Customer Growth Adjustment	Weather Adjustment	Remove impact of SC DERP Net Metered generation	Normalized Test Period Sales
NC RETAIL	59,059,117	162,487	337,854	-	59,559,458
SC RETAIL	20,955,111	(8,320)	99,613	179,291	21,225,695
Wholesale	8,269,814	5,836	(306)	-	8,275,343
Normalized System MWH Sales for Fuel Factor	88,284,042	160,003	437,160	179,291	89,060,496
NC as a percentage of total	**66.90%**				**66.88%**
SC as a percentage of total	23.74%				23.83%
Wholesale as a percentage of total	9.37%				9.29%
	100.00%				100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	179,291	
Marginal fuel rate per MWh for SC NEM	$ 24.52	
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
System Fuel Expense	$ 2,032,140,076	Clark Exhibit 2 Schedule 2 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 2,036,536,291	Clark Exhibit 2 Schedule 2 Page 3 of 3, L5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**
Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1	$ 2,032,140,076			
QF and REPS Compliance Purchased Power - Capacity	$ 27,108,225			
Other fuel costs	$ 2,005,031,851			
SC Net Metering Fuel Allocation adjustment	$ 4,396,215			
Jurisdictional fuel costs after adj.	$ 2,009,428,066			
Allocation to states/classes		66.88%	9.29%	23.83%
Jurisdictional fuel costs	$ 2,009,428,055	$ 1,343,810,646	$ 186,712,496	$ 478,904,904
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)
Total system actual fuel costs	$ 2,005,031,840	$ 1,343,810,646	$ 186,712,496	$ 474,508,689
QF and REPS Compliance Purchased Power - Capacity	27,108,225	18,076,112		
Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1	$ 2,032,140,065	**$ 1,361,886,758**		
		Exh. 2, Sch 2 page 3, Line 13		

rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 7b

Fall 2022 Forecast
Billed Sales Forecast
Sales Forecast - MWhs (000)

		Projected sales for the Billing Period	Remove impact of SC DERP Net Metered generation	Adjusted Sales
North Carolina:				
	Residential	23,477,265		23,477,265
	General	23,838,527		23,838,527
	Industrial	13,270,457		13,270,457
	Lighting	238,480		238,480
	NC RETAIL	60,824,730	-	60,824,730
South Carolina:				
	Residential	7,223,610	136,278	7,359,888
	General	5,371,691	42,584	5,414,275
	Industrial	9,133,136	429	9,133,565
	Lighting	51,014	0	51,014
	SC RETAIL	21,779,451	179,291	21,958,742
Total Retail Sales				
	Residential	30,700,876	136,278	30,837,154
	General	29,210,218	42,584	29,252,802
	Industrial	22,403,593	429	22,404,022
	Lighting	289,494	-	289,494
	Retail Sales	82,604,181	179,291	82,783,472
	Wholesale	8,227,610	-	8,227,610
	Projected System MWh Sales for Fuel Factor	90,831,791	179,291	91,011,082
	NC as a percentage of total	**66.96%**		**66.83%**
	SC as a percentage of total	23.98%		24.13%
	Wholesale as a percentage of total	9.06%		9.04%
		100.00%		100.00%

SC Net Metering allocation adjustment		
Total projected SC NEM MWhs	179,291	
Marginal fuel rate per MWh for SC NEM	$ 24.52	
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
System Fuel Expense	$ 2,132,906,715	Clark Exhibit 2 Schedule 3 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 2,137,302,931	Clark Exhibit 2 Schedule 3 Page 3 of 3, Line 5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**
Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1	$ 2,132,906,715			
QF and REPS Compliance Purchased Power - Capacity	$ 27,108,225			
Other fuel costs	$ 2,105,798,490			
SC Net Metering Fuel Allocation adjustment	$ 4,396,215			
Jurisdictional fuel costs after adj.	$ 2,110,194,706			
Allocation to states/classes		66.83%	9.04%	24.13%
Jurisdictional fuel costs	$ 2,110,194,706	$ 1,410,243,122	$ 190,761,601	$ 509,189,982
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)
Total system actual fuel costs	$ 2,105,798,490	$ 1,410,243,122	$ 190,761,601	$ 504,793,767
QF and REPS Compliance Purchased Power - Capacity	27,108,225	18,076,112		
Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1	$ 2,132,906,715	**$ 1,428,319,234**		
		Exh. 2, Sch.3 page 3, Line 13		

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Annualized Revenue
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 8

	January 2023 Actuals			Normalized Sales	
	Revenue	**kWh Sales**	**Cents/ kWh**	**Clark Exhibit 4**	**Total Annualized Revenues**
	(a)	(b)	(a)/(b) *100 = (c)	(d)	(c) * (d) * 10
Residential	$ 259,112,943	2,404,726,417	10.7752	22,892,401	$ 2,466,691,215
General	$ 161,395,026	2,001,691,757	8.0629	24,448,017	$ 1,971,226,718
Industrial	$ 55,270,705	891,437,613	6.2002	12,219,040	$ 757,602,036
Total	$ 475,778,674	5,297,855,787		59,559,458	$ 5,195,519,969

rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Reagents and ByProducts
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Workpaper 9

Reagent and ByProduct projections

Date	Ammonia	Urea	Limestone	Magnesium Hydroxide	Calcium Carbonate	Lime	**Reagent Cost**	**Gypsum (Gain)/ Loss**	**Ash (Gain)/Loss**	**Steam (Gain)/Loss**	**Sale of By-Products (Gain)/Loss**
9/1/2022	$ 215,268	$ 20,510	$ 258,314	$ 37,104	$ 22,496	$ 13,158	**$ 566,851**	$ 72,900	$ (11,374)	$ (249,752)	**$ (188,226)**
10/1/2022	$ 126,192	$ 12,023	$ 151,427	$ 20,990	$ 12,726	$ 13,158	**$ 336,516**	$ 42,578	$ (7,798)	$ (249,752)	**$ (214,972)**
11/1/2022	$ 175,908	$ 16,760	$ 211,084	$ 22,395	$ 13,578	$ 13,158	**$ 452,884**	$ 52,334	$ (12,578)	$ (249,752)	**$ (209,995)**
12/1/2022	$ 1,809,326	$ 172,388	$ 2,171,130	$ 139,582	$ 84,629	$ 13,158	**$ 4,390,213**	$ 702,173	$ (219,291)	$ (249,752)	**$ 233,130**
1/1/2023	$ 2,582,989	$ 246,100	$ 3,099,500	$ 205,790	$ 124,770	$ 13,158	**$ 6,272,308**	$ 1,096,545	$ (268,116)	$ (249,752)	**$ 578,677**
2/1/2023	$ 2,113,676	$ 201,385	$ 2,536,340	$ 167,519	$ 101,567	$ 13,158	**$ 5,133,645**	$ 816,993	$ (238,439)	$ (249,752)	**$ 328,803**
3/1/2023	$ 447,777	$ 42,663	$ 537,317	$ 56,469	$ 34,237	$ 13,158	**$ 1,131,622**	$ 144,210	$ (32,598)	$ (249,752)	**$ (138,140)**
4/1/2023	$ 245,737	$ 23,413	$ 294,876	$ 33,856	$ 20,527	$ 13,158	**$ 631,567**	$ 69,849	$ (12,590)	$ (249,752)	**$ (192,493)**
5/1/2023	$ 183,122	$ 17,447	$ 219,740	$ 34,191	$ 20,730	$ 13,158	**$ 488,388**	$ 52,063	$ (3,750)	$ (249,752)	**$ (201,439)**
6/1/2023	$ 544,468	$ 51,875	$ 653,343	$ 56,548	$ 34,285	$ 13,158	**$ 1,353,677**	$ 163,414	$ (51,742)	$ (249,752)	**$ (138,080)**
7/1/2023	$ 916,015	$ 87,275	$ 1,099,187	$ 78,871	$ 47,819	$ 13,158	**$ 2,242,325**	$ 283,833	$ (91,686)	$ (260,498)	**$ (68,352)**
8/1/2023	$ 896,206	$ 85,388	$ 1,075,417	$ 92,289	$ 55,955	$ 13,158	**$ 2,218,412**	$ 292,195	$ (94,322)	$ (260,498)	**$ (62,626)**
	$ 10,256,683	$ 977,229	$ 12,307,675	$ 945,605	$ 573,319	$ 157,896	**$ 25,218,407**	$ 3,789,087	$ (1,044,284)	$ (3,018,514)	**$ (273,711)**

Total Reagent cost and Sale of By-products **$ 24,944,696**

rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC **Clark Workpaper 10**
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2022
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Line No.	Description	Forecast $	(Over)/Under Collection $	Total $
1	Amount in current docket	139,103,703	70,794,129	209,897,832
2	Amount in Sub 1263, prior year docket	100,735,755	13,526,437	114,262,192
3	Increase/(Decrease)	38,367,948	57,267,693	95,635,640
4	2.5% of 2022 NC retail revenue of $4,944,339,147			123,608,479
	Excess of purchased power growth over 2.5% of revenue			0
	E-7, Sub 1282			
WP 4	Purchases for REPS Compliance - Energy	68,790,240	66.83%	45,972,517
WP 4	Purchases for REPS Compliance - Capacity	14,931,581	66.68%	9,956,570
WP 4	Purchases	397,088	66.83%	265,374
WP 4	QF Energy	59,039,401	66.83%	39,456,032
WP 4	QF Capacity	12,176,644	66.68%	8,119,542
WP 4	Allocated Economic Purchase cost	52,870,968	66.83%	35,333,668
		208,205,922		139,103,703
	E-7, Sub 1263			
	Purchases for REPS Compliance	66,782,210	66.08%	44,126,819
	Purchases for REPS Compliance Capacity	14,610,064	66.68%	9,742,178
	Purchases	7,489,994	66.08%	4,949,066
	QF Energy	40,652,503	66.08%	26,861,429
	QF Capacity	8,445,498	66.68%	5,631,567
	Allocated Economic Purchase cost	14,263,480	66.08%	9,424,695
		152,243,749		100,735,755

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Workpaper 10a

2022	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	12 ME
System KWH Sales - Sch 4, Adjusted	7,587,345,694	7,631,271,992	6,790,067,074	6,455,104,305	6,544,372,277	7,852,382,055	8,386,958,942	8,886,608,895	8,009,959,106	6,516,474,006	6,148,600,623	7,600,126,412	88,409,271,381
NC Retail KWH Sales - Sch 4	4,988,913,451	5,189,555,709	4,642,701,985	4,283,391,409	4,361,033,505	5,223,755,139	5,560,704,210	6,010,616,462	5,369,219,189	4,315,776,539	4,103,701,351	5,009,748,290	59,059,117,240
NC Retail % of Sales, Adjusted (Calc)	65.75%	68.00%	68.37%	66.36%	66.64%	66.52%	66.30%	67.64%	67.03%	66.23%	66.74%	65.92%	66.80%
NC retail production plant %	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%
Fuel and Fuel related component of purchased power													
System Actual $ - Sch 3 Fuel$:	$ 37,348,658	$ 40,334,882	$ 28,936,616	$ 49,553,437	$ 53,977,979	$ 76,187,119	$ 84,243,384	$ 92,288,328	$ 54,398,279	$ 11,798,321	$ 41,689,819	$ 94,911,581	$ 665,668,403
System Actual $ - Sch 3 Fuel-related$; Economic Purchases	7,928,235	(1,570,627)	3,557,135	4,369,558	7,286,679	6,129,379	10,685,578	9,921,881	9,510,435	1,184,100	3,142,043	8,875,341	$ 71,019,737
System Actual $ - Sch 3 Fuel-related$; Purchased Power for REPS Compliance	4,142,352	3,490,134	3,995,856	3,290,332	5,192,821	5,283,840	5,430,924	5,998,047	5,270,163	5,163,446	4,802,114	4,257,583	$ 56,317,611
System Actual$ - Sch 3 Fuel-related$; SC DERP	153,840	153,265	196,932	137,675	248,854	297,053	290,834	285,229	257,994	240,417	248,173	229,623	$ 2,739,889
System Acutal $ - Sch 3 Fuel-related$; HB589 purpa Purchases	1,977,570	1,777,710	2,215,962	1,745,571	2,647,918	3,816,224	3,554,345	3,225,136	3,434,693	3,359,816	3,414,696	2,956,940	$ 34,126,582
Total System Economic & QF$	51,550,655	44,185,364	38,902,502	59,096,573	69,354,250	91,713,615	104,205,065	111,718,622	72,871,564	21,746,101	53,296,844	111,231,068	829,872,222
Less:													
Native Load Transfers, Native Load Transfer Benefit & DE - Progress fees	$ 30,480,569	$ 37,453,029	$ 26,486,545	$ 48,026,753	$ 49,193,125	$ 74,564,244	$ 75,622,595	$ 87,008,500	$ 47,113,469	$ 10,577,023	$ 40,068,662	$ 74,950,979	$ 601,545,494
Total System Economic $ without Native Load Transfers	$ 21,070,086	$ 6,732,335	$ 12,415,956	$ 11,069,820	$ 20,161,125	$ 17,149,371	$ 28,582,470	$ 24,710,121	$ 25,758,095	$ 11,169,078	$ 13,228,182	$ 36,280,089	$ 228,326,728
NC Actual $ (Calc)	$ 13,854,230	$ 4,578,244	$ 8,489,398	$ 7,345,562	$ 13,434,954	$ 11,408,527	$ 18,950,690	$ 16,713,131	$ 17,266,113	$ 7,397,136	$ 8,828,758	$ 23,914,617	$ 152,181,363
Billed rate (¢/kWh):	0.1378	0.1378	0.1378	0.1378	0.1378	0.1378	0.1378	0.1378	0.1367	0.1378	0.1378	0.1378	
Billed $:	$ 6,874,552	$ 7,151,030	$ 6,397,484	$ 5,902,367	$ 6,009,355	$ 7,198,156	$ 7,662,460	$ 8,282,423	$ 7,340,000	$ 5,946,992	$ 5,654,760	$ 6,903,261	$ 81,322,839
(Over)/ Under $:	$ 6,979,678	$ (2,572,786)	$ 2,091,914	$ 1,443,196	$ 7,425,600	$ 4,210,372	$ 11,288,231	$ 8,430,708	$ 9,926,113	$ 1,450,144	$ 3,173,998	$ 17,011,356	$ 70,858,524
Capacity component of purchased power													
System Actual $ - Capacity component of Cherokee County Cogen Purchases	$ -	$ (215,310)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (215,310)
System Actual $ - Capacity component of Purchased Power for REPS Compliance	631,201	645,219	680,737	463,766	802,115	701,461	827,443	2,753,196	2,319,960	2,511,631	2,238,491	639,202	$ 15,214,422
System Actual $ - Capacity component of HB589 Purpa QF purchases	14,255	14,801	19,366	14,471	24,039	29,036	28,404	28,368	25,409	23,627	24,299	22,399	$ 268,474
System Actual $ - Capacity component of SC DERP	312,476	340,840	349,198	316,395	389,774	481,428	581,279	1,661,830	1,443,022	1,553,118	1,525,519	414,939	$ 9,369,818
System Actual $ - Sch 2 pg 1 ANNUAL VIEW	$ 957,932	$ 785,549	$ 1,049,301	$ 794,633	$ 1,215,927	$ 1,211,925	$ 1,437,127	$ 4,443,394	$ 3,788,390	$ 4,088,375	$ 3,788,310	$ 1,076,540	$ 24,637,403
NC Actual $ (Calc) (1)	$ 638,761	$ 523,814	$ 699,688	$ 529,871	$ 810,796	$ 808,127	$ 958,294	$ 2,962,912	$ 2,526,147	$ 2,726,181	$ 2,526,093	$ 717,851	$ 16,428,537
Billed rate (¢/kWh):	0.0279	0.0279	0.0279	0.0279	0.0279	0.0279	0.0279	0.0279	0.0284	0.0279	0.0279	0.0279	
Billed $:	$ 1,390,793	$ 1,446,727	$ 1,294,277	$ 1,194,110	$ 1,215,755	$ 1,456,261	$ 1,550,195	$ 1,675,620	$ 1,525,438	$ 1,203,138	$ 1,144,016	$ 1,396,601	$ 16,492,931
(Over)/Under $:	$ (752,032)	$ (922,913)	$ (594,589)	$ (664,238)	$ (404,959)	$ (648,134)	$ (591,900)	$ 1,287,293	$ 1,000,709	$ 1,523,043	$ 1,382,077	$ (678,751)	$ (64,394)
TOTAL (Over)/ Under $:	**$ 6,227,647**	**$ (3,495,699)**	**$ 1,497,325**	**$ 778,957**	**$ 7,020,641**	**$ 3,562,238**	**$ 10,696,330**	**$ 9,718,001**	**$ 10,926,822**	**$ 2,973,187**	**$ 4,556,076**	**$ 16,332,605**	**$ 70,794,129**

Note: The billed rate for September and October are pro-rated based on number of billing days in cycle on new rate schedules.
(1) January - May NC actual capacity shown herein is adjusted to reflect use of 2021 production plant allocation factor. Actual true-up related to allocator was made as prior period adjustment in May 2022 of Schedule 4.

rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2021
Docket E-7, Sub 1282

Clark Workpaper 10b

2021	**Jan-21**	**Feb-21**	**Mar-21**	**Apr-21**	**May-21**	**Jun-21**	**Jul-21**	**Aug-21**	**Sep-21**	**Oct-21**	**Nov-21**	**Dec-21**	**12 ME**
System KWH Sales - Sch 4, Adjusted	8,623,321,816	7,033,781,083	6,170,273,584	6,357,924,869	5,750,592,351	7,218,972,840	8,473,666,049	8,688,276,000	8,107,525,420	6,609,883,548	6,537,708,709	7,191,590,664	86,763,516,933
NC Retail KWH Sales - Sch 4	5,785,766,552	4,705,197,397	4,216,101,608	4,307,482,408	3,784,759,966	4,813,117,777	5,540,576,171	5,890,178,638	5,517,650,819	4,297,619,492	4,396,624,370	4,888,703,073	58,143,778,271
NC Retail % of Sales, Adjusted (Calc)	67.09%	66.89%	68.33%	67.75%	65.82%	66.67%	65.39%	67.79%	68.06%	65.02%	67.25%	67.98%	67.01%
NC retail production plant %	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%
Fuel and Fuel related component of purchased power													
System Actual $ - Sch 3 Fuel$:	$ 14,110,987	$ 21,997,962	$ 7,288,155	$ 1,159,999	$ 6,909,766	$ 19,650,947	$ 27,256,372	$ 22,941,922	$ 20,301,410	$ 27,877,777	$ 27,842,536	$ 26,295,173	$ 223,633,006
System Actual $ - Sch 3 Fuel-related$; Economic Purchases	1,908,455	2,653,190	897,843	1,159,946	1,043,015	1,716,177	3,233,998	2,658,287	1,580,193	2,101,644	2,163,509	2,417,594	$ 23,533,851
System Actual $ - Sch 3 Fuel-related$; Purchased Power for REPS Compliance	3,836,471	3,851,010	3,578,469	1,634,328	5,557,142	6,244,501	5,777,306	6,144,771	5,617,037	5,684,750	4,972,836	4,406,882	$ 57,305,503
System Actual$ - Sch 3 Fuel-related$; SC DERP	148,221	63,773	117,353	217,851	155,453	263,492	427,484	260,031	242,117	236,248	246,176	205,494	$ 2,583,692
System Acutal $ - Sch 3 Fuel-related$; HB589 purpa Purchases	2,756,782	2,455,383	2,198,548	2,656,105	2,051,181	3,609,263	3,393,224	3,761,968	2,668,737	2,679,082	2,593,637	2,343,504	$ 33,167,413
Total System Economic & QF$	22,760,916	31,021,318	14,080,368	6,828,229	15,716,557	31,484,380	40,088,384	35,766,979	30,409,494	38,579,500	37,818,693	35,668,647	340,223,465
Less:													
Native Load Transfers, Native Load Transfer Benefit & DE - Progress fees	$ 13,085,320	$ 20,311,355	$ 6,186,575	$ 12,225	$ 6,203,819	$ 19,379,239	$ 26,072,774	$ 21,770,863	$ 19,434,801	$ 26,816,502	$ 23,378,784	$ 23,491,467	$ 206,143,723
Total System Economic $ without Native Load Transfers	$ 9,675,596	$ 10,709,964	$ 7,893,793	$ 6,816,004	$ 7,306,104	$ 8,232,386	$ 14,015,610	$ 13,996,116	$ 10,974,693	$ 11,762,998	$ 14,439,909	$ 12,177,179	$ 128,000,354
NC Actual $ (Calc)	$ 6,491,783	$ 7,164,353	$ 5,393,769	$ 4,617,830	$ 4,808,522	$ 5,488,793	$ 9,164,222	$ 9,488,606	$ 7,468,928	$ 7,648,076	$ 9,710,873	$ 8,277,809	$ 85,723,565
Billed rate (¢/kWh):	0.1367	0.1367	0.1367	0.1367	0.1367	0.1367	0.1367	0.1367	0.1363	0.1357	0.1357	0.1357	
Billed $:	$ 7,911,008	$ 6,433,522	$ 5,764,770	$ 5,889,717	$ 5,174,987	$ 6,581,084	$ 7,575,754	$ 8,053,773	$ 7,518,618	$ 5,832,583	$ 5,966,949	$ 6,634,781	$ 79,337,545
(Over)/ Under $:	$ (1,419,225)	$ 730,832	$ (371,001)	$ (1,271,887)	$ (366,465)	$ (1,092,291)	$ 1,588,468	$ 1,434,833	$ (49,690)	$ 1,815,493	$ 3,743,924	$ 1,643,028	$ 6,386,020
Capacity component of purchased power													
System Actual $ - Capacity component of Cherokee County Cogen Purchases	$ 430,619	$ 430,619	$ 215,311	$ 215,310	$ 322,964	$ 1,399,512	$ 3,229,644	$ 3,229,644	$ 645,929	$ 215,310	$ 215,310	$ 215,310	$ 10,765,481
System Actual $ - Capacity component of Purchased Power for REPS Compliance	679,198	657,904	611,495	370,864	1,021,112	874,770	880,403	2,930,150	2,610,093	2,651,828	2,162,592	642,188	$ 16,092,597
System Actual $ - Capacity component of HB589 Purpa QF purchases	401,588	376,607	536,828	347,396	110,548	427,589	1,222,705	1,697,840	1,371,802	1,324,805	834,474	281,956	$ 8,934,138
System Actual $ - Capacity component of SC DERP	14,999	7,491	12,697	15,442	14,837	24,880	38,885	24,278	22,766	22,049	24,646	19,907	$ 242,878
System Actual $ - Sch 2 pg 1 ANNUAL VIEW	$ 1,526,405	$ 1,472,621	$ 1,376,331	$ 949,012	$ 1,469,461	$ 2,726,751	$ 5,371,637	$ 7,881,912	$ 4,650,590	$ 4,213,992	$ 3,237,022	$ 1,159,361	$ 36,035,094
NC Actual $ (Calc) (1)	$ 1,022,340	$ 986,317	$ 921,825	$ 635,619	$ 984,201	$ 1,826,295	$ 3,597,760	$ 5,279,066	$ 3,114,825	$ 2,822,404	$ 2,168,059	$ 776,504	$ 24,135,214
Billed rate (¢/kWh):	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0291	0.0289	0.0289	0.0289	
Billed $:	$ 1,698,557	$ 1,381,329	$ 1,237,743	$ 1,264,570	$ 1,111,112	$ 1,413,012	$ 1,626,576	$ 1,729,210	$ 1,608,069	$ 1,241,743	$ 1,270,349	$ 1,412,529	$ 16,994,798
(Over)/Under $:	$ (676,218)	$ (395,012)	$ (315,918)	$ (628,950)	$ (126,911)	$ 413,283	$ 1,971,184	$ 3,549,856	$ 1,506,756	$ 1,580,661	$ 897,710	$ (636,025)	$ 7,140,416
TOTAL (Over)/ Under $:	**$ (2,095,442)**	**$ 335,820**	**$ (686,918)**	**$ (1,900,837)**	**$ (493,375)**	**$ (679,008)**	**$ 3,559,653**	**$ 4,984,689**	**$ 1,457,065**	**$ 3,396,154**	**$ 4,641,634**	**$ 1,007,003**	**$ 13,526,437**

Note: The billed rate for September and October are pro-rated based on number of billing days in cycle on new rate schedules.
(1) January - May NC actual capacity shown herein is adjusted to reflect use of 2020 production plant allocation factor. Actual true-up related to allocator was made as prior period adjustment in May 2021 of Schedule 4.

rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Actual Sales by Jursidiction - Subject to Weather
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Workpaper 11

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Line #	Description	Reference	MWhs NORTH CAROLINA	SOUTH CAROLINA	TOTAL COMPANY	% NC	% SC
1	Residential	Company Records	22,419,810	6,932,595	29,352,406	76.38	23.62
2	Total General Service	Company Records	24,337,421	5,555,439	29,892,860		
3	less Lighting and Traffic Signals		326,292	83,069	409,361		
4	General Service subject to weather		24,011,129	5,472,369	29,483,499	81.44	18.56
5	Industrial	Company Records	12,301,885	8,467,077	20,768,963	59.23	40.77
6	Total Retail Sales	1+2+5	59,059,117	20,955,111	80,014,228		
7	Total Retail Sales subject to weather	1+4+5	58,732,825	20,872,042	79,604,867	73.78	26.22

This does not exclude Greenwood and includes the impact of SC DERP net metering generation
rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Weather Normalization Adjustment
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Workpaper 12
Page 1

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May 26 2023

Line #	Description	REFERENCE	Total Company MWh	NC RETAIL % To Total	NC RETAIL MWh	SC RETAIL % To Total	SC RETAIL MWh
	Residential						
1	Total Residential		448,056	76.38	342,225	23.62	105,831
	General Service						
2	Total General Service		8,558	81.44	6,970	18.56	1,588
	Industrial						
3	Total Industrial		(19,147)	59.23	(11,341)	40.77	(7,806)
4	Total Retail	L1+ L2+ L3	437,466		337,854		99,613
5	Wholesale		(306)				
6	Total Company	L4 + L5	437,160		337,854		99,613

rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Weather Normalization Adjustment by Class by Month
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Workpaper 12
Page 2

	Residential	Commercial	Industrial	
2022	**TOTAL MWH ADJUSTMENT**	**TOTAL MWH ADJUSTMENT**	**TOTAL MWH ADJUSTMENT**	
JAN	430,826	41,682	(6,770)	
FEB	26,706	3,498	334	
MAR	196,589	16,797	229	
APR	57,319	1,598	(581)	
MAY	(79,111)	(16,277)	(3,799)	
JUN	(157,659)	(57,717)	(13,625)	
JUL	(87,489)	(31,423)	(6,855)	
AUG	7,117	4,384	604	
SEP	9,348	5,285	898	
OCT	-	26,141	6,943	
NOV	23,449	17,862	5,321	
DEC	20,961	(3,272)	(1,847)	
Total	**448,056**	**8,558**	**(19,147)**	**437,466**

Wholesale

2022	**TOTAL MWH ADJUSTMENT**	Note:	**The Resale customers include:**
JAN	(2,917)	1	Concord[1]
FEB	8,132	2	Dallas
MAR	12,387	3	Forest City
APR	7	4	Kings Mountain[1]
MAY	(4,538)	5	Due West
JUN	(8,323)	6	Prosperity[2]
JUL	(3,594)	7	Lockhart
AUG	2,515	8	Western Carolina University
SEP	1,554	9	City of Highlands
OCT	(8,702)	10	Haywood
NOV	11,971	11	Piedmont
DEC	(8,800)	12	Rutherford
		13	Blue Ridge
Total	**(306)**	14	Greenwood[1]

[1]Wholesale load is no longer being served by Duke as of December 2018.
[2]Wholesale load is no longer being served by Duke as of December 2019.

rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Customer Growth Adjustment to kWh Sales
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

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Line	Estimation Method [1]	Rate Schedule	NC Proposed kWh [1] Adjustment	SC Proposed kWh Adjustment	Wholesale Proposed kWh Adjustment	Total Company
1	*Regression*	Residential	130,366,123	72,505,791		
2						
3		**General Service (Excluding Lighting):**				
4	*Customer*	General Service Small and Large	109,009,655	1,179,199		
5	*Regression*	Miscellaneous	(2,444,761)	(1,131,149)		
6		Total General	106,564,894	48,050		
7						
8		**Lighting:**				
9	*Regression*	T & T2 (GL/FL/PL/OL)[2]	(2,957,804)	(1,879,960)		
10	*Regression*	TS	18,088	(14,903)		
11		Total Lighting	(2,939,716)	(1,894,862)		
12						
13		**Industrial:**				
14	*Customer*	I - Textile	(28,808,158)	(776,997)		
15	*Customer*	I - Nontextile	(42,696,403)	(78,201,535)		
16		Total Industrial	(71,504,561)	(78,978,532)		
17						
18						
19		Total	162,486,740	(8,319,553)	5,835,657	160,002,845
					WP 13-2	

Notes:
[1] Two approved methods are used for estimating the growth adjustment depending on the class/schedule:
"Regression" refers to the use of Ordinary Least Squares Regression
"Customer" refers to the use of the Customer by Customer approach.
[2] T and T2 were combined due to North Carolina's FL & GL schedules being merged into OL & PL.
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Duke Energy Carolinas, LLC **Clark Workpaper 13**
North Carolina Annual Fuel and Fuel Related Expense **Page 2**
Customer Growth Adjustment to kWh Sales-Wholesale
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Calculation of Customer Growth Adjustment to kWh Sales - Wholesale

Line No.		Reference	
1	Total System Resale (kWh Sales)	Company Records	9,637,002,447
2	Less Intersystem Sales	Exhibit 6, Sch 1	1,193,715,448
3	Total kWh Sales Excluding Intersystem Sales	L1 - L2	8,443,286,999
4	Residential Growth Factor	Line 8	0.6912
5	Adjustment to kWhs - Wholesale	L3 * L4 / 100	5,835,657
6	Total System Retail Residential kWh Sales	Company Records	29,352,405,508
7	2022 Proposed Adjustment kWh - Residential (NC+SC)	WP 13-1	202,871,914
8	Percent Adjustment	L7 / L6 * 100	0.6912

rounding differences may occur

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CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's Supplemental Testimony and Exhibits, in Docket No. E-7, Sub 1282, has been served by electronic mail, hand delivery or by depositing a copy in the United States mail, postage prepaid to the parties of record.

This the 4th day of May, 2023.

Ladawn S. Toon
Associate General Counsel
Duke Energy Corporation
P.O. Box 1551/NCRH 20
Raleigh, North Carolina 27602
Tel: 919.546.7971
ladawn.toon@duke-energy.com

Clark Rebuttal Revision Exhibit 1

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Summary Comparison of Fuel and Fuel Related Cost Factors
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Description	Reference	Residential cents/kWh	General cents/kWh	Industrial cents/kWh	Composite cents/kWh
	Current Fuel and Fuel Related Cost Factors (Approved Fuel Rider Docket No. E-7, Sub 1263)					
1	Approved Fuel and Fuel Related Costs Factors	Input	2.0003	1.8217	1.8396	1.9010
2	EMF Increment (Decrement) cents/kWh	Input	0.4863	0.6254	0.5726	0.5597
3	EMF Interest Increment (Decrement) cents/kWh	Input	-	-	-	-
4	Approved Net Fuel and Fuel Related Costs Factors	Sum	**2.4866**	**2.4471**	**2.4122**	**2.4607**
	Fuel and Fuel Related Cost Factors Required by Rule R8-55					
5	Proposed Nuclear Capacity Factor of 93.60% and Normalized Test Period Sales	Exh 2 Sch 2 pg 2	**3.1722**	**2.9601**	**2.8067**	**3.9138**
6	NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales	Exh 2 Sch 3 pg 2	**3.2462**	**3.0160**	**2.8598**	**3.9654**
	Proposed Fuel and Fuel Related Cost Factors using Proposed Nuclear Capacity Factor of 93.52%					
7	Fuel and Fuel Related Costs excluding Purchased Capacity cents/kWh	Exh 2 Sch 1 pg 2	1.5098	1.2979	1.0894	2.2294
8	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Exh 2 Sch 1 pg 2	0.0331	0.0245	0.0214	0.0272
9	Total adjusted Fuel and Fuel Related Costs cents/kWh	Sum	1.5429	1.3224	1.1108	2.2566
10	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6635	1.6638	1.7256	1.6764
11	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
12	Net Fuel and Fuel Related Costs Factors cents/kWh	Sum	**3.2064**	**2.9862**	**2.8364**	**3.9330**

Note: Fuel factors exclude regulatory fee

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Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,871,920	0.5609	330,239,182
2	Coal	Workpaper 3 & 4	10,197,068	3.9786	405,705,179
3	Gas CT and CC	Workpaper 3 & 4	29,873,528	3.4985	1,045,125,311
4	Reagents and Byproducts	Workpaper 9			25,288,082
5	Total Fossil	Sum	40,070,595		1,476,118,572
6	Hydro	Workpaper 3	5,280,351		
7	Net Pumped Storage	Workpaper 3	(3,799,951)		
8	Total Hydro	Sum	1,480,401		-
9	Solar Distributed Generation	Workpaper 3	359,301		-
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	100,782,217		1,806,357,754
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(23,592,537)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,888,880)		(160,254,288)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum Lines 10-13	85,014,937		1,618,823,548
15	Purchased Power	Workpaper 3 & 4	10,963,165	3.0356	332,801,702
16	JDA Savings Shared	Workpaper 5			115,585,534
17	Total Purchased Power		10,963,165		448,387,237
18	Total Generation and Purchased Power	Line 14 + Line 17	95,978,101	2.1538	2,067,210,785
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,028,431)	3.8382	(39,473,663)
20	Line losses and Company use	Line 22-Line 18-Line 19	(5,078,704)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,027,737,121
22	Projected System MWh Sales for Fuel Factor	Workpaper 7	89,870,966		89,870,966
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.2563

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.60%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7	23,311,388	24,873,076	12,148,800	60,333,264
	Calculation of Renewable and Cogeneration Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,936,094
3	QF Purchased Power - Capacity	Workpaper 4				9,663,863
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 24,599,957
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 16,403,567
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 7,717,004	$ 6,092,491	$ 2,594,072	$ 16,403,567
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0331	0.0245	0.0214	0.0272
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	1.5098	1.2979	1.0894	2.2294
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0331	0.0245	0.0214	0.0272
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	1.5429	1.3224	1.1108	2.2566
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6635	1.6638	1.7256	1.6764
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 1 Page 3	3.2064	2.9862	2.8364	3.9330

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
Proposed Nuclear Capacity Factor of 93.60%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

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Line #	Rate Class	Projected Billing Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/(Decrease) as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	D	E	F	G
		Workpaper 7	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	23,311,388	$ 2,466,691,215	$ 167,784,912	6.80%	0.7198	2.4866	3.2064
2	General Service/Lighting	24,873,076	1,971,226,718	134,083,302	6.80%	0.5391	2.4471	2.9862
3	Industrial	12,148,800	757,602,036	51,532,267	6.80%	0.4242	2.4122	2.8364
4	NC Retail	60,333,264	$ 5,195,519,969	$ 353,400,481	6.80%			

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7	$ 2,032,133,337
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 1, Page 2	24,599,957
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,007,533,380
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7	90,050,257
9	NC Retail Projected Billing Period MWh Sales	Line 4	60,333,264
10	Allocation %	Line 9 / Line 8	67.00%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,345,047,364
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 1, Page 2	16,403,567
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,361,450,931
14	NC Retail Projected Billing Period MWh Sales	Line 4	60,333,264
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.2566
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	1.6764
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.9330

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	1.4723
24	NC Retail Projected Billing Period MWh Sales	Line 4	60,333,264
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 888,286,650
26	EDIT Mitigation		$ (534,886,169)
27	Net Increase/(Decrease) in Fuel Costs with EDIT Mitigation		$ 353,400,481

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.60% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,871,920	0.5609	330,239,182
2	Coal	Calculated	9,207,306	3.9786	366,326,086
3	Gas CT and CC	Workpaper 3 & 4	29,873,528	3.4985	1,045,125,311
4	Reagents and Byproducts	Workpaper 9	-		25,288,082
5	Total Fossil	Sum	39,080,834		1,436,739,479
6	Hydro	Workpaper 3	5,280,351		
7	Net Pumped Storage	Workpaper 3	(3,799,951)		
8	Total Hydro	Sum	1,480,401		
9	Solar Distributed Generation	Workpaper 3	359,301		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	99,792,455		1,766,978,661
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(23,592,537)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,888,880)		(160,254,288)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum	84,025,175		1,579,444,455
15	Purchased Power	Workpaper 3 & 4	10,963,165		332,801,702
16	JDA Savings Shared	Workpaper 5	-		115,585,534
17	Total Purchased Power	Sum	10,963,165		448,387,237
18	Total Generation and Purchased Power	Line 14 + Line 17	94,988,340		2,027,831,691
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,028,431)		(39,473,663)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(5,078,704)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			1,988,358,028
22	Normalized Test Period MWh Sales	Exhibit 4	88,881,205		88,881,205
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.2371

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.60% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

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Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Normalized Test Period MWh Sales	Exhibit 4	22,892,401	24,448,017	12,219,040	59,559,458
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,936,094
3	QF Purchased Power - Capacity	Workpaper 4				9,663,863
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 24,599,957
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 16,403,567
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 7,717,004	$ 6,092,491	$ 2,594,072	$ 16,403,567
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales	Line 8 / Line 1 / 10	0.0337	0.0249	0.0212	0.0275
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	1.4750	1.2714	1.0599	2.2099
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0337	0.0249	0.0212	0.0275
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	1.5087	1.2963	1.0811	2.2374
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6635	1.6638	1.7256	1.6764
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 2 Page 3	3.1722	2.9601	2.8067	3.9138

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
Proposed Nuclear Capacity Factor of 93.60% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
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Line #	Rate Class	Normalized Test Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/(Decrease) as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	D	E	F	G
		Exhibit 4	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	22,892,401	$ 2,466,691,215	$ 156,946,722	6.36%	0.6856	2.4866	3.1722
2	General Service/Lighting	24,448,017	$ 1,971,226,718	125,422,091	6.36%	0.5130	2.4471	2.9601
3	Industrial	12,219,040	$ 757,602,036	48,203,502	6.36%	0.3945	2.4122	2.8067
4	NC Retail	59,559,458	$ 5,195,519,969	$ 330,572,315				

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7a	$ 1,992,754,243
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 2, Page 2	24,599,957
7	System Other Fuel Costs	Line 5 - Line 6	$ 1,968,154,286
8	Normalized Test Period System MWh Sales for Fuel Factor	Workpaper 7a	89,060,496
9	NC Retail Normalized Test Period MWh Sales	Exhibit 4	59,559,458
10	Allocation %	Line 9 / Line 8	66.88%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,316,208,690
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 2, Page 2	16,403,567
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,332,612,257
14	NC Retail Normalized Test Period MWh Sales	Line 9	59,559,458
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.2374
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	1.6764
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.9138

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	1.4531
24	NC Retail Normalized Test Period MWh Sales	Exhibit 4	59,559,458
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 865,458,484
26	EDIT Mitigation		$ (534,886,169)
27	Net Increase/(Decrease) in Fuel Costs with EDIT Mitigation		$ 330,572,315

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
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Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 2	57,782,460	0.5609	324,127,910
2	Coal	Calculated	11,010,999	3.9786	438,088,639
3	Gas CT and CC	Workpaper 3 & 4	29,873,528	3.4985	1,045,125,311
4	Reagents and Byproducts	Workpaper 9	-		25,288,082
5	Total Fossil	Sum	40,884,527		1,508,502,032
6	Hydro	Workpaper 3	5,280,351		
7	Net Pumped Storage	Workpaper 3	(3,799,951)		
8	Total Hydro	Sum	1,480,401		
9	Solar Distributed Generation	Workpaper 3	359,301		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	100,506,689		1,832,629,942
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(23,592,537)
12	Less Catawba Joint Owners	Calculated	(14,613,352)		(157,288,682)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum	85,014,937		1,648,061,342
15	Purchased Power	Workpaper 3 & 4	10,963,165		332,801,702
16	JDA Savings Shared	Workpaper 5	-		115,585,534
17	Total Purchased Power	Sum	10,963,165		448,387,237
18	Total Generation and Purchased Power	Line 14 + Line 17	95,978,101		2,096,448,579
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,028,431)		(39,473,663)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(5,078,704)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,056,974,915
22	Projected System MWh Sales for Fuel Factor	Workpaper 7b	89,870,966		89,870,966
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.2888

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
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Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7b	23,311,388	24,873,076	12,148,800	60,333,264
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,936,094
3	QF Purchased Power - Capacity	Workpaper 4				9,663,863
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 24,599,957
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 16,403,567
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 7,717,004	$ 6,092,491	$ 2,594,072	$ 16,403,567
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0331	0.0245	0.0214	0.0272
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	1.5496	1.3277	1.1128	2.2618
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0331	0.0245	0.0214	0.0272
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	1.5827	1.3522	1.1342	2.2890
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	1.6635	1.6638	1.7256	1.6764
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 3 Page 3	3.2462	3.0160	2.8598	3.9654

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
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Line #	Rate Class	Projected Billing Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/Decrease as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	C / B = D	E	F	G
		Workpaper 7b	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	23,311,388	$ 2,466,691,215	$ 177,065,759	7.18%	0.7596	2.4866	3.2462
2	General Service/Lighting	24,873,076	$ 1,971,226,718	$ 141,499,979	7.18%	0.5689	2.4471	3.0160
3	Industrial	12,148,800	$ 757,602,036	$ 54,382,721	7.18%	0.4476	2.4122	2.8598
4	NC Retail	60,333,264	$ 5,195,519,969	$ 372,948,459				

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7b	$ 2,061,371,131
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 3, Page 2	24,599,957
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,036,771,174
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7b	90,050,257
9	NC Retail Projected Billing Period MWh Sales	Line 4	60,333,264
10	Allocation %	Line 9 / Line 8	67.00%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,364,636,686
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 3, Page 2	16,403,567
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,381,040,253
14	NC Retail Projected Billing Period MWh Sales	Line 4	60,333,264
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.2890
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	1.6764
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.9654

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	1.5047
24	NC Retail Projected Billing Period MWh Sales	Line 4	60,333,264
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 907,834,628
26	EDIT Mitigation		$ (534,886,169)
27	Net Increase/(Decrease) in Fuel Costs with EDIT Mitigation		$ 372,948,459

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Proposed Nuclear Capacity Factor
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 1

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	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs	9,980,344	9,191,590	8,868,313	9,887,079	7,345,341	6,787,188	6,812,066	58,871,920
Cost (Gross of Joint Owners)	$ 62,084,118	$ 50,530,499	$ 46,895,042	$ 53,798,314	$ 41,957,266	$ 34,678,076	$ 40,295,868	$ 330,239,182
$/MWh	6.2206	5.4975	5.2879	5.4413	5.7121	5.1093	5.9154	
Avg $/MWh		**5.6095**						
Cents per kWh		**0.5609**						

			Sept 2023 - August 2024
MDC			
CATA_UN01	Catawba	MW	1,160.0
CATA_UN02	Catawba	MW	1,150.1
MCGU_UN01	McGuire	MW	1,158.0
MCGU_UN02	McGuire	MW	1,157.6
OCON_UN01	Oconee	MW	847.0
OCON_UN02	Oconee	MW	848.0
OCON_UN03	Oconee	MW	859.0
			7,179.7
Hours In Year			8,760
Generation GWhs			
CATA_UN01	Catawba	GWh	9,980
CATA_UN02	Catawba	GWh	9,192
MCGU_UN01	McGuire	GWh	8,868
MCGU_UN02	McGuire	GWh	9,887
OCON_UN01	Oconee	GWh	7,345
OCON_UN02	Oconee	GWh	6,787
OCON_UN03	Oconee	GWh	6,812
			58,872
	Proposed Nuclear Capacity Factor		93.60%

rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

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	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs with NERC applied	9,272,460	9,193,324	9,256,473	9,253,276	6,900,340	6,908,486	6,998,101	57,782,460
Hours	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760
MDC	1,160.0	1,150.1	1,158.0	1,157.6	847.0	848.0	859.0	7,179.7
Capacity factor	91.25%	91.25%	91.25%	91.25%	93.00%	93.00%	93.00%	91.87%
Cost	$ 52,013,415	$ 51,569,507	$ 51,923,737	$ 51,905,801	$ 38,707,121	$ 38,752,820	$ 39,255,510	$ 324,127,910

Avg $/MWh **5.6095**
Cents per kWh **0.5609**

2017-2021	Capacity Rating	NCF Rating	Weighted Average	
Oconee 1	847.0	93.00	10.97%	
Oconee 2	848.0	93.00	10.98%	
Oconee 3	859.0	93.00	11.13%	
McGuire 1	1,158.0	91.25	14.72%	
McGuire 2	1,157.6	91.25	14.71%	
Catawba 1	1,160.0	91.25	14.74%	
Catawba 2	1,150.1	91.25	14.62%	
	7,179.7		**91.87%**	Wtd Avg on Capacity Rating

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Duke Energy Carolinas, LLC **Clark Rebuttal Revised Workpaper 3**
North Carolina Annual Fuel and Fuel Related Expense
North Carolina Generation and Purchased Power in MWhs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Resource Type	**Sept 2023 - August 2024**	
NUC Total (Gross)	58,871,920	
COAL Total	10,197,068	
Gas CT and CC total (Gross)	29,873,528	
Run of River	5,280,351	
Net pumped Storage	(3,799,951)	
Total Hydro	1,480,401	
Catawba Joint Owners	(14,888,880)	
Lee CC Joint Owners	(878,400)	
DEC owned solar	359,301	
Total Generation		85,014,937
Purchases for REPS Compliance	1,436,977	
Qualifying Facility Purchases - Non-REPS compliance	1,788,429	
Other Purchases	166,722	
Allocated Economic Purchases	504,389	
Joint Dispatch Purchases	7,066,647	
	10,963,165	
Total Generation and Purchased Power		95,978,101
Fuel Recovered Through Intersystem Sales	(1,028,431)	

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Duke Energy Carolinas, LLC **Clark Rebuttal Revised Workpaper 4**
North Carolina Annual Fuel and Fuel Related Expense
Projected Fuel and Fuel Related Costs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Resource Type	Sept 2023 - August 2024	
Nuclear Total (Gross)	$ 330,239,182	
COAL Total	405,705,179	
Gas CT and CC total (Gross)	1,045,125,311	
Catawba Joint Owner costs	(160,254,288)	
CC Joint Owner costs	(23,592,537)	
Non-Economic Fuel Expense Recovered through Reimbursement	(3,687,381)	
Reagents and gain/loss on sale of By-Products	25,288,082	Workpaper 9
Purchases for REPS Compliance - Energy	68,804,621	
Purchases for REPS Compliance - Capacity	14,936,094	
Purchases of Qualifying Facilities - Energy	46,784,121	
Purchases of Qualifying Facilities - Capacity	9,663,863	
Other Purchases	442,692	
JDA Savings Shared	115,585,534	Workpaper 5
Allocated Economic Purchase cost	22,007,503	Workpaper 5
Joint Dispatch purchases	170,162,808	Workpaper 6
Total Purchases	448,387,237	
Fuel Expense recovered through intersystem sales	(39,473,663)	Workpaper 5
Total System Fuel and Fuel Related Costs	**$ 2,027,737,121**	

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Duke Energy Carolinas, LLC **Clark Rebuttal Revised Workpaper 5**
North Carolina Annual Fuel and Fuel Related Expense
Projected Joint Dispatch Fuel Impacts
Billing Period September 2023 through August 2024
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Positive numbers represent costs to ratepayers, Negative numbers represent removal of costs to ratepayers

	Allocated Economic Purchase Cost		Economic Sales Cost		Fuel Transfer Payment		JDA Savings Payment	
	DEP	**DEC**	**DEP**	**DEC**	**DEP**	**DEC**	**DEP**	**DEC**
9/1/2023	$ 647,873	$ 978,148	$ (1,013,222)	$ (210,902)	$ (19,424,084)	$ 19,424,084	$ (14,054,141)	$ 14,054,141
10/1/2023	$ 1,013,990	$ 431,348	$ (417,155)	$ (186,378)	$ (15,815,993)	$ 15,815,993	$ (5,353,793)	$ 5,353,793
11/1/2023	$ 3,199,149	$ 2,357,689	$ (553,353)	$ (161,351)	$ (13,137,037)	$ 13,137,037	$ (7,464,228)	$ 7,464,228
12/1/2023	$ 1,234,637	$ 1,823,317	$ (6,565,637)	$ (1,577,591)	$ (17,362,556)	$ 17,362,556	$ (3,700,688)	$ 3,700,688
1/1/2024	$ 2,710,394	$ 3,918,202	$ (8,902,259)	$ (9,199,451)	$ (13,075,319)	$ 13,075,319	$ (12,308,043)	$ 12,308,043
2/1/2024	$ 461,528	$ 678,216	$ (9,119,170)	$ (9,695,477)	$ (10,474,496)	$ 10,474,496	$ (3,083,001)	$ 3,083,001
3/1/2024	$ 702,147	$ 1,012,669	$ (1,229,751)	$ (615,762)	$ (3,371,359)	$ 3,371,359	$ 449,444	$ (449,444)
4/1/2024	$ 3,424,152	$ 3,700,357	$ (1,189,893)	$ (487,140)	$ (7,303,371)	$ 7,303,371	$ (5,056,429)	$ 5,056,429
5/1/2024	$ 635,825	$ 962,431	$ (1,571,140)	$ (465,036)	$ (11,184,244)	$ 11,184,244	$ (3,536,847)	$ 3,536,847
6/1/2024	$ 2,825,707	$ 4,022,008	$ (1,028,743)	$ (521,349)	$ (14,844,982)	$ 14,844,982	$ (12,855,914)	$ 12,855,914
7/1/2024	$ 1,281,574	$ 928,342	$ (3,381,926)	$ (2,371,343)	$ (16,781,326)	$ 16,781,326	$ (35,473,683)	$ 35,473,683
8/1/2024	$ 829,726	$ 1,194,776	$ (2,611,213)	$ (1,983,996)	$ (15,390,154)	$ 15,390,154	$ (13,148,211)	$ 13,148,211
Sept 23 - Aug 24		$ 22,007,503		$ (27,475,776)		$ 158,164,920		$ 115,585,534

$ 170,162,808	Workpaper 6 - Transfer - Purchases
$ (11,997,888)	Workpaper 6 - Transfer - Sales
$ 158,164,920	Sept 22-Aug 23 Net Fuel Transfer Payment
$ (11,997,888)	Workpaper 6 - Transfer - Sales
$ (27,475,776)	Sept 23-Aug 24 Economic Sales Cost
$ (39,473,663)	**Total Fuel expense recovered through intersystem sales**

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Merger Payments
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 6

					Purchase	Sale			Sale	Purchase
	Transfer Projection		Purchase Allocation Delta		Adjusted Transfer		Fossil Gen Cost		Pre-Net Payments	
	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC
9/1/2023	888,206	6,167	12,746	(12,746)	900,952	6,167	21.69	19.50	120,285	19,544,370
10/1/2023	759,078	22,356	24,443	(24,443)	783,521	22,356	20.73	19.03	425,482	16,241,475
11/1/2023	707,022	10,465	36,802	(36,802)	743,824	10,465	17.98	22.78	238,408	13,375,445
12/1/2023	668,931	8,104	(1,330)	1,330	668,931	9,435	26.35	28.09	265,028	17,627,583
1/1/2024	440,541	10,654	7,184	(7,184)	447,724	10,654	29.99	32.85	350,028	13,425,347
2/1/2024	372,757	14,658	(2,015)	2,015	372,757	16,673	29.44	29.98	499,850	10,974,346
3/1/2024	320,748	229,436	(1,388)	1,388	320,748	230,824	28.06	24.38	5,627,246	8,998,605
4/1/2024	368,059	68,107	26,423	(26,423)	394,482	68,107	22.61	23.72	1,615,378	8,918,750
5/1/2024	599,170	44,714	3,506	(3,506)	602,676	44,714	20.39	24.74	1,106,424	12,290,668
6/1/2024	565,913	29,299	58,422	(58,422)	624,334	29,299	24.95	24.99	732,110	15,577,092
7/1/2024	613,464	22,701	16,901	(16,901)	630,366	22,701	27.59	26.81	608,571	17,389,897
8/1/2024	552,420	15,664	23,912	(23,912)	576,332	15,664	27.41	26.11	409,076	15,799,230
Sept 23 - Aug 24	6,856,310	482,326	205,604	(205,604)	7,066,647	487,060			$ 11,997,888	$ 170,162,808
									Net Pre-Net Payments	$ 158,164,920

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.60%
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Spring 2023 Forecast
Billed Sales Forecast
Sales Forecast - MWhs (000)

		Projected sales for the Billing Period	Remove impact of SC DERP Net Metered Generation	Adjusted Sales
North Carolina:				
	Residential	23,311,388		23,311,388
	General	24,631,092		24,631,092
	Industrial	12,148,800		12,148,800
	Lighting	241,984		241,984
	NC RETAIL	60,333,264	-	60,333,264
South Carolina:				
	Residential	7,175,070	136,278	7,311,348
	General	5,591,750	42,584	5,634,334
	Industrial	8,402,177	429	8,402,606
	Lighting	49,483	-	49,483
	SC RETAIL	21,218,481	179,291	21,397,771
Total Retail Sales				
	Residential	30,486,458	136,278	30,622,736
	General	30,222,842	42,584	30,265,426
	Industrial	20,550,977	429	20,551,406
	Lighting	291,467	-	291,467
	Retail Sales	81,551,744	179,291	81,731,035
	Wholesale	8,319,222	-	8,319,222
	Projected System MWH Sales for Fuel Factor	89,870,966	179,291	90,050,257
	NC as a percentage of total	**67.13%**		**67.00%**
	SC as a percentage of total	23.61%		23.76%
	Wholesale as a percentage of total	9.26%		9.24%
		100.00%		100.00%
	SC Net Metering allocation adjustment			
	Total projected SC NEM MWhs		179,291	
	Marginal fuel rate per MWh for SC NEM		$ 24.52	
	Fuel benefit to be directly assigned to SC Retail		$ 4,396,215	
	System Fuel Expense		$ 2,027,737,121	Clark Exhibit 2 Schedule 1 Page 1 of 3
	Fuel benefit to be directly assigned to SC Retail		$ 4,396,215	
	Total Fuel Costs for Allocation		$ 2,032,133,337	Clark Exhibit 2 Schedule 1 Page 3 of 3, L5

Reconciliation	System	NC Retail Customers	Wholesale	South Carolina Retail	
Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1	$ 2,027,737,121				
QF and REPS Compliance Purchased Power - Capacity	$ 24,599,957				
Other fuel costs	$ 2,003,137,164				
SC Net Metering Fuel Allocation adjustment	$ 4,396,215				
Jurisdictional fuel costs after adj.	$ 2,007,533,380				
Allocation to states/classes		67.00%	9.24%	23.76%	
Jurisdictional fuel costs	$ 2,007,533,380	$ 1,345,047,364	$ 185,496,084	$ 476,989,931	66.68%
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)	
Total system actual fuel costs	$ 2,003,137,164	$ 1,345,047,364	$ 185,496,084	$ 472,593,716	
QF and REPS Compliance Purchased Power - Capacity	24,599,957	16,403,567			
Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1	$ 2,027,737,121	**$ 1,361,450,931**			
		Exh.2, Sch. 1 page 3, Line 13			

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.60% and Normalized Test Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 7a

Spring 2023 Forecast
Billed Sales Forecast - Normalized Test Period Sales
Sales Forecast - MWhs (000)

	Test Period Sales	Customer Growth Adjustment	Weather Adjustment	Remove impact of SC DERP Net Metered generation	Normalized Test Period Sales
NC RETAIL	59,059,117	162,487	337,854	-	59,559,458
SC RETAIL	20,955,111	(8,320)	99,613	179,291	21,225,695
Wholesale	8,269,814	5,836	(306)	-	8,275,343
Normalized System MWH Sales for Fuel Factor	88,284,042	160,003	437,160	179,291	89,060,496
NC as a percentage of total	**66.90%**				**66.88%**
SC as a percentage of total	23.74%				23.83%
Wholesale as a percentage of total	9.37%				9.29%
	100.00%				100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	179,291
Marginal fuel rate per MWh for SC NEM	$ 24.52
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215

System Fuel Expense	$ 1,988,358,028	Clark Exhibit 2 Schedule 2 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 1,992,754,243	Clark Exhibit 2 Schedule 2 Page 3 of 3, L5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**
Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1	$ 1,988,358,028			
QF and REPS Compliance Purchased Power - Capacity	$ 24,599,957			
Other fuel costs	$ 1,963,758,071			
SC Net Metering Fuel Allocation adjustment	$ 4,396,215			
Jurisdictional fuel costs after adj.	$ 1,968,154,286			
Allocation to states/classes		66.88%	9.29%	23.83%
Jurisdictional fuel costs	$ 1,968,154,275	$ 1,316,208,690	$ 182,877,409	$ 469,068,167
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)
Total system actual fuel costs	$ 1,963,758,060	$ 1,316,208,690	$ 182,877,409	$ 464,671,952
QF and REPS Compliance Purchased Power - Capacity	24,599,957	16,403,567		
Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1	$ 1,988,358,017	**$ 1,332,612,257**		
		Exh. 2, Sch 2 page 3, Line 13		

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 7b

Spring 2023 Forecast
Billed Sales Forecast
Sales Forecast - MWhs (000)

		Projected sales for the Billing Period	Remove impact of SC DERP Net Metered generation	Adjusted Sales
North Carolina:				
	Residential	23,311,388		23,311,388
	General	24,631,092		24,631,092
	Industrial	12,148,800		12,148,800
	Lighting	241,984		241,984
	NC RETAIL	60,333,264	-	60,333,264
South Carolina:				
	Residential	7,175,070	136,278	7,311,348
	General	5,591,750	42,584	5,634,334
	Industrial	8,402,177	429	8,402,606
	Lighting	49,483	0	49,483
	SC RETAIL	21,218,481	179,291	21,397,772
Total Retail Sales				
	Residential	30,486,458	136,278	30,622,736
	General	30,222,842	42,584	30,265,426
	Industrial	20,550,977	429	20,551,406
	Lighting	291,467	-	291,467
	Retail Sales	81,551,745	179,291	81,731,036
	Wholesale	8,319,222	-	8,319,222
	Projected System MWh Sales for Fuel Factor	89,870,966	179,291	90,050,257
	NC as a percentage of total	**67.13%**		**67.00%**
	SC as a percentage of total	23.61%		23.76%
	Wholesale as a percentage of total	9.26%		9.24%
		100.00%		100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	179,291	
Marginal fuel rate per MWh for SC NEM	$ 24.52	
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
System Fuel Expense	$ 2,056,974,915	Clark Exhibit 2 Schedule 3 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 2,061,371,131	Clark Exhibit 2 Schedule 3 Page 3 of 3, Line 5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**
Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1	$ 2,056,974,915			
QF and REPS Compliance Purchased Power - Capacity	$ 24,599,957			
Other fuel costs	$ 2,032,374,958			
SC Net Metering Fuel Allocation adjustment	$ 4,396,215			
Jurisdictional fuel costs after adj.	$ 2,036,771,174			
Allocation to states/classes		67.00%	9.24%	23.76%
Jurisdictional fuel costs	$ 2,036,771,174	$ 1,364,636,686	$ 188,197,656	$ 483,936,831
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)
Total system actual fuel costs	$ 2,032,374,958	$ 1,364,636,686	$ 188,197,656	$ 479,540,616
QF and REPS Compliance Purchased Power - Capacity	24,599,957	16,403,567		
Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1	$ 2,056,974,915	**$ 1,381,040,253**		
		Exh. 2, Sch.3 page 3, Line 13		

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Reagents and ByProducts
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 9

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Reagent and ByProduct projections

Date	Ammonia	Urea	Limestone	Magnesium Hydroxide	Calcium Carbonate	Lime	**Reagent Cost**	**Gypsum (Gain)/ Loss**	**Ash (Gain)/Loss**	**Steam (Gain)/Loss**	**Sale of By-Products (Gain)/Loss**
9/1/2022	$ 187,067	$ 17,823	$ 224,474	$ 34,843	$ 21,125	$ 13,158	**$ 498,490**	$ 60,002	$ (7,251)	$ (188,430)	**$ (135,678)**
10/1/2022	$ 77,713	$ 7,404	$ 93,252	$ 15,002	$ 9,096	$ 13,158	**$ 215,624**	$ 25,001	$ (2,374)	$ (188,430)	**$ (165,802)**
11/1/2022	$ 722,011	$ 68,791	$ 866,389	$ 64,517	$ 39,117	$ 13,158	**$ 1,773,984**	$ 249,743	$ (79,195)	$ (188,430)	**$ (17,881)**
12/1/2022	$ 1,605,806	$ 152,997	$ 1,926,913	$ 118,263	$ 71,702	$ 13,158	**$ 3,888,839**	$ 669,682	$ (187,273)	$ (188,430)	**$ 293,979**
1/1/2023	$ 2,375,310	$ 226,313	$ 2,850,292	$ 160,896	$ 97,551	$ 13,158	**$ 5,723,520**	$ 1,050,918	$ (243,517)	$ (188,430)	**$ 618,972**
2/1/2023	$ 1,859,654	$ 177,183	$ 2,231,522	$ 141,074	$ 85,533	$ 13,158	**$ 4,508,124**	$ 751,057	$ (195,534)	$ (188,430)	**$ 367,093**
3/1/2023	$ 659,731	$ 62,857	$ 791,655	$ 47,064	$ 28,535	$ 13,158	**$ 1,603,000**	$ 204,428	$ (67,657)	$ (188,430)	**$ (51,659)**
4/1/2023	$ 335,275	$ 31,944	$ 402,319	$ 34,846	$ 21,127	$ 13,158	**$ 838,668**	$ 80,541	$ (18,937)	$ (188,430)	**$ (126,826)**
5/1/2023	$ 289,085	$ 27,543	$ 346,892	$ 37,815	$ 22,927	$ 13,158	**$ 737,420**	$ 85,062	$ (19,979)	$ (188,430)	**$ (123,347)**
6/1/2023	$ 583,585	$ 55,602	$ 700,283	$ 59,048	$ 35,801	$ 13,158	**$ 1,447,477**	$ 204,383	$ (67,998)	$ (188,430)	**$ (52,044)**
7/1/2023	$ 765,121	$ 72,899	$ 918,120	$ 69,159	$ 41,931	$ 13,158	**$ 1,880,387**	$ 295,936	$ (96,985)	$ (236,498)	**$ (37,547)**
8/1/2023	$ 673,991	$ 64,216	$ 808,766	$ 66,344	$ 40,224	$ 13,158	**$ 1,666,699**	$ 253,476	$ (80,390)	$ (236,498)	**$ (63,411)**
	$ 10,134,349	$ 965,573	$ 12,160,878	$ 848,869	$ 514,668	$ 157,896	**$ 24,782,233**	$ 3,930,230	$ (1,067,089)	$ (2,357,293)	**$ 505,848**

Total Reagent cost and Sale of By-products **$ 25,288,082**

rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2022
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 10

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Line No.	Description	Forecast $	(Over)/Under Collection $	Total $
1	Amount in current docket	108,889,655	70,794,129	179,683,784
2	Amount in Sub 1263, prior year docket	100,735,755	13,526,437	114,262,192
3	Increase/(Decrease)	8,153,900	57,267,693	65,421,592
4	2.5% of 2022 NC retail revenue of $4,944,339,147			123,608,479
	Excess of purchased power growth over 2.5% of revenue			0
	E-7, Sub 1282			
WP 4	Purchases for REPS Compliance - Energy	68,804,621	67.00%	46,099,096
WP 4	Purchases for REPS Compliance - Capacity	14,936,094	66.68%	9,959,579
WP 4	Purchases	442,692	67.00%	296,604
WP 4	QF Energy	46,784,121	67.00%	31,345,361
WP 4	QF Capacity	9,663,863	66.68%	6,443,988
WP 4	Allocated Economic Purchase cost	22,007,503	67.00%	14,745,027
		162,638,895		108,889,655
	E-7, Sub 1263			
	Purchases for REPS Compliance	66,782,210	66.08%	44,126,819
	Purchases for REPS Compliance Capacity	14,610,064	66.68%	9,742,178
	Purchases	7,489,994	66.08%	4,949,066
	QF Energy	40,652,503	66.08%	26,861,429
	QF Capacity	8,445,498	66.68%	5,631,567
	Allocated Economic Purchase cost	14,263,480	66.08%	9,424,695
		152,243,749		100,735,755

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Summary Comparison of Fuel and Fuel Related Cost Factors
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Second Revised Exhibit 1

Line #	Description	Reference	Residential cents/kWh	General cents/kWh	Industrial cents/kWh	Composite cents/kWh
	Current Fuel and Fuel Related Cost Factors (Approved Fuel Rider Docket No. E-7, Sub 1263)					
1	Approved Fuel and Fuel Related Costs Factors	Input	2.0003	1.8217	1.8396	1.9010
2	EMF Increment (Decrement) cents/kWh	Input	0.4863	0.6254	0.5726	0.5597
3	EMF Interest Increment (Decrement) cents/kWh	Input	-	-	-	-
4	Approved Net Fuel and Fuel Related Costs Factors	Sum	**2.4866**	**2.4471**	**2.4122**	**2.4607**
	Fuel and Fuel Related Cost Factors Required by Rule R8-55					
5	Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales	Exh 2 Sch 2 pg 2	**3.2329**	**3.0056**	**2.8416**	**3.0649**
6	NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales	Exh 2 Sch 3 pg 2	**3.3057**	**3.0854**	**2.8573**	**3.1266**
	Proposed Fuel and Fuel Related Cost Factors using Proposed Nuclear Capacity Factor of 93.52%					
7	Fuel and Fuel Related Costs excluding Purchased Capacity cents/kWh	Exh 2 Sch 1 pg 2	2.4695	2.2648	1.9895	2.2905
8	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Exh 2 Sch 1 pg 2	0.0362	0.0279	0.0215	0.0297
9	Total adjusted Fuel and Fuel Related Costs cents/kWh	Sum	2.5057	2.2927	2.0110	2.3202
10	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.7654	0.7657	0.8275	0.7783
11	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
12	Net Fuel and Fuel Related Costs Factors cents/kWh	Sum	**3.2711**	**3.0584**	**2.8385**	**3.0985**

Note: Fuel factors exclude regulatory fee

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Second Revised Exhibit 2
Schedule 1
Page 1 of 3

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,819,128	0.5613	330,162,771
2	Coal	Workpaper 3 & 4	10,320,159	3.8575	398,104,637
3	Gas CT and CC	Workpaper 3 & 4	31,212,640	3.7804	1,179,963,909
4	Reagents and Byproducts	Workpaper 9			24,944,696
5	Total Fossil	Sum	41,532,800		1,603,013,242
6	Hydro	Workpaper 3	5,600,555		
7	Net Pumped Storage	Workpaper 3	(4,083,743)		
8	Total Hydro	Sum	1,516,812		-
9	Solar Distributed Generation	Workpaper 3	358,121		-
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	102,226,860		1,933,176,012
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(25,697,152)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,888,880)		(83,614,236)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum Lines 10-13	86,459,580		1,820,177,243
15	Purchased Power	Workpaper 3 & 4	11,789,258	3.5185	414,804,733
16	JDA Savings Shared	Workpaper 5			(69,598,371)
17	Total Purchased Power		11,789,258		345,206,362
18	Total Generation and Purchased Power	Line 14 + Line 17	98,248,839	2.2040	2,165,383,605
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,148,043)	5.0520	(57,998,825)
20	Line losses and Company use	Line 22-Line 18-Line 19	(6,269,005)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,107,384,780
22	Projected System MWh Sales for Fuel Factor	Workpaper 7	90,831,791		90,831,791
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.3201

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7	23,477,265	24,077,007	13,270,457	60,824,730
	Calculation of Renewable and Cogeneration Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,931,581
3	QF Purchased Power - Capacity	Workpaper 4				12,176,644
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 27,108,225
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 18,076,112
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 8,503,847	$ 6,713,696	$ 2,858,570	$ 18,076,112
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0362	0.0279	0.0215	0.0297
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	2.4695	2.2648	1.9895	2.2905
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0362	0.0279	0.0215	0.0297
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	2.5057	2.2927	2.0110	2.3202
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.7654	0.7657	0.8275	0.7783
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 1 Page 3	3.2711	3.0584	2.8385	3.0985

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
Proposed Nuclear Capacity Factor of 93.52%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Rate Class	Projected Billing Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/(Decrease) as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	D	E	F	G
		Workpaper 7	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	23,477,265	$ 2,466,691,215	$ 184,183,394	7.47%	0.7845	2.4866	3.2711
2	General Service/Lighting	24,077,007	1,971,226,718	147,187,952	7.47%	0.6113	2.4471	3.0584
3	Industrial	13,270,457	757,602,036	56,568,781	7.47%	0.4263	2.4122	2.8385
4	NC Retail	60,824,730	$ 5,195,519,969	$ 387,940,127	7.47%			

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7	$ 2,111,780,996
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 1, Page 2	27,108,225
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,084,672,770
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7	91,011,082
9	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
10	Allocation %	Line 9 / Line 8	66.83%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,393,186,813
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 1, Page 2	18,076,112
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,411,262,925
14	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.3202
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	0.7783
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.0985

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	0.6378
24	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 387,940,127

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

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Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,819,128	0.5613	330,162,771
2	Coal	Calculated	8,369,573	3.8575	322,859,932
3	Gas CT and CC	Workpaper 3 & 4	31,212,640	3.7804	1,179,963,909
4	Reagents and Byproducts	Workpaper 9	-		24,944,696
5	Total Fossil	Sum	39,582,214		1,527,768,538
6	Hydro	Workpaper 3	5,600,555		
7	Net Pumped Storage	Workpaper 3	(4,083,743)		
8	Total Hydro	Sum	1,516,812		
9	Solar Distributed Generation	Workpaper 3	358,121		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	100,276,274		1,857,931,308
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(25,697,152)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,888,880)		(83,614,236)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum	84,508,994		1,744,932,539
15	Purchased Power	Workpaper 3 & 4	11,789,258		414,804,733
16	JDA Savings Shared	Workpaper 5	-		(69,598,371)
17	Total Purchased Power	Sum	11,789,258		345,206,362
18	Total Generation and Purchased Power	Line 14 + Line 17	96,298,253		2,090,138,901
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,148,043)		(57,998,825)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(6,269,005)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,032,140,076
22	Normalized Test Period MWh Sales	Exhibit 4	88,881,205		88,881,205
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.2864

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Normalized Test Period MWh Sales	Exhibit 4	22,892,401	24,448,017	12,219,040	59,559,458
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,931,581
3	QF Purchased Power - Capacity	Workpaper 4				12,176,644
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 27,108,225
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 18,076,112
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 8,503,847	$ 6,713,696	$ 2,858,570	$ 18,076,112
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales	Line 8 / Line 1 / 10	0.0371	0.0275	0.0234	0.0303
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	2.4304	2.2124	1.9907	2.2563
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0371	0.0275	0.0234	0.0303
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	2.4675	2.2399	2.0141	2.2866
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.7654	0.7657	0.8275	0.7783
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 2 Page 3	3.2329	3.0056	2.8416	3.0649

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Rate Class	Normalized Test Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/(Decrease) as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	D	E	F	G
		Exhibit 4	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	22,892,401	$ 2,466,691,215	$ 170,850,882	6.93%	0.7463	2.4866	3.2329
2	General Service/Lighting	24,448,017	$ 1,971,226,718	136,533,435	6.93%	0.5585	2.4471	3.0056
3	Industrial	12,219,040	$ 757,602,036	52,473,928	6.93%	0.4294	2.4122	2.8416
4	NC Retail	59,559,458	$ 5,195,519,969	$ 359,858,245				

Line #	Description	Source	Amount
	Total Proposed Composite Fuel Rate:		
5	Total Fuel Costs for Allocation	Workpaper 7a	$ 2,036,536,291
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 2, Page 2	27,108,225
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,009,428,066
8	Normalized Test Period System MWh Sales for Fuel Factor	Workpaper 7a	89,060,496
9	NC Retail Normalized Test Period MWh Sales	Exhibit 4	59,559,458
10	Allocation %	Line 9 / Line 8	66.88%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,343,810,646
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 2, Page 2	18,076,112
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,361,886,758
14	NC Retail Normalized Test Period MWh Sales	Line 9	59,559,458
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.2866
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	0.7783
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.0649
	Total Current Composite Fuel Rate - Docket E-7 Sub 1263:		
19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	0.6042
24	NC Retail Normalized Test Period MWh Sales	Exhibit 4	59,559,458
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 359,858,245

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Second Revised Exhibit 2
Schedule 3
Page 1 of 3

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Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 2	57,782,460	0.5613	324,343,758
2	Coal	Calculated	11,094,415	3.8575	427,971,909
3	Gas CT and CC	Workpaper 3 & 4	31,212,640	3.7804	1,179,963,909
4	Reagents and Byproducts	Workpaper 9	-		24,944,696
5	Total Fossil	Sum	42,307,056		1,632,880,514
6	Hydro	Workpaper 3	5,600,555		
7	Net Pumped Storage	Workpaper 3	(4,083,743)		
8	Total Hydro	Sum	1,516,812		
9	Solar Distributed Generation	Workpaper 3	358,121		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	101,964,448		1,957,224,272
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(878,400)		(25,697,152)
12	Less Catawba Joint Owners	Calculated	(14,626,468)		(82,140,560)
13	Fuel expense recovered through reimbursement	Workpaper 4			(3,687,381)
14	Net Generation	Sum	86,459,580		1,845,699,178
15	Purchased Power	Workpaper 3 & 4	11,789,258		414,804,733
16	JDA Savings Shared	Workpaper 5	-		(69,598,371)
17	Total Purchased Power	Sum	11,789,258		345,206,362
18	Total Generation and Purchased Power	Line 14 + Line 17	98,248,839		2,190,905,541
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,148,043)		(57,998,825)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(6,269,005)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			2,132,906,715
22	Projected System MWh Sales for Fuel Factor	Workpaper 7b	90,831,791		90,831,791
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			2.3482

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7b	23,477,265	24,077,007	13,270,457	60,824,730
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 14,931,581
3	QF Purchased Power - Capacity	Workpaper 4				12,176,644
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 27,108,225
5	NC Portion - Jursidicational % based on 2021 Production Plant Allocator	Input				66.68%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 18,076,112
7	2021 Production Plant Allocation Factors	Input	47.04%	37.14%	15.81%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator	Line 6 * Line 7	$ 8,503,847	$ 6,713,696	$ 2,858,570	$ 18,076,112
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0362	0.0279	0.0215	0.0297
	Summary of Total Rate by Class					
10	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 15 - Line 11 - Line 13 - Line 14	2.5041	2.2918	2.0083	2.3186
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0362	0.0279	0.0215	0.0297
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	2.5403	2.3197	2.0298	2.3483
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.7654	0.7657	0.8275	0.7783
14	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 3 Page 3	3.3057	3.0854	2.8573	3.1266

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Uniform Percentage Average Bill Adjustment by Customer Class
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Rate Class	Projected Billing Period MWh Sales	Annual Revenue at Current rates	Allocate Fuel Costs Increase/(Decrease) to Customer Class	Increase/Decrease as % of Annual Revenue at Current Rates	Total Fuel Rate Increase/(Decrease)	Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1263	Proposed Total Fuel Rate (including Capacity and EMF)
		A	B	C	C / B = D	E	F	G
		Workpaper 7b	Workpaper 8	Line 25 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Clark Exhibit 1	E + F = G
1	Residential	23,477,265	$ 2,466,691,215	$ 192,298,091	7.80%	0.8191	2.4866	3.3057
2	General Service/Lighting	24,077,007	$ 1,971,226,718	$ 153,672,714	7.80%	0.6383	2.4471	3.0854
3	Industrial	13,270,457	$ 757,602,036	$ 59,061,071	7.80%	0.4451	2.4122	2.8573
4	NC Retail	60,824,730	$ 5,195,519,969	$ 405,031,876				

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7b	$ 2,137,302,931
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 3, Page 2	27,108,225
7	System Other Fuel Costs	Line 5 - Line 6	$ 2,110,194,706
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7b	91,011,082
9	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
10	Allocation %	Line 9 / Line 8	66.83%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 1,410,243,122
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 3, Page 2	18,076,112
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 1,428,319,234
14	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.3483
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	0.7783
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	3.1266

Total Current Composite Fuel Rate - Docket E-7 Sub 1263:

19	Current composite Fuel Rate cents/kWh	Clark Exhibit 1	1.9010
20	Current composite EMF Rate cents/kWh	Clark Exhibit 1	0.5597
21	Current composite EMF Interest Rate cents/kWh	Clark Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	2.4607
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	0.6659
24	NC Retail Projected Billing Period MWh Sales	Line 4	60,824,730
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ 405,031,876

Note: Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Proposed Composite
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Second Revised Exhibit 3

Line No.	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)		NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022				4,988,891	$ 82,008,233
2	February [1]				5,189,525	$ 61,224,070
3	March				4,642,682	$ 16,628,788
4	April				4,283,375	$ 22,131,836
5	May [1]				4,361,034	$ 82,217,312
6	June [1]				5,223,755	$ 115,761,737
7	July				5,560,704	$ 146,325,916
8	August				6,010,616	$ 185,513,643
9	September				5,369,219	$ 84,720,701
10	October				4,315,777	$ 27,143,393
11	November				4,103,701	$ 71,328,379
12	December [1]				5,009,748	$ 186,026,549
13	**Total Test Period**				**59,059,028**	**$ 1,081,030,561**
14	**Adjustment to remove (Over)/Under Recovery - January 2022** [2]					$ 81,987,600
15	**Adjustment for Clemson CHP Steam Revenues**					$ (613,775)
16	**Adjusted (Over)/Under Recovery**					**$ 998,429,186**
17	**Potential EDIT Mitigant**					$ (534,886,169)
18	**Adjusted (Over)/Under Recovery with EDIT Mitigant**					**$ 463,543,017**
19	NC Retail Normalized Test Period MWh Sales			Exhibit 4		59,559,458
20	**Experience Modification Increment (Decrement) cents/kWh**					**0.7783**

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

Rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Residential
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022	2.6880	1.5337	2,129,408	$ 24,579,060
2	February [(1)]	2.2111	1.5337	2,308,671	$ 15,631,479
3	March	1.8234	1.5337	1,783,273	$ 5,165,674
4	April	2.2527	1.5337	1,441,708	$ 10,365,435
5	May [(1)]	3.7477	1.5337	1,441,079	$ 31,901,319
6	June [(1)]	3.6847	1.5337	1,916,024	$ 41,213,674
7	July	3.7644	1.5337	2,208,753	$ 49,270,398
8	August	4.1426	1.5337	2,405,836	$ 62,764,654
9	September	3.7169	1.7555	1,992,460	$ 39,079,833
10	October	3.2667	2.0003	1,373,788	$ 17,397,939
11	November	4.5684	2.0003	1,345,710	$ 34,559,470
12	December [(1)]	5.2540	2.0003	2,073,011	$ 73,670,397
13	**Total Test Period [(3)]**			**22,419,721**	**$ 405,599,334**
14	Test Period Wtd Avg. ¢/kWh	3.4346	1.6532		
15	Adjustment to remove (Over)/Under Recovery - January 2022 [(2)]				$ 24,571,837
16	**Adjustment for Clemson CHP Steam Revenues**				$ (217,439)
17	**Adjusted (Over)/Under Recovery**				**$ 380,810,058**
18	**Potential EDIT Mitigant**				$ (205,589,999)
19	**Adjusted (Over)/Under Recovery with EDIT Mitigant**				**$ 175,220,059**
20	NC Retail Normalized Test Period MWh Sales			Exhibit 4	22,892,401
21	**Experience Modification Increment (Decrement) cents/kWh**				**0.7654**

Notes:

[(1)] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[(2)] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 17.

[(3)] North Carolina Residential sales on Exhibit 3, Line 13 differ from North Carolina Residential sales on Wo

Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - GS/Lighting
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022	3.6550	1.6895	1,921,732	$ 37,771,442
2	February [1]	3.2504	1.6895	1,927,508	$ 30,077,232
3	March	2.2020	1.6895	1,808,909	$ 9,269,996
4	April	2.1636	1.6895	1,840,396	$ 8,725,608
5	May [1]	3.4774	1.6895	1,904,671	$ 34,049,947
6	June [1]	3.9661	1.6895	2,184,316	$ 49,730,332
7	July	4.5134	1.6895	2,260,531	$ 63,835,167
8	August	4.9415	1.6895	2,467,241	$ 80,234,867
9	September	2.9735	1.7523	2,309,221	$ 28,198,709
10	October	2.1545	1.8217	1,927,666	$ 6,414,818
11	November	3.2050	1.8217	1,777,613	$ 24,589,863
12	December [1]	5.0399	1.8217	2,007,616	$ 71,896,623
13	**Total Test Period**			**24,337,421**	**$ 444,794,604**
14	Test Period Wtd Avg. ¢/kWh	3.5242	1.7265		
15	Adjustment to remove (Over)/Under Recovery - January 2022 [2]				$ 37,762,562
16	**Adjustment for Clemson CHP Steam Revenues**				$ (263,925)
17	**Adjusted (Over)/Under Recovery**				**$ 406,768,116**
18	**Potential EDIT Mitigant**				$ (219,560,526)
19	**Adjusted (Over)/Under Recovery with EDIT Mitigant**				**$ 187,207,590**
20	NC Retail Normalized Test Period MWh Sales			Exhibit 4	24,448,017
21	**Experience Modification Increment (Decrement) cents/kWh**				**0.7657**

Notes:

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 17.

Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Industrial
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2022	3.8206	1.7243	937,751	$ 19,657,733
2	February [1]	3.3522	1.7243	953,346	$ 15,515,360
3	March	1.9331	1.7243	1,050,500	$ 2,193,118
4	April	2.0280	1.7243	1,001,271	$ 3,040,792
5	May [1]	3.3268	1.7243	1,015,284	$ 16,266,045
6	June [1]	3.9333	1.7243	1,123,416	$ 24,817,732
7	July	4.7681	1.7243	1,091,420	$ 33,220,351
8	August	5.4617	1.7243	1,137,540	$ 42,514,122
9	September	3.4130	1.7791	1,067,538	$ 17,442,158
10	October	2.1680	1.8396	1,014,322	$ 3,330,636
11	November	3.0819	1.8396	980,378	$ 12,179,045
12	December [1]	5.7913	1.8396	929,121	$ 40,459,529
13	**Total Test Period**			**12,301,885**	**$ 230,636,623**
14	Test Period Wtd Avg. ¢/kWh	3.6009	1.7565		
15	Adjustment to remove (Over)/Under Recovery - January 2022 [2]				$ 19,653,201
16	**Adjustment for Clemson CHP Steam Revenues**				$ (132,411)
17	**Adjusted (Over)/Under Recovery**				**$ 210,851,011**
18	**Potential EDIT Mitigant**				$ (109,735,643)
19	**Adjusted (Over)/Under Recovery with EDIT Mitigant**				**$ 101,115,367**
20	NC Retail Normalized Test Period MWh Sales			Exhibit 4	12,219,040
21	**Experience Modification Increment (Decrement) cents/KWh**				**0.8275**

Notes:

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January 2022 filed in Docket E-7, Sub 1263 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 17.

Rounding differences may occur

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Sales, Fuel Revenue, Fuel Expense and System Peak
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Second Revised Exhibit 4

Line #	Description	Reference	Total Company	North Carolina Retail	North Carolina Residential	North Carolina General Service/Lighting	North Carolina Industrial
1	Test Period MWh Sales (excluding inter system sales) [1]	Exhibit 6 Schedule 1 (Line 4) and Workpaper 11 (NC Retail)	88,284,042	59,059,117	22,419,810	24,337,421	12,301,885
2	Customer Growth MWh Adjustment	Workpaper 13 Pg 1	160,003	162,487	130,366	103,625	(71,505)
3	Weather MWh Adjustment	Workpaper 12 Pg 1	437,160	337,854	342,225	6,970	(11,341)
4	Total Normalized MWh Sales	Sum	88,881,205	59,559,458	22,892,401	24,448,017	12,219,040
5	Test Period Fuel and Fuel Related Revenue *		$ 1,606,073,846	$ 1,006,893,394			
6	Test Period Fuel and Fuel Related Expense *		$ 2,966,425,990	$ 2,087,923,955			
7	Test Period Unadjusted (Over)/Under Recovery		$ 1,360,352,144	$ 1,081,030,561			

Line #	Description	2021 Summer Coincidental Peak (CP) kW
8	Total System Peak	17,241,828
9	NC Retail Peak	11,480,608
10	NC Residential Peak	5,400,475
11	NC General Service/Lighting Peak	4,263,819
12	NC Industrial Peak	1,816,314

* Total Company Fuel and Fuel-Related Revenue and Fuel and Fuel-Related Expense are determined based upon the fuel and fuel-related cost recovery mechanism in each of the company's jurisdictions.

[1] North Carolina Residential sales on Exhibit 4, Line 1 differ from North Carolina Residential sales on Exhibit 3, Page 2 of 4 due to an adjustment reported on the June 2022 monthly fuel report.

Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Nuclear Capacity Ratings
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Secibd Revised Exhibit 5

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May 26 2023

Unit	Rate Case Docket E-7, Sub 1214	Fuel Docket E-7, Sub 1263	Proposed Capacity Rating MW
Oconee Unit 1	847.0	847.0	847.0
Oconee Unit 2	848.0	848.0	848.0
Oconee Unit 3	859.0	859.0	859.0
McGuire Unit 1	1,158.0	1,158.0	1,158.0
McGuire Unit 2	1,157.6	1,157.6	1,157.6
Catawba Unit 1	1,160.1	1,160.0	1,160.0
Catawba Unit 2	1,150.1	1,150.1	1,150.1
Total Company	7,179.8	7,179.7	7,179.7

Clark Second Revised Exhibit 6

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DECEMBER 2022 MONTHLY FUEL FILING

Clark Second Revised
Exhibit 6 Schedule 1

DUKE ENERGY CAROLINAS
SUMMARY OF MONTHLY FUEL REPORT

Docket No. E-7, Sub 1260

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May 26 2023

Line No.		Dec 2022	12 Months Ended Dec 2022
1	Fuel and fuel-related costs	$ 400,088,306	$ 3,125,398,595
	MWH sales:		
2	Total system sales	7,795,402	89,477,757
3	Less intersystem sales	205,952	1,193,715
4	Total sales less intersystem sales	7,589,450	88,284,042
5	Total fuel and fuel-related costs (¢/KWH) (line 1/line 4)	5.2716	3.5402
6	Current fuel and fuel-related cost component (¢/KWH) (per Schedule 4, Line 7a Total)	1.8989	
	Generation Mix (MWH):		
	Fossil (by primary fuel type):		
7	Coal	1,226,989	8,102,494
8	Fuel Oil	78,865	130,190
9	Natural Gas - Combined Cycle	923,129	13,612,829
10	Natural Gas - Combined Heat and Power	7,147	91,218
11	Natural Gas - Combustion Turbine	74,091	1,686,686
12	Natural Gas - Steam	1,243,316	13,557,414
13	Biogas	2,080	18,277
14	Total fossil	3,555,617	37,199,108
15	Nuclear 100%	5,486,217	59,538,303
16	Hydro - Conventional	215,484	1,696,649
17	Hydro - Pumped storage	(34,571)	(697,976)
18	Total hydro	180,913	998,673
19	Solar Distributed Generation	15,173	320,481
20	Total MWH generation	9,237,920	98,056,565
21	Less joint owners' portion - Nuclear	1,417,939	15,313,271
22	Less joint owners' portion - Combined Cycle	(160)	592,719
23	Adjusted total MWH generation	7,820,141	82,150,575

Note: Detail amounts may not add to totals shown due to rounding.

Clark Second Revised
Exhibit 6 Schedule 2

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May 26 2023

DUKE ENERGY CAROLINAS
DETAILS OF FUEL AND FUEL-RELATED COSTS

Docket No. E-7, Sub 1260

Fuel and fuel-related costs:	Dec 2022	12 Months Ended Dec 2022
0501110 coal consumed - steam	$ 45,283,039	$ 270,898,099
0501222-0501223 biomass/test fuel consumed	-	
0501310 fuel oil consumed - steam	157,081	1,075,261
0501330 fuel oil light-off - steam	48,166	1,713,942
Total Steam Generation - Account 501	45,488,286	273,687,302
Nuclear Generation - Account 518		
0518100 burnup of owned fuel	21,706,902	247,614,928
Other Generation - Account 547		
0547100, 0547124 - natural gas consumed - Combustion Turbine	11,551,223	129,502,907
0547100 - Combustion Turbine - credit for inefficient fuel cost	-	(2,857,210)
0547100 natural gas consumed - Steam	139,769,907	960,513,825
0547101 natural gas consumed - Combined Cycle	78,921,823	626,119,762
0547101 natural gas consumed - Combined Heat and Power	1,290,155	8,688,719
0547106 biogas consumed - Combined Cycle	112,306	986,012
0547200 fuel oil consumed - Combustion Turbine	13,579,427	20,076,765
Total Other Generation - Account 547	245,224,841	1,743,030,780
Reagents		
Reagents (lime, limestone, ammonia, urea, dibasic acid, and sorbents)	3,579,598	19,538,566
Total Reagents	3,579,598	19,538,566
By-products		
Net proceeds from sale of by-products	451,601	2,946,324
Total By-products	451,601	2,946,324
Total Fossil and Nuclear Fuel Expenses		
Included in Base Fuel Component	316,451,228	2,286,817,900
Purchased Power and Net Interchange - Account 555		
Capacity component of purchased power (economic)	-	(215,310)
Capacity component of purchased power (renewables)	661,601	15,482,895
Capacity component of purchased power (PURPA)	414,939	9,369,817
Fuel and fuel-related component of purchased power	126,508,359	940,337,520
Total Purchased Power and Net Interchange - Account 555	127,584,899	964,974,922
Less:		
Fuel and fuel-related costs recovered through intersystem sales	43,533,664	122,923,146
Fuel in loss compensation	381,194	2,967,546
Solar Integration Charge	13,226	(4,005)
Lincoln CT marginal fuel revenue	19,737	506,640
Miscellaneous Fees Collected	-	900
Total Fuel Credits - Accounts 447 /456	43,947,821	126,394,227
Total Fuel and Fuel-related Costs	$ 400,088,306	$ 3,125,398,595

Notes: Detail amounts may not add to totals shown due to rounding.
Report reflects net ownership costs of jointly owned facilities.

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Clark Second Revised Exhibit 6
Schedule 3 - Purchases
Page 1 of 5

DUKE ENERGY CAROLINAS
PURCHASED POWER AND INTERCHANGE
SYSTEM REPORT - NORTH CAROLINA VIEW

DEC 2022

Purchased Power	**Total**	**Capacity**	**Non-capacity**			
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel $ Not Fuel-related $
Alcoa Power Generating Inc.	-	-	-	-	-	
American Electric Power Serv Corp.	-	-	-	-	-	
Associated Electric Cooperative, Inc.	153,251	-	3,154	130,264	22,988	
Blue Ridge Electric Membership Corp.	-	-	-	-	-	
Calpine Energy Services, L.P.	-	-	-	-	-	
Cargill Power Marketers, LLC.	-	-	-	-	-	
Carolina Power Partners, LLC	$ 220,128	-	2,924	$ 187,109	$ 33,019	
Cherokee County Cogeneration Partners	-	$ -	-	-	-	
City of Kings Mountain	-	-	-	-	-	
Constellation	-	-	-	-	-	
Cube Yadkin Generation LLC	115,680	-	723	98,328	17,352	
DE Progress	-	-	-	-	-	
DE Progress - Native Load Transfer	70,200,387	-	466,390	70,248,967	2,377,140	(2,425,721)
DE Progress - Native Load Transfer (Prior Period Adjust)	-	-	-	-	-	
DE Progress - Native Load Transfer Benefit	2,350,019	-	-	2,350,019	-	
DE Progress - Fees	(25,148)	-	-	-	(25,148)	
EDF Trading North America, LLC.	-	-	-	-	-	
Exelon Generation Company, LLC.	-	-	-	-	-	
Florida Power & Light Company	-	-	-	-	-	
Haywood Electric - Economic	32,445	19,590	116	10,927	1,928	
LGE/KU	650,620	-	11,423	553,027	97,593	
Lockhart Power Co.	-	-	-	-	-	
Macquarie Energy, LLC	16,474,177	-	68,687	14,003,050	2,471,127	
Midwest Independent System Operator	-	-	-	-	-	
Morgan Stanley Capital Group	57,600	-	800	48,960	8,640	
NCEMC - Economic	30,628	3,317	611	23,215	4,097	
NCMPA - Economic	1,893,200	-	18,346	1,609,220	283,980	
NCMPA Instantaneous - Economic	7,173,244	-	48,002	4,089,467	3,083,778	
NTE Carolinas LLC	-	-	-	-	-	
Oglethorpe Power	-	-	-	-	-	
Piedmont Electric Membership Corp. - Economic	-	-	-	-	-	
Piedmont Municipal Power Agency	681,363	-	11,318	388,992	292,370	
PJM Interconnection, LLC.	498,917	-	5,150	424,080	74,838	
Rainbow Energy Marketing Corporation	-	-	-	-	-	
Rutherford Electric Membership Corp.	-	-	-	-	-	
South Carolina Electric & Gas Company / Dominion Energy	13,472	-	288	11,451	2,021	
Southern Company Services, Inc.	148,469	-	2,641	126,198	22,270	
Tennesse Valley Authority	700,625	-	12,982	595,531	105,094	
The Energy Authority	15,029	-	386	12,775	2,254	
Town of Dallas	-	-	-	-	-	
Town of Forest City	20,417	20,417	-	-	-	
Westar Energy, Inc.	-	-	-	-	-	
	$ 101,404,524	**$ 43,324**	**653,941**	**$ 94,911,581**	**$ 8,875,341**	**$ (2,425,721)**
Renewable Energy						
REPS	$ 4,896,784.45	$ 639,202	86,592	$ -	$ 4,257,583	
DERP - Purchased Power	$ 342,872.54	22,399	5,884	-	229,623	90,850
DERP - Net Metered Generation	$ 496.80	-	18			497
	$ 5,240,154	**$ 661,601**	**92,494**	**$ -**	**$ 4,487,206**	**$ 91,347**
HB589 PURPA Purchases						
CPRE - Purchased Power	$ 1,214,288.27	-	29,865			1,214,288
Qualifying Facilities	$ 3,465,792.71	414,939	66,488		2,956,940	93,914
	$ 4,680,081	**$ 414,939**	**96,353**	**$ -**	**$ 2,956,940**	**$ 1,308,203**
Non-dispatchable / Other						
Carolina Power & Light (DE Progress) (Emergency)	-	-	-	-		-
South Carolina Public Service Authority - Emergency	-	-	-	-		-
Blue Ridge Electric Membership Corp.	1,573,673	$ 803,142	24,891	654,951		115,580
Cargill Power Marketers, LLC.	-	-	-	-		-
Carolina Power Partners, LLC	-	-	-	-		-
DE Progress - As Available Capacity	-	-	-	-		-
Exelon Generation Company, LLC.	-	-	-	-		-
Haywood Electric	177,287	79,852	3,859	82,820		14,615
Macquarie Energy, LLC	15,571,770	-	35,899	13,236,005		2,335,766
Morgan Stanley Capital Group	-	-	-	-		-
NCEMC - Other	679,250	-	1,235	577,363		101,888
NCMPA	2,097,600	-	2,696	1,782,960		314,640
NTE Carolinas LLC	-	-	-	-		-
Piedmont Electric Membership Corp.	739,661	379,423	11,904	306,202		54,036
PJM Interconnection, LLC - Other	-	-	-	-		-
South Carolina Electric & Gas Company / Dominion Energy	-	-	-	-		-
Southern Company Services, Inc.	-	-	-	-		-
Tennesse Valley Authority	-	-	-	-		-
Generation Imbalance	3,118,465	-	9,905	2,559,774		558,691
Energy Imbalance - Purchases	1,435,304	-	469	1,175,506		259,798
Energy Imbalance - Sales	(4,204,965)	-	-	(3,566,988)		(637,977)
Qualifying Facilities - Pre HB589	-	-	-			-
Other Purchases	472	-	18	-		472
	$ 21,188,517	**$ 1,262,418**	**90,876**	**$ 16,808,592**	**$ -**	**$ 3,117,507**
Total Purchased Power	**$ 132,513,276**	**$ 2,382,281**	**933,664**	**$ 111,720,172**	**$ 16,319,487**	**$ 2,091,335**
Interchanges In						
Other Catawba Joint Owners	6,968,385	-	710,207	4,330,916		2,637,471
WS Lee Joint Owner	170,714		2,953	158,305		12,409
Total Interchanges In	7,139,099	-	713,160	4,489,220	-	2,649,878
Interchanges Out						
Other Catawba Joint Owners	(6,832,104)	(134,209)	(693,600)	(4,230,264)		(2,467,631)
Catawba- Net Negative Generation	-	-	-	-		-
WS Lee Joint Owner	(1,942,451)		(33,801)	(1,790,256)		(152,195)
Total Interchanges Out	(8,774,555)	(134,209)	(727,400)	(6,020,520)	-	(2,619,826)
Net Purchases and Interchange Power	**$ 130,877,820**	**$ 2,248,072**	**919,424**	**$ 110,188,872**	**$ 16,319,487**	**$ 2,121,387**

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Clark Second Revised Exhibit 6
Schedule 3 - Sales Page 2 of 5

DEC 2022

DUKE ENERGY CAROLINAS
INTERSYSTEM SALES*
SYSTEM REPORT - NORTH CAROLINA VIEW

	Total	Capacity	Non-capacity		
Sales	**$**	**$**	**mWh**	**Fuel $**	**Non-fuel $**
Utilities:					
Midwest Independent System Operator - Emergency	-	-	-	-	-
DE Progress - Emergency	-	-	-	-	-
SC Public Service Authority - Emergency	-	-	-	(155)	155
SC Electric & Gas / Dominion Energy - Emergency	508,666	-	2,763	2,270,933	(1,762,267)
Tennessee Valley Authority - Emergency	1,924,600	-	8,648	5,948,337	(4,023,737)
Market Based:					
Associated Electric Cooperative, Inc.	2,552	-	41	1,603	949
American Electric Power Services Corp.	-	-	-	-	-
Cargill-Alliant, LLC.	-	-	-	-	-
Carolina Power Partners, LLC	8,800	-	150	8,953	(153)
Central Electric Power Cooperative, Inc.	-	$ -	-	-	-
Constellation Power Sources	-	-	-	-	-
EDF Trading Company	-	-	-	-	-
Evergy Kansas Central	-	-	-	-	-
Exelon Generation Company, LLC.	-	-	-	-	-
Macquarie Energy, LLC	-	-	-	980	(980)
Midwest Independent System Operator	-	-	-	-	-
Morgan Stanley	-	-	-	-	-
NCEMC	-	-	-	-	-
NCEMC (Balancing/Generator)	-	-	-	-	-
NCMPA	127,155	87,500	213	38,688	967
Oglethorpe Power Corporation	-	-	-	-	-
PJM Interconnection, LLC.	17,071	-	200	13,976	3,095
SC Electric & Gas / Dominion Energy	20,383	-	182	4,442	15,941
South Carolina Electric & Gas - T	(4)	-	-	-	(4)
South Carolina Public Service Authority - T	(4)	-	-	-	(4)
Southern Company	90,699	-	1,058	121,282	(30,583)
Tenaska Power Service	-	-	-	-	-
Tennessee Valley Authority	5,926	-	90	3,948	1,978
The Energy Authority	18,112	-	411	10,634	7,479
Westar Energy	-	-	-	-	-
Other:					
Cargill-Alliant, LLC - Mitigation sales	-	-	-	-	-
DE Progress - Native Load Transfer Benefit	1,268,405	-	-	1,268,405	-
DE Progress - Native Load Transfer	32,571,610	-	187,066	32,362,740	208,869
Generation Imbalance	1,777,596	-	5,130	1,478,897	298,699
BPM Transmission	8,535	-			8,535
Total Intersystem Sales	**$ 38,350,103**	**$ 87,500**	**205,952**	**$ 43,533,664**	**$ (5,271,061)**

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DUKE ENERGY CAROLINAS
PURCHASED POWER AND INTERCHANGE
SYSTEM REPORT - NORTH CAROLINA VIEW

Twelve Months Ended
DEC 2022

Clark Second Revised
Exhibit 6 Schedule 3 -
Purchases Page 3 of 5

Purchased Power	**Total**	**Capacity**	**Non-capacity**			
						Not Fuel $
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel-related $
Alcoa Power Generating Inc.	-	-	-	-	-	
American Electric Power Serv Corp.	-	-	-	-	-	
Associated Electric Cooperative, Inc.	163,916	-	3,384	136,769	27,147	
Blue Ridge Electric Membership Corp. - Economic	-	-	-	-	-	
Calpine Energy Services, L.P.	-	-	-	-	-	
Cargill Power Marketers, LLC.	$ -	-	-	$ -	$ -	
Carolina Power Partners, LLC	9,667,773	$ -	128,879	5,950,172	3,717,601	
Cherokee County Cogeneration Partners	(6,400,734)	(215,310)	-	22,574	(6,207,998)	
City of Kings Mountain	-	-	-	-	-	
Constellation	489,570	-	6,659	298,638	190,932	
Cube Yadkin Generation LLC	221,550	-	2,810	162,909	58,641	
DE Progress	-	-	-	-	-	
DE Progress - Native Load Transfer	544,444,833	-	7,369,876	520,344,456	26,483,093	(2,382,715)
DE Progress - Native Load Transfer (Prior Period Adjust)	-	-	-	-	-	
DE Progress - Native Load Transfer Benefit	54,871,210	-	-	54,871,210	-	
DE Progress - Fees	(153,265)	-	-	-	(153,265)	
EDF Trading North America, LLC.	-	-	-	-	-	
Exelon Generation Company, LLC.	-	-	-	-	-	
Florida Power & Light Company	-	-	-	-	-	
Haywood Electric - Economic	958,305	242,809	6,962	439,537	275,958	
LGE/KU	785,194	-	14,077	635,117	150,077	
Lockhart Power Co.	-	-	-	-	-	
Macquarie Energy, LLC	51,250,548	-	486,963	35,216,637	16,033,911	
Midwest Independent System Operator	-	-	-	-	-	
Morgan Stanley Capital Group	72,600	-	1,100	58,110	14,490	
NCEMC	970,306	3,317	15,767	596,418	370,571	
NCMPA	14,524,190	-	220,006	9,314,124	5,210,066	
NCMPA Load Following Economic	37,141,682	-	465,009	21,929,915	15,211,767	
NTE Carolinas LLC	-	-	-	-	-	
Oglethorpe Power	-	-	-	-	-	
Piedmont Electric Membership Corp. - Economic	-	-	-	-	-	
Piedmont Municipal Power Agency	5,268,496	-	102,863	3,124,813	2,143,684	
PJM Interconnection, LLC.	14,064,189	-	192,441	8,698,896	5,365,294	
Rainbow Energy Marketing Corporation	-	-	-	-	-	
Rutherford Electric Membership Corp.	-	-	-	-	-	
South Carolina Electric & Gas Company / Dominion Energy	13,472	-	288	11,451	2,021	
Southern Company Services, Inc.	557,481	-	9,748	375,696	181,785	
Tennessee Valley Authority	5,408,020	-	84,497	3,467,042	1,940,978	
The Energy Authority	16,905	-	424	13,919	2,986	
Town of Dallas	-	-	-	-	-	
Town of Forest City	**$ 244,999**	**$ 244,999**	**-**	**$ -**	**$ -**	
Westar Energy, Inc.	$ -	$ -	-	$ -	$ -	
	734581242	275815.11	9111753	665668404.2	71019738.84	-2382715.37
Renewable Energy						
REPS	71,532,035	15,214,422	1,148,827	-	56,317,611	-
DERP - Purchased Power	4,025,008	268,474	69,800	-	2,739,889	1,016,646
DERP - Purchased Power - Pre HB589	$ -	$ -	-	$ -		$ -
DERP - Net Metered Generation	124,177.1400	0.0000	4,598.5974	0.0000		124,177.1400
	$ 75,681,220	15,482,895	1223226	$ -	$ 59,057,500	1,140,823
	ok	ok	ok		ok	
HB589 PURPA Purchases						
CPRE - Purchased Power	**$ 6,118,008**	**$ -**	**301,278**			**$ 6,118,008**

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Qualifying Facilities	**$ 44,602,804 OK**	**$ 9,369,818 OK**	**747,251**		**$ 34,126,582**	**1106408.62**
	$ 50,720,812	**$ 9,369,818**	**1,048,529**	**$ -**	**$ 34,126,582**	**7224417**
Non-dispatchable / Other						
Carolina Power & Light (DE Progress) - Emergency	$ 30,606	$ -	177	$ 26,015		$ 4,591
South Carolina Public Service Authority - Emergency	-	-	-	-		-
Blue Ridge Electric Membership Corp.	12,234,125	5,929,525	293,671	5,358,911		945,690
City of Concord	-	-	-	-		-
Cargill Power Marketers, LLC.	-	-	-	-		-
Carolina Power Partners, LLC	5,412,299	-	53,596	4,600,454		811,845
DE Progress - As Available Capacity	400,501	400,501	-	-		-
Exelon Generation Company, LLC.	-	-	-	-		-
Haywood Electric	2,184,429	978,976	45,858	1,024,635		180,818
Macquarie Energy, LLC	95,814,395	-	573,508	81,442,236		14,372,159
Morgan Stanley Capital Group	-	-	-	-		-
NCEMC - Other	9,311,412	36,488	51,330	7,883,685		1,391,239
NCMPA - Reliability	6,533,220	-	39,228	5,553,237		979,983
NTE Carolinas LLC	-	-	-	-		-
Piedmont Electric Membership Corp.	5,818,999	2,826,296	140,160	2,543,798		448,905
PJM Interconnection, LLC - Other	-	-	-	-		-
South Carolina Electric & Gas Company	-	-	-	-		-
Southern Company Services, Inc.	-	-	-	-		-
Tennesse Valley Authority	-	-	-	-		-
Generation Imbalance	9,288,793		69,713	6,023,880		3,264,913
Energy Imbalance - Purchases	2,954,691		(19,820)	2,284,580		670,111
Energy Imbalance - Sales	(7,911,557)		-	(7,181,724)		(729,833)
Qualifying Facilities - Pre HB589	-	-	-	-		-
Other Purchases	6,318	-	233	-		6,318
	$ 142,078,232	**$ 10,171,786**	**1,247,654**	**$ 109,559,706**	**$ -**	**$ 22,346,739**
Total Purchased Power	**$ 1,003,061,506**	**$ 35,300,314**	**12,631,162**	**$ 775,228,110**	**$ 164,203,821**	**$ 28,329,264**
						2
Interchanges In						
Other Catawba Joint Owners	73,411,183	-	7,683,448	45,957,871		27,453,312
WS Lee Joint Owner	27,399,050	-	421,179	25,673,117		1,725,933
Total Interchanges In	100,810,232	-	8,104,626	71,630,988	-	29,179,244
Interchanges Out						
Other Catawba Joint Owners	(72,945,394)	(1,580,207)	(7,598,655)	(45,548,810)		(25,816,377)
Catawba- Net Negative Generation	(452,734)	-	(13,562)	(391,439)		(61,295)
WS Lee Joint Owner	(26,616,561)	-	(411,650)	(24,785,151)		(1,831,410)
Total Interchanges Out	(100,014,689)	(1,580,207)	(8,023,867)	(70,725,400)	-	(27,709,082)
Net Purchases and Interchange Power	**$ 1,003,857,049**	**$ 33,720,107**	**12,711,921**	**$ 776,133,698**	**$ 164,203,821**	**$ 29,799,426**

NOTES: Detail amounts may not add to totals shown due to rounding.
CPRE purchased power amounts are recovered through the CPRE Rider.

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DUKE ENERGY CAROLINAS
INTERSYSTEM SALES*
SYSTEM REPORT - NORTH CAROLINA VIEW

Twelve Months Ended DEC 2022

Clark Second Revised
Exhibit 6 Schedule 3 -
Sales Page 5 of 5

Sales	Total $	Capacity $	Non-capacity mWh	Non-capacity Fuel $	Non-capacity Non-fuel $
Utilities:					
Midwest Independent System Operator - Emergency	-	-	-	-	-
DE Progress - Emergency	$ 106,271	-	1,150	$ 101,064	$ 5,207
SC Public Service Authority - Emergency	417,282	-	4,767	389,377	27,905
SC Electric & Gas / Dominion Energy - Emergency	522,805	-	3,020	2,283,300	(1,760,495)
Tennessee Valley Authority - Emergency	1,924,600	-	8,648	5,948,337	(4,023,737)
Market Based:					
Associated Electric Cooperative, Inc.	2,552	-	41	1,603	949
American Electric Power Services Corp.	-	-	-	-	-
Cargill-Alliant, LLC.	-	-	-	-	-
Carolina Power Partners, LLC	8,800	-	150	8,953	(153)
Central Electric Power Cooperative, Inc.	5,538,111	$ 5,267,000	3,450	265,640	5,471
Constellation Power Sources	-	-	-	-	-
EDF Trading Company	-	-	-	-	-
Evergy Kansas Central (BPM)	-	-	-	-	-
Exelon Generation Company, LLC.	-	-	-	-	-
Macquarie Energy, LLC	1,459,360	-	20,545	1,456,745	2,615
Midwest Independent System Operator	-	-	-	-	-
Morgan Stanley	-	-	-	-	-
NCEMC	-	-	-	-	-
NCEMC (Balancing/Generator)	-	-	-	-	-
NCMPA	1,764,061	1,050,000	6,341	686,859	27,202
Oglethorpe Power Corporation	-	-	-	-	-
PJM Interconnection, LLC.	16,952	-	200	13,976	2,976
SC Electric & Gas / Dominion Energy	209,983	-	1,382	147,017	62,966
South Carolina Electric & Gas - T	(4)	-	-	-	(4)
South Carolina Public Service Authority - T	(4)	-	-	-	(4)
Southern Company	112,627	-	1,409	136,190	(23,563)
Tenaska Power Service	-	-	-	-	-
Tennesse Valley Authority	5,926	-	90	3,948	1,978
The Energy Authority	83,368	-	1,474	62,119	21,250
Westar Energy	-	-	-	-	-
Other:					
Cargill-Alliant, LLC - Mitigation sales	-	-	-	-	-
DE Progress - Native Load Transfer Benefit	10,826,966	-	-	10,826,966	-
DE Progress - Native Load Transfer	98,082,917	17,512	1,104,079	96,983,455	1,081,950
Generation Imbalance	4,126,628	-	36,969	3,607,599	519,029
BPM Transmission	(289,990)	-	-	-	(289,990)
Total Intersystem Sales	**$ 124,919,210**	**$ 6,334,512**	**1,193,715**	**$ 122,923,146**	**$ (4,338,447)**

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Duke Energy Carolinas
(Over) / Under Recovery of Fuel Costs
Dec-22

Line No.			Residential	Commercial	Industrial	Total
1	Actual System kWh sales	Input				7,589,450,642
2	DERP Net Metered kWh generation	Input				10,675,770
3	Adjusted System kWh sales	L1 + L2				7,600,126,412
4	N.C. Retail kWh sales	Input	2,073,010,864	2,007,616,467	929,120,959	5,009,748,290
5	NC kWh sales % of actual system kWh sales	L4 T / L1				66.01%
6	NC kWh sales % of adjusted system kWh sales	L4 T / L3				65.92%
7	Approved fuel and fuel related rates (¢/kWh)					
	7a Billed rates by class (¢/kWh)	L7g	2.0003	1.8217	1.8396	1.8989
	7b Billed fuel expense	L7a * L4 / 100	$41,466,436	$36,572,749	$17,092,109	$95,131,294
	Rate changes:		Agrees to CY Rate	Agrees to CY Rate	Agrees to CY Rate	ate with Annual Fuel Filings.
	7c New approved rates	Input	2.0003	1.8217	1.8396	
	7d Ratio of days to rate	Input	100.00%	100.00%	100.00%	
	7e Prior approved rates	Input	1.5337	1.6895	1.7243	
	7f Ratio of days to rate	Input	$0	$0	$0	
	7g Total prorated ¢/KWH	(L7c * L7d) + (L7e * L7f)	2.0003	1.8217	1.8396	
8	Incurred base fuel and fuel related (¢/kWh) (less renewable purchased power capacity)					
	Allocation changes:					
	8a New approved Docket E-7, Sub 1263 allocation factor	Input	41.25%	38.34%	20.40%	ate with Annual Fuel Filings.
	8b System incurred expense	Input				$399,273,363
	8c Incurred base fuel and fuel related expense	L8b * L6 * 8a	$108,577,957	$100,915,104	$53,694,541	$263,187,602
	8d Incurred base fuel rates by class (¢/kWh)	L8c / L4 * 100	5.2377	5.0266	5.7791	5.2535
9	Incurred renewable purchased power capacity rates (¢/kWh)					
	9a NC retail production plant %	Input				0.6668
	9b Production plant allocation factors	Input	$0	$0	$0	$1
	9c System incurred expense	Input				1,076,540
	9d Incurred renewable capacity expense	L9a * L9b * L9c	337,710	266,619	113,521	717,851
	9e Incurred renewable capacity rates by class (¢/kWh)	((L9a * L9c) * L9b) / L4 * 100	$0	$0	$0	$0
10	Total incurred rates by class (¢/kWh)	L8h + 9e	$5	$5	$6	$5
11	Difference in ¢/kWh (incurred - billed)	L10 - L7a	$3	$3	$4	3
12	(Over) / under recovery [See footnote]	(L4 * L11) / 100	$67,449,231	$64,608,974	$36,715,953	$168,774,159
13	Prior period adjustments	Input	$ 6,221,166	$ 7,287,649	$ 3,743,576	$ 17,252,391
14	Total (over) / under recovery	L12 + L13	$ 73,670,398	$ 71,896,623	$ 40,459,529	$ 186,026,550
15	Total system incurred expense	L8f + L9c				$ 400,349,903
16	Less: Jurisdictional allocation adjustment(s)	Input				$ 261,597
17	Total Fuel and Fuel-related Costs per Schedule 2	L15 + L16				$ 400,088,306

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Clark Second Revised Exhibit 6

Schedule 4
Page 2 of 2

	Year 2022	(Over) / Under Recovery Total To Date	Residential	Commercial	Industrial	Total Company
	January	$82,008,235	$24,579,060	$37,771,442	$19,657,733	$82,008,235
	February	$143,232,306	$15,631,479	$30,077,232	$15,515,360	$61,224,071
_/1	March	$159,861,094	$5,165,674	$9,269,996	$2,193,118	$16,628,788
	April	$181,992,930	$10,365,435	$8,725,608	$3,040,792	$22,131,835
_/1	May	$264,210,240	$31,901,319	$34,049,947	$16,266,045	$82,217,311
	June	$379,971,976	$41,213,673	$49,730,332	$24,817,731	$115,761,736
	July	$526,297,892	$49,270,398	$63,835,167	$33,220,351	$146,325,916
	August	$711,811,535	$62,764,654	$80,234,867	$42,514,122	$185,513,643
	September	796,532,236	$39,079,834	$28,198,709	$17,442,158	$84,720,701
	October	823,675,629	$17,397,939	$6,414,818	$3,330,636	$27,143,393
	November	$895,004,007	34,559,470	24,589,863	12,179,045	$71,328,378
	December	$1,081,030,557	$73,670,398	$71,896,623	$40,459,529	$186,026,550
			$405,599,335	$444,794,603	$230,636,622	$1,081,030,557

Notes:
Detail amounts may not recalculate due to percentages presented as rounded.
Presentation of over or under collected amounts reflects a regulatory asset or liability. Over collections, or regulatory liabilities, are shown as negative amounts.
Under collections, or regulatory assets, are shown as positive amounts.
Includes prior period adjustments.
_/1 Reflects a prorated rate and prorated allocation factor for periods in which the approved rates changed.

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Clark Second Revised Exhibit 6

Schedule 5
Page 1 of 2

DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED COST REPORT
December 2022

Description	Buck	Dan River	Lee	Clemson	Lee	Lincoln	(A) Lincoln (Unit17)	Mill Creek	Rockingham
	CC	CC	CC	CHP	Steam/CT	CT	CT	CT	CT
Cost of Fuel Purchased ($)									
Coal									
Oil	-	-	-		581,554	-	-	4,046,679	4,504,834
Gas - CC	$40,036,410	$38,694,262	$221,226						
Gas - CHP				$1,290,155					
Gas - CT					$339,173	$1,752,935	$247	$1,301,300	$8,157,569
Gas - Steam					-				
Biogas	-	379,200	-						
Total	$40,036,410	$39,073,462	$221,226	$1,290,155	$920,726	$1,752,935	$247	$5,347,979	$12,662,402
Average Cost of Fuel Purchased (¢/MBTU)									
Coal		-							
Oil					2,568.26	-	-	2,253.14	2,410.28
Gas - CC	1,210.54	1,211.01	2,080.56						
Gas - CHP				1,297.62					
Gas - CT					1,277.34	1,215.43	(1,129.41)	1,212.99	1,217.66
Gas - Steam					-				
Biogas	-	2,595.49	-						
Weighted Average	1,210.54	1,217.31	2,080.56	1,297.62	1,871.51	1,215.43	(1,129.41)	1,864.18	1,477.81
Cost of Fuel Burned ($)									
Coal		-	-		-				
Oil - CC	-	-	-						
Oil - Steam/CT					$288,821	4,242,357	-	5,012,521	4,035,727
Gas - CC	$40,036,410	$38,694,262	$221,226						
Gas - CHP				$1,290,155					
Gas - CT					339,173	$1,752,935	$247	$1,301,300	$8,157,569
Gas - Steam					-				
Biogas	-	379,200	-						
Nuclear									
Total	$40,036,410	$39,073,462	$221,226	$1,290,155	$627,994	$5,995,292	$247	$6,313,821	$12,193,296
Average Cost of Fuel Burned (¢/MBTU)									
Coal					-				
Oil - CC									
Oil - Steam/CT					1,751.81	1,517.46	-	1,952.52	1,856.01
Gas - CC	1,210.54	1,211.01	2,080.56						
Gas - CHP				1,297.62					
Gas - CT					1,277.34	1,215.43	(1,129.41)	1,212.99	1,217.66
Gas - Steam					-				
Biogas	-	2,595.49	-						
Nuclear									
Weighted Average	1,210.54	1,217.31	2,080.56	1,297.62	1,459.09	1,414.68	(1,129.41)	1,734.56	1,374.08
Average Cost of Generation (¢/kWh)									
Coal		-	-		-	-	-		
Oil - CC	-	-	-						
Oil - Steam/CT		-	-		17.56	12.13	-	23.53	20.14
Gas - CC	8.53	8.51	-						
Gas - CHP				18.05					
Gas - CT					12.54	291,185.15	-	14.61	12.95
Gas - Steam					-	-	-	-	-
Biogas	-	18.23	-						
Nuclear									
Weighted Average	8.53	8.55	-	18.05	14.44	17.14	-	20.90	14.68
Burned MBTU's									
Coal					-				
Oil - CC									
Oil - Steam/CT					16,487	279,569	-	256,721	217,441
Gas - CC	3,307,314	3,195,214	10,633						
Gas - CHP				99,425					
Gas - CT					26,553	144,223	(22)	107,280	669,936
Gas - Steam					-				
Biogas	-	14,610	-						
Nuclear									
Total	3,307,314	3,209,824	10,633	99,425	43,040	423,792	(22)	364,001	887,377
Net Generation (mWh)									
Coal									
Oil - CC									
Oil - Steam/CT		-	-		1,644	34,986	-	21,307	20,035
Gas - CC	469,549	454,840	(1,260)		-				
Gas - CHP				7,147					
Gas - CT					2,705	1	(523)	8,908	63,001
Gas - Steam					-				
Biogas	-	2,080	-						
Nuclear 100%									
Hydro (Total System)									
Solar (Total System)									
Total	469,549	456,920	(1,260)	7,147	4,349	34,987	(523)	30,215	83,036
Cost of Reagents Consumed ($)									
Ammonia	$48,324	$0	$6,766						
Limestone									
Sorbents									
Urea									
Re-emission Chemical									
Dibasic Acid									
Activated Carbon									
Lime (water emissions)									
Total	$48,324	$0	$6,766						

Notes:
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
Detail amounts may not add to totals shown due to rounding.
Data is reflected at 100% ownership.
Schedule excludes in-transit and terminal activity.
Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.
Re-emission chemical reagent expense is not recoverable in NC.
Lime (water emissions) expense is not recoverable in SC fuel clause.

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May 26 2023

Clark Second Revised Exhibit 6
Schedule 5

DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED COST REPORT
December 2022

Description	Allen	Marshall	Belews Creek	Cliffside	Catawba	McGuire	Retail	onee	Current Month
	Steam	Steam - Dual Fuel	Steam - Dual Fuel	Steam - Dual Fuel	Nuclear	Nuclear		Nuclear	
Cost of Fuel Purchased ($)									
Coal	$8,397	$22,275,183	$13,005,647	$4,159,826					39449052.41
Oil	-	-	43,134	195,355					9371554.83
Gas - CC									78951896.85
Gas - CHP									1290154.86
Gas - CT									11551223.21
Gas - Steam		23,192,605	89,015,098	27,562,204					139769906.7
Biogas									379200.4585
Total	$8,397	$45,467,788	$102,063,879	$31,917,385					280762989.3
Average Cost of Fuel Purchased (¢/MBTU)									
Coal	-	556.38	405.58	529.76					493.39
Oil	-	-	2,094.23	2,358.10					2345.876765
Gas - CC									1212.190124
Gas - CHP									1297.616153
Gas - CT									1218.467781
Gas - Steam		1,212.83	1,212.32	1,219.81					1213.873974
Biogas				.					2595.485685
Weighted Average	-	768.58	967.31	1,045.42					1021.532064
Cost of Fuel Burned ($)									
Coal	$0	$20,049,558	$15,376,945	$9,856,536					45283038.68
Oil - CC									0
Oil - Steam/CT	-	2,092	-	203,154			-		13784673.86
Gas - CC									78951896.85
Gas - CHP									1290154.86
Gas - CT							-		11551223.21
Gas - Steam		23,192,605	89,015,098	27,562,204					139769906.7
Biogas									379200.4585
Nuclear					$9,964,761	$9,371,945			29753844.93
Total	$0	$43,244,255	$104,392,043	$37,621,894	$9,964,761	$9,371,945	$0	#	320763940
Average Cost of Fuel Burned (¢/MBTU)									
Coal	-	418.68	345.25	368.79					380.0415591
Oil - CC									0
Oil - Steam/CT	-	1,442.88	-	2,545.79			-		1771.028179
Gas - CC									1212.190124
Gas - CHP									1297.616153
Gas - CT							-		1218.467781
Gas - Steam		1,212.83	1,212.32	1,219.81					1213.873974
Biogas									2595.485685
Nuclear					57.13	53.27			54.49758916
Weighted Average	-	645.32	884.95	761.55	57.13	53.27	-		371.3414283
Average Cost of Generation (¢/kWh)									
Coal	-	4.02	3.37	3.57					3.690582692
Oil - CC									-
Oil - Steam/CT	-	13.67	-	23.16			-		17.47873714
Gas - CC									8.552637244
Gas - CHP									18.05169806
Gas - CT							-		15.59056553
Gas - Steam		11.10	11.18	11.55					11.24170747
Biogas									18.2330654
Nuclear					0.57	0.53			0.542338098
Weighted Average	-	6.11	8.34	7.29	0.57	0.53			3.472252469
Burned MBTU's									
Coal	-	4,788,789	4,453,853	2,672,644					11915286
Oil - CC									0
Oil - Steam/CT	-	145	-	7,980			-		778343
Gas - CC									6513161.2
Gas - CHP									99425
Gas - CT							-		947970
Gas - Steam		1,912,266	7,342,548	2,259,553					11514367.2
Biogas									14610
Nuclear					17,441,277	17,594,902			54596626
Total	-	6,701,200	11,796,401	4,940,177	17,441,277	17,594,902	-		86379788.4
Net Generation (mWh)									
Coal	(3,652)	498,367	455,930	276,344					1226988.865
Oil - CC									0
Oil - Steam/CT	-	15	-	877			-		78865.388
Gas - CC									923129.2594
Gas - CHP									7147
Gas - CT							-		74091.111
Gas - Steam		208,863	795,860	238,593					1243315.636
Biogas									2079.740571
Nuclear 100%					1,755,875	1,777,031			5486217
Hydro (Total System)									180912.503
Solar (Total System)									15173.19
Total	(3,652)	707,245	1,251,790	515,814	1,755,875	1,777,031	-		9237921
Cost of Reagents Consumed ($)									
Ammonia			$1,573,130	$112,122					1740341.44
Limestone	$0	$463,125	669,388	417,704					1550217.58
Sorbents	-	135,320	-						135319.92
Urea	-	135,168							135167.6
Re-emission Chemical	-	-	-	-					0
Dibasic Acid	-								0
Activated Carbon	19,413	-							19413
Lime (water emissions)	-	-	-						0
Total	19,413	733,613	$2,242,518	$529,827					3580459.54

Notes:
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
Detail amounts may not add to totals shown due to rounding.
Data is reflected at 100% ownership.
Schedule excludes in-transit and terminal activity.
Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.
Re-emission chemical reagent expense is not recoverable in NC.
Lime (water emissions) expense is not recoverable in SC fuel clause.

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May 26 2023

Clark Second RevisedExhibit 6
Schedule 6

DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED CONSUMPTION AND INVENTORY REPORT
December 2022

Description	Buck	Dan River	Lee	Clemson	Lee	Lincoln	(A) Lincoln (Unit17)	Mill Creek	Rockingham	Allen	Marshall	Belews Creek	Cliffside	Current Month	Total 12 ME December 2022
	CC	CC	CC	CHP	Steam/CT	CT	CT	CT	CT	Steam	Steam - Dual Fuel	Steam - Dual Fuel	Steam - Dual Fuel		
Coal Data:															
Beginning balance					-					74,257	942,182	1,063,230	560,022	2,639,691	2,249,850.29
Tons received during period										-	160,876	126,317	34,519	321,712	3,321,481.00
Inventory adjustments					-					-	-	-	-	-	87,264.42
Tons burned during period					-					-	188,294	175,590	106,421	470,305	3,167,498.27
Ending balance					-					74,257	914,764	1,013,957	488,120	2,491,098	2,491,097.54
MBTUs per ton burned					-					-	25.43	25.37	25.11	25.34	25.14
Cost of ending inventory ($/ton)					-					76.97	106.48	87.57	92.62	95.19	95.19
Oil Data:															
Beginning balance	-	-	-		676,615	8,412,634	815,389	2,345,685	2,482,428	97,085	278,522	19,411	189,712	15,317,480	17,610,506
Gallons received during period	-	-	-		164,086	-	-	1,301,461	1,354,355	-	-	14,925	60,032	2,894,859	4,430,957
Miscellaneous adjustments	-	-	-		-	-	-	-	-	-	-	(12,217)	(7,796)	(18,962)	(283,590)
Gallons burned during period		-	-		119,913	2,024,251	-	1,863,711	1,584,733	-	1,055	-	57,940	5,652,654	9,217,150
Ending balance	-	-	-		720,788	6,388,383	815,389	1,783,435	2,252,050	97,085	277,467	22,119	184,008	12,540,723	12,540,723
Cost of ending inventory ($/gal)	-	-	-		2.41	2.10	2.40	2.69	2.55	3.67	1.98	2.92	3.51	2.33	2.33
Natural Gas Data:															
Beginning balance															
MCF received during period	3,201,724	3,078,374	10,314	96,396	25,719	139,785	(21)	103,973	645,289		1,854,024	7,076,232	2,186,597	18,418,406	245,725,869
MCF burned during period	3,201,724	3,078,374	10,314	96,396	25,719	139,785	(21)	103,973	645,289		1,854,024	7,076,232	2,186,597	18,418,406	245,725,869
Ending balance															
Biogas Data:															
Beginning balance															
MCF received during period	-	14,075	-											14,075	125,074
MCF burned during period	-	14,075	-											14,075	125,074
Ending balance															
Limestone Data:															
Beginning balance										17,697	69,262	39,265	31,093	157,316	158,739
Tons received during period										-	-	-	-	-	163,156
Inventory adjustments										-	-	-	-	-	(9,121)
Tons consumed during period										-	10,150	11,833	7,544	29,527	184,984
Ending balance										17,697	59,112	27,432	23,549	127,789	127,789
Cost of ending inventory ($/ton)										55.11	45.63	55.25	47.15	49.29	49.29

Description	Buck	Qtr Ending December 2022	Total 12 ME December 2022
Ammonia Data: (B)			
Beginning balance	3,836	3,836	2,761
Tons received during period	925	925	5,319
Tons consumed during period	1,127	1,127	4,446
Ending balance	3,634	3,634	3,634
Cost of ending inventory ($/ton)	339.09	339.09	339.09

Notes:
Detail amounts may not add to totals shown due to rounding.
Schedule excludes in-transit and terminal activity.
Gas is burned as received; therefore, inventory balances are not maintained.
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
(B) Quarterly ammonia inventory amounts are revised to reflect a correction to June quantities, affecting the quarter ending September 2021 beginning balance. Revised amounts for quarter ending June 2021 are revised above.

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Clark Second Revised
Exhibit 6 Schedule 7

DUKE ENERGY CAROLINAS
ANALYSIS OF COAL PURCHASED
'December 2022

STATION	TYPE	QUANTITY OF TONS DELIVERED	DELIVERED COST	DELIVERED COST PER TON
ALLEN	SPOT	-	$ -	$ -
	CONTRACT	-	7,786	-
	FUEL MANAGEMENT AGREEMENT		(7,786)	
	FIXED TRANSPORTATION / ADJUSTMENTS	-	8,397	-
	TOTAL	0	8,397	-
BELEWS CREEK	SPOT	-	-	-
	CONTRACT	126,317	11,773,259	93.20
	FUEL MANAGEMENT AGREEMENT		814,231	
	FIXED TRANSPORTATION / ADJUSTMENTS	-	418,157	-
	TOTAL	126,317	13,005,647	102.96
BUCK	SPOT	-	-	-
CLIFFSIDE	SPOT	-	-	-
	CONTRACT	34,519	3,969,974	115.01
	FUEL MANAGEMENT AGREEMENT			
	FIXED TRANSPORTATION / ADJUSTMENTS	-	189,852	-
	TOTAL	34,519	4,159,826	120.51
	TOTAL	-	-	-
MARSHALL	SPOT	60,317	11,977,372	198.57
	CONTRACT	100,559	11,121,036	110.59
	FUEL MANAGEMENT AGREEMENT		(1,413,676)	
	FUEL MANAGEMENT AGREEMENT			
	FIXED TRANSPORTATION / ADJUSTMENTS	-	-	-
	TOTAL	-	(0)	-

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Exhibit 6 Schedule 8

DUKE ENERGY CAROLINAS
ANALYSIS OF COAL QUALITY RECEIVED
December 2022

STATION	PERCENT MOISTURE	PERCENT ASH	HEAT VALUE	PERCENT SULFUR
ALLEN	-	-	-	-
BELEWS CREEK	6.68	9.63	12,693	1.84
CLIFFSIDE	13.99	8.16	11,374	1.99
LEE	-	-	-	-
MARSHALL	7.56	9.61	12,443	1.39

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Clark Second Revised Exhibit 6
Schedule 9

DUKE ENERGY CAROLINAS
ANALYSIS OF OIL PURCHASED
DECEMBER 2022

	ALLEN	BELEWS CREEK
VENDOR	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract
SULFUR CONTENT %	-	-
GALLONS RECEIVED	-	14,925
TOTAL DELIVERED COST	$ -	$ 43,134
DELIVERED COST/GALLON	$ -	$ 2.89
BTU/GALLON	138,000	138,000

	CLIFFSIDE	MARSHALL
VENDOR	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract
SULFUR CONTENT %	-	-
GALLONS RECEIVED	60,032	-
TOTAL DELIVERED COST	$ 195,355	$ -
DELIVERED COST/GALLON	$ 3.25	$ -
BTU/GALLON	138,000	138,000

	LEE	MILL CREEK	ROCKINGHAM
VENDOR	HighTowers	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract	Contract
SULFUR CONTENT %	-	-	-
GALLONS RECEIVED	164,086	1,301,461	1,354,355
TOTAL DELIVERED COST	$ 581,554	$ 4,046,679	$ 4,504,834
DELIVERED COST/GALLON	$ 3.54	$ 3.11	$ 3.33
BTU/GALLON	138,000	138,000	138,000

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Clark Second Revised Exhibit 6
Schedule 10

Duke Energy Carolinas Base Load Power Plant Performance Review Plan

Report Period: December 2022 - December 2022

Station	Unit	Date of Outage	Duration of Outage (Hours)	Scheduled / Unscheduled	Cause of Outage	Reason Outage Occurred	Remedial Actions Taken
Oconee	1						
	2						
	3						
McGuire	1						
	2						
Catawba	1						
	2						

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022

Belews Creek Station

No Outages at Baseload Units During the Month.

Buck Combined Cycle Station

No Outages at Baseload Units During the Month.

Clemson CHP

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
1	12/12/2022 8:13:00 AM To 12/21/2022 7:52:00 AM	Sch	3999	Other miscellaneous balance of plant problems	Planned outage to repair duct work damage.	
1	12/24/2022 7:59:00 AM To 12/24/2022 3:05:00 PM	Unsch	5041	Fuel piping and valves	Gas Turbine trip due to reduced gas pressure from Fort Hill.	

Dan River Combined Cycle Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
9	12/23/2022 11:51:00 PM To 12/24/2022 1:56:00 AM	Unsch	1740	Boiler drum gage glasses / level indicator	HRSG 9 LP Drum Level Transmitters froze and lost indication on the Drum level transmitters.	
9	12/24/2022 1:56:00 AM To 12/25/2022 12:08:00 AM	Unsch	5016	High pressure compressor bleed valves	Started the GT9 and unit failed to start due to a faulty Compressor Blead valve switch.	

Marshall Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
4	12/2/2022 10:55:00 PM To 12/9/2022 9:53:00 PM	Sch	8140	Reaction tanks including agitators	Maintenance outage to repair leaking reaction tank agitators "A" and "E".	
4	12/30/2022 2:56:00 PM To 12/31/2022 11:59:00 PM	Sch	0920	Other slag and ash removal problems	Clinker Removal from Bottom Ash Hopper.	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022

WS Lee Combined Cycle

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
WS Lee CC ST 10	11/3/2022 3:34:00 AM To 12/11/2022 3:07:00 AM	Sch	4640	Seal oil system and seals	Generator inspection.	
WS Lee CC ST 10	12/11/2022 3:07:00 AM To 12/31/2022 11:59:00 PM	Unsch	4410	Turning gear and motor	Fire damage discovered in the ST compartment.	
WS Lee CC GT 11	11/3/2022 3:48:00 AM To 12/10/2022 8:44:00 AM	Sch	5272	Boroscope inspection	Gas turbine 11 borscope inspection.	
WS Lee CC GT 11	12/10/2022 8:56:00 AM To 12/10/2022 7:19:00 PM	Sch	1740	Boiler drum gage glasses / level indicator	Test fired unit coming out of PO. (HRSG drum levels)	
WS Lee CC GT 11	12/11/2022 3:07:00 AM To 12/31/2022 11:59:00 PM	Unsch	4410	Turning gear and motor	Fire damage in the ST compartment.	
WS Lee CC GT 12	11/3/2022 3:47:00 AM To 12/10/2022 3:55:00 PM	Sch	5260	Major overhaul (use for non-specific overhaul only; see page B-CCGT-2)	GT12 HGP overhaul.	
WS Lee CC GT 12	12/10/2022 5:05:00 PM To 12/11/2022 3:07:00 AM	Sch	5048	Gas fuel system including controls and instrumentation	Unit testing coming out of outage - (ACDMS not available for tuning).	
WS Lee CC GT 12	12/11/2022 3:07:00 AM To 12/31/2022 11:59:00 PM	Unsch	4410	Turning gear and motor	Fire damage located in the ST compartment.	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas Base Load Power Plant Performance Review Plan
Report Period: December 2022

	Oconee 1	Oconee 2	Oconee 3	McGuire 1	McGuire 2	Catawba 1	Catawba 2
(A) MDC (MW)	847	848	859	1158	1158	1160	1150
(B) Period Hours	744	744	744	744	744	744	744
(C1) Net Gen (MWH)	647,998	651,793	653,520	889,246	887,785	880,020	875,855
(C2) Capacity Factor (%)	102.83	103.31	102.26	103.21	103.04	101.97	102.37
(D1) Net MWH Not Gen. Due to Full Schedule Outages	0	0	0	0	0	0	0
(D2) % Net MWH Not Gen. Due to Full Schedule Outages	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(E1) Net MWH Not Gen. Due to Partial Scheduled Outages	0	0	0	0	0	0	0
(E2) % Net MWH Not Gen. Due to Partial Scheduled Outages	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(F1) Net MWH Not Gen Due to Full Forced Outages	0	0	0	0	0	0	0
(F2) % Net MWH Not Gen Due to Full Forced Outages	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(G1) Net MWH Not Gen due to Partial Forced Outages	-17,830	-20,881	-14,424	-27,694	-26,233	-16,980	-20,255
(G2) % Net MWH Not Gen Due to Partial Forced Outages	-2.83	-3.31	-2.26	-3.21	-3.04	-1.97	-2.37
(H1) Net MWH Not Gen Due to Economic Dispatch	0	0	0	0	0	0	0
(H2) %Net MWH Not Gen Due to Economic Dispatch	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(I1) Core Conservation	0	0	0	0	0	0	0
(I2) % Core Conservation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(J1) Net MWH Possible in Period	630,168	630,912	639,096	861,552	861,552	863,040	855,600
(J2) % Net mwh Possible in Period	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
(K) Equivalent Availability (%)	100	100	100	100	100	100	100
(L) Output Factor (%)	102.83	103.31	102.26	103.21	103.04	101.97	102.37
(M) Heat Rate (BTU/Net KWH)	10,060	10,004	9,978	9,893	9,909	9,993	9,873

Notes:
1) Fields (E1), (E2), (G1), (G2), (H1), (H2), (I1) and (I2) are estimates
2) Fields (D1), (D2), (F1) and (F2) include ramping losses
EAF is calculated using Standard NERC calculation and excludes OMC events

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Belews Creek Station

	Unit 1	Unit 2
(A) MDC (mW)	1,110	1,110
(B) Period Hrs	744	744
(C) Net Generation (mWh)	595,517	656,273
(D) Capacity Factor (%)	72.11	79.47
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	61,727	44,766
(H) Scheduled Derates: percent of Period Hrs	7.47	5.42
(I) Net mWh Not Generated due to Full Forced Outages	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	38,639	0
(L) Forced Derates: percent of Period Hrs	4.68	0.00
(M) Net mWh Not Generated due to Economic Dispatch	129,957	124,801
(N) Economic Dispatch: percent of Period Hrs	15.74	15.11
(O) Net mWh Possible in Period	825,840	825,840
(P) Equivalent Availability (%)	87.85	94.58
(Q) Output Factor (%)	72.11	79.47
(R) Heat Rate (BTU/NkWh)	9,723	9,803

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Buck Combined Cycle Station

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	206	206	306	718
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	135,615	135,779	198,155	469,549
(D) Capacity Factor (%)	88.48	88.59	87.04	87.90
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	636	636
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.28	0.12
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	152	152	3,216	3,521
(L) Forced Derates: percent of Period Hrs	0.10	0.10	1.41	0.66
(M) Net mWh Not Generated due to Economic Dispatch	17,497	17,333	25,656	60,486
(N) Economic Dispatch: percent of Period Hrs	11.42	11.31	11.27	11.32
(O) Net mWh Possible in Period	153,264	153,264	227,664	534,192
(P) Equivalent Availability (%)	99.90	99.90	98.31	99.22
(Q) Output Factor (%)	88.48	88.59	87.04	87.90
(R) Heat Rate (BTU/NkWh)	10,371	10,176	2,649	7,056

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Clemson CHP

	Clemson CHP1
(A) MDC (mW)	16
(B) Period Hrs	744
(C) Net Generation (mWh)	7,147
(D) Capacity Factor (%)	61.98
(E) Net mWh Not Generated due to Full Scheduled Outages	3,343
(F) Scheduled Outages: percent of Period Hrs	28.99
(G) Net mWh Not Generated due to Partial Scheduled Outages	0
(H) Scheduled Derates: percent of Period Hrs	0.00
(I) Net mWh Not Generated due to Full Forced Outages	110
(J) Forced Outages: percent of Period Hrs	0.95
(K) Net mWh Not Generated due to Partial Forced Outages	0
(L) Forced Derates: percent of Period Hrs	0.00
(M) Net mWh Not Generated due to Economic Dispatch	932
(N) Economic Dispatch: percent of Period Hrs	8.09
(O) Net mWh Possible in Period	11,532
(P) Equivalent Availability (%)	70.06
(Q) Output Factor (%)	88.46
(R) Heat Rate (BTU/NkWh)	13,906

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Dan River Combined Cycle Station

	Unit 8	Unit 9	Unit ST07	Block Total
(A) MDC (mW)	206	206	308	720
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	131,290	127,576	198,054	456,920
(D) Capacity Factor (%)	85.66	83.24	86.43	85.30
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	0	0
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(I) Net mWh Not Generated due to Full Forced Outages	0	5,002	0	5,002
(J) Forced Outages: percent of Period Hrs	0.00	3.26	0.00	0.93
(K) Net mWh Not Generated due to Partial Forced Outages	457	457	5,331	6,246
(L) Forced Derates: percent of Period Hrs	0.30	0.30	2.33	1.17
(M) Net mWh Not Generated due to Economic Dispatch	21,517	20,229	25,767	67,512
(N) Economic Dispatch: percent of Period Hrs	14.04	13.20	11.24	12.60
(O) Net mWh Possible in Period	153,264	153,264	229,152	535,680
(P) Equivalent Availability (%)	99.70	96.44	97.67	97.90
(Q) Output Factor (%)	85.66	86.05	86.43	86.10
(R) Heat Rate (BTU/NkWh)	10,567	10,487	2,708	7,138

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
Marshall Station

	Unit 3	Unit 4
(A) MDC (mW)	658	660
(B) Period Hrs	744	744
(C) Net Generation (mWh)	358,385	297,208
(D) Capacity Factor (%)	73.21	60.53
(E) Net mWh Not Generated due to Full Scheduled Outages	0	132,020
(F) Scheduled Outages: percent of Period Hrs	0.00	26.89
(G) Net mWh Not Generated due to Partial Scheduled Outages	6,231	0
(H) Scheduled Derates: percent of Period Hrs	1.27	0.00
(I) Net mWh Not Generated due to Full Forced Outages	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	5,409	0
(L) Forced Derates: percent of Period Hrs	1.10	0.00
(M) Net mWh Not Generated due to Economic Dispatch	119,527	61,812
(N) Economic Dispatch: percent of Period Hrs	24.42	12.59
(O) Net mWh Possible in Period	489,552	491,040
(P) Equivalent Availability (%)	97.62	73.11
(Q) Output Factor (%)	73.21	82.78
(R) Heat Rate (BTU/NkWh)	9,494	9,365

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
December 2022
WS Lee Combined Cycle

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	248	248	313	809
(B) Period Hrs	744	744	744	744
(C) Net Generation (mWh)	-376	-884	0	-1,260
(D) Capacity Factor (%)	0.00	0.00	0.00	-0.21
(E) Net mWh Not Generated due to Full Scheduled Outages	58,307	60,004	76,097	194,407
(F) Scheduled Outages: percent of Period Hrs	31.60	32.52	32.68	32.30
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	0	0
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(I) Net mWh Not Generated due to Full Forced Outages	124,218	124,218	156,775	405,212
(J) Forced Outages: percent of Period Hrs	67.32	67.32	67.32	67.32
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	0	1,174	0	1,174
(N) Economic Dispatch: percent of Period Hrs	0.00	0.64	0.00	0.20
(O) Net mWh Possible in Period	184,512	184,512	232,872	601,896
(P) Equivalent Availability (%)	0.00	0.00	0.00	0.38
(Q) Output Factor (%)	0.00	0.00	0.00	-55.41
(R) Heat Rate (BTU/NkWh)	0	0	0	-14,135

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

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Duke Energy Carolinas
Intermediate Power Plant Performance Review Plan
December 2022

		Cliffside Station
		Cliffside 6
(A)	**MDC (mW)**	849
(B)	**Period Hrs**	744
(C)	**Net Generation (mWh)**	427,074
(D)	**Net mWh Possible in Period**	631,656
(E)	**Equivalent Availability (%)**	79.65
(F)	**Output Factor (%)**	84.32
(G)	**Capacity Factor (%)**	67.61

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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Duke Energy Carolinas
Peaking Power Plant Performance Review Plan
December 2022

		Cliffside Station
		Unit 5
(A)	MDC (mW)	546
(B)	Period Hrs	744
(C)	Net Generation (mWh)	88,740
(D)	Net mWh Possible in Period	406,224
(E)	Equivalent Availability (%)	95.43
(F)	Output Factor (%)	68.09
(G)	Capacity Factor (%)	21.85

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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Duke Energy Carolinas Base Load Power Plant Performance Review Plan
Report Period: January 2022 - December 2022

	Oconee 1	Oconee 2	Oconee 3	McGuire 1	McGuire 2	Catawba 1	Catawba 2
(A) MDC (MW)	847	848	859	1158	1158	1160	1150
(B) Period Hours	8,760	8,760	8,760	8,760	8,760	8,760	8,760
(C1) Net Gen (MWH)	6,988,171	7,123,871	7,013,087	9,221,671	10,228,639	10,277,595	8,685,269
(C2) Capacity Factor (%)	94.18	95.9	93.2	90.91	100.83	101.14	86.21
(D1) Net MWH Not Gen. Due to Full Schedule Outages	544,917	0	486,752	805,968	0	0	1,159,200
(D2) % Net MWH Not Gen. Due to Full Schedule Outages	7.34	0.00	6.47	7.95	0.00	0.00	11.51
(E1) Net MWH Not Gen. Due to Partial Scheduled Outages	20,893	2,936	98,689	51,931	0	1,094	42,417
(E2) % Net MWH Not Gen. Due to Partial Scheduled Outages	0.28	0.04	1.31	0.51	0.00	0.01	0.42
(F1) Net MWH Not Gen Due to Full Forced Outages	0	443,928	0	227,682	111,593	0	259,478
(F2) % Net MWH Not Gen Due to Full Forced Outages	0.00	5.98	0.00	2.24	1.10	0.00	2.58
(G1) Net MWH Not Gen due to Partial Forced Outages	-134,261	-142,255	-73,688	-163,172	-196,152	-117,089	-72,364
(G2) % Net MWH Not Gen Due to Partial Forced Outages	-1.80	-1.92	-0.98	-1.61	-1.93	-1.15	-0.72
(H1) Net MWH Not Gen Due to Economic Dispatch	0	0	0	0	0	0	0
(H2) %Net MWH Not Gen Due to Economic Dispatch	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(I1) Core Conservation	0	0	0	0	0	0	0
(I2) % Core Conservation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(J1) Net MWH Possible in Period	7,419,720	7,428,480	7,524,840	10,144,080	10,144,080	10,161,600	10,074,000
(J2) % Net mwh Possible in Period	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
(K) Equivalent Availability (%)	92.38	93.81	92.16	89.24	98.76	99.99	85.38
(L) Output Factor (%)	101.65	101.99	99.64	101.22	101.96	101.14	100.25
(M) Heat Rate (BTU/Net KWH)	10,148	10,114	10,091	10,005	10,003	10,073	10,033

Notes:
1) Fields (E1), (E2), (G1), (G2), (H1), (H2), (I1) and (I2) are estimates
2) Fields (D1), (D2), (F1) and (F2) include ramping losses
EAF is calculated using Standard NERC calculation and excludes OMC events

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Belews Creek Station

	Unit 1	Unit 2
(A) MDC (mW)	1,110	1,110
(B) Period Hrs	8,760	8,760
(C) Net Generation (mWh)	5,464,278	3,779,808
(D) Capacity Factor (%)	56.20	38.87
(E) Net mWh Not Generated due to Full Scheduled Outages	682,961	1,672,770
(F) Scheduled Outages: percent of Period Hrs	7.02	17.20
(G) Net mWh Not Generated due to Partial Scheduled Outages	82,895	84,005
(H) Scheduled Derates: percent of Period Hrs	0.85	0.86
(I) Net mWh Not Generated due to Full Forced Outages	687,179	2,163,967
(J) Forced Outages: percent of Period Hrs	7.07	22.25
(K) Net mWh Not Generated due to Partial Forced Outages	251,493	60,684
(L) Forced Derates: percent of Period Hrs	2.59	0.62
(M) Net mWh Not Generated due to Economic Dispatch	2,554,795	1,962,366
(N) Economic Dispatch: percent of Period Hrs	26.27	20.18
(O) Net mWh Possible in Period	9,723,600	9,723,600
(P) Equivalent Availability (%)	82.47	59.05
(Q) Output Factor (%)	65.99	65.86
(R) Heat Rate (BTU/NkWh)	9,021	9,783

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Buck Combined Cycle Station

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	206	206	306	718
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,406,294	1,403,629	2,056,915	4,866,838
(D) Capacity Factor (%)	77.93	77.78	76.73	77.38
(E) Net mWh Not Generated due to Full Scheduled Outages	127,024	132,116	189,644	448,783
(F) Scheduled Outages: percent of Period Hrs	7.04	7.32	7.07	7.14
(G) Net mWh Not Generated due to Partial Scheduled Outages	115,863	114,594	18,320	248,777
(H) Scheduled Derates: percent of Period Hrs	6.42	6.35	0.68	3.96
(I) Net mWh Not Generated due to Full Forced Outages	0	6,355	0	6,355
(J) Forced Outages: percent of Period Hrs	0.00	0.35	0.00	0.10
(K) Net mWh Not Generated due to Partial Forced Outages	152	152	13,415	13,720
(L) Forced Derates: percent of Period Hrs	0.01	0.01	0.50	0.22
(M) Net mWh Not Generated due to Economic Dispatch	155,227	147,714	402,266	705,207
(N) Economic Dispatch: percent of Period Hrs	8.60	8.19	15.01	11.21
(O) Net mWh Possible in Period	1,804,560	1,804,560	2,680,560	6,289,680
(P) Equivalent Availability (%)	86.53	85.97	91.74	88.59
(Q) Output Factor (%)	83.83	84.35	82.58	83.44
(R) Heat Rate (BTU/NkWh)	10,472	10,245	2,388	6,990

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Clemson CHP

	Clemson CHP1
(A) MDC (mW)	15
(B) Period Hrs	8,760
(C) Net Generation (mWh)	91,218
(D) Capacity Factor (%)	67.66
(E) Net mWh Not Generated due to Full Scheduled Outages	7,454
(F) Scheduled Outages: percent of Period Hrs	5.53
(G) Net mWh Not Generated due to Partial Scheduled Outages	14,157
(H) Scheduled Derates: percent of Period Hrs	10.50
(I) Net mWh Not Generated due to Full Forced Outages	10,738
(J) Forced Outages: percent of Period Hrs	7.97
(K) Net mWh Not Generated due to Partial Forced Outages	0
(L) Forced Derates: percent of Period Hrs	0.00
(M) Net mWh Not Generated due to Economic Dispatch	11,246
(N) Economic Dispatch: percent of Period Hrs	8.34
(O) Net mWh Possible in Period	134,813
(P) Equivalent Availability (%)	76.08
(Q) Output Factor (%)	78.22
(R) Heat Rate (BTU/NkWh)	12,264

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Dan River Combined Cycle Station

	Unit 8	Unit 9	Unit ST07	Block Total
(A) MDC (mW)	206	206	308	720
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,158,153	1,172,815	1,779,047	4,110,015
(D) Capacity Factor (%)	64.18	64.99	65.94	65.16
(E) Net mWh Not Generated due to Full Scheduled Outages	362,259	372,530	559,938	1,294,727
(F) Scheduled Outages: percent of Period Hrs	20.07	20.64	20.75	20.53
(G) Net mWh Not Generated due to Partial Scheduled Outages	107,474	107,353	9,098	223,925
(H) Scheduled Derates: percent of Period Hrs	5.96	5.95	0.34	3.55
(I) Net mWh Not Generated due to Full Forced Outages	25,190	20,771	24,126	70,086
(J) Forced Outages: percent of Period Hrs	1.40	1.15	0.89	1.11
(K) Net mWh Not Generated due to Partial Forced Outages	457	457	5,686	6,600
(L) Forced Derates: percent of Period Hrs	0.03	0.03	0.21	0.10
(M) Net mWh Not Generated due to Economic Dispatch	151,026	130,634	320,186	601,845
(N) Economic Dispatch: percent of Period Hrs	8.37	7.24	11.87	9.54
(O) Net mWh Possible in Period	1,804,560	1,804,560	2,698,080	6,307,200
(P) Equivalent Availability (%)	72.55	72.23	77.80	74.71
(Q) Output Factor (%)	82.36	83.10	84.15	83.34
(R) Heat Rate (BTU/NkWh)	10,691	10,619	2,489	7,120

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
Marshall Station

	Unit 3	Unit 4
(A) MDC (mW)	658	660
(B) Period Hrs	8,760	8,760
(C) Net Generation (mWh)	3,101,170	2,712,398
(D) Capacity Factor (%)	53.80	46.91
(E) Net mWh Not Generated due to Full Scheduled Outages	586,574	1,467,292
(F) Scheduled Outages: percent of Period Hrs	10.18	25.38
(G) Net mWh Not Generated due to Partial Scheduled Outages	10,850	0
(H) Scheduled Derates: percent of Period Hrs	0.19	0.00
(I) Net mWh Not Generated due to Full Forced Outages	101,148	149,140
(J) Forced Outages: percent of Period Hrs	1.75	2.58
(K) Net mWh Not Generated due to Partial Forced Outages	235,834	146,348
(L) Forced Derates: percent of Period Hrs	4.09	2.53
(M) Net mWh Not Generated due to Economic Dispatch	1,728,504	1,306,421
(N) Economic Dispatch: percent of Period Hrs	29.99	22.60
(O) Net mWh Possible in Period	5,764,080	5,781,600
(P) Equivalent Availability (%)	83.79	69.51
(Q) Output Factor (%)	61.49	65.12
(R) Heat Rate (BTU/NkWh)	10,369	9,782

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Baseload Steam and CHP Units
Performance Review Plan
January, 2022 through December, 2022
WS Lee Combined Cycle

	Unit 11	Unit 12	Unit ST10	Block Total
(A) MDC (mW)	248	248	313	809
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,172,874	1,533,260	1,948,119	4,654,253
(D) Capacity Factor (%)	53.99	70.58	71.05	65.67
(E) Net mWh Not Generated due to Full Scheduled Outages	306,173	307,959	392,464	1,006,597
(F) Scheduled Outages: percent of Period Hrs	14.09	14.18	14.31	14.20
(G) Net mWh Not Generated due to Partial Scheduled Outages	38,348	53,273	0	91,621
(H) Scheduled Derates: percent of Period Hrs	1.77	2.45	0.00	1.29
(I) Net mWh Not Generated due to Full Forced Outages	537,604	152,289	194,999	884,893
(J) Forced Outages: percent of Period Hrs	24.75	7.01	7.11	12.49
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	147,623	147,623
(L) Forced Derates: percent of Period Hrs	0.00	0.00	5.38	2.08
(M) Net mWh Not Generated due to Economic Dispatch	117,480	125,699	58,674	301,853
(N) Economic Dispatch: percent of Period Hrs	5.41	5.79	2.14	4.26
(O) Net mWh Possible in Period	2,172,480	2,172,480	2,741,880	7,086,840
(P) Equivalent Availability (%)	59.40	76.36	73.19	69.93
(Q) Output Factor (%)	88.31	90.01	90.42	89.75
(R) Heat Rate (BTU/NkWh)	10,787	10,488	2,522	7,229

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

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Duke Energy Carolinas
Intermediate Power Plant
Performance Review Plan
January, 2022 through December, 2022

Cliffside Station

Units	Unit 6
(A) MDC (mW)	849
(B) Period Hrs	8,760
(C) Net Generation (mWh)	4,410,848
(D) Net mWh Possible in Period	7,437,240
(E) Equivalent Availability (%)	71.91
(F) Output Factor (%)	82.25
(G) Capacity Factor (%)	59.31

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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Duke Energy Carolinas
Peaking Power Plant
Performance Review Plan
January, 2022 through December, 2022

Cliffside Station

Units	Unit 5
(A) MDC (mW)	546
(B) Period Hrs	8,760
(C) Net Generation (mWh)	600,803
(D) Net mWh Possible in Period	4,782,960
(E) Equivalent Availability (%)	57.36
(F) Output Factor (%)	38.11
(G) Capacity Factor (%)	12.56

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Proposed Nuclear Capacity Factor
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Second Revised Workpaper 1

	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs	10,026,652	9,119,788	8,799,414	9,938,344	7,338,135	6,713,739	6,883,057	58,819,128
Cost (Gross of Joint Owners)	$ 62,355,885	$ 50,162,610	$ 46,520,487	$ 54,060,516	$ 41,917,165	$ 34,438,133	$ 40,707,973	$ 330,162,771
$/MWh	6.2190	5.5004	5.2868	5.4396	5.7122	5.1295	5.9142	
Avg $/MWh		**5.6132**						
Cents per kWh		**0.5613**						

			Sept 2023 - August 2024
MDC			
CATA_UN01	Catawba	MW	1,160.0
CATA_UN02	Catawba	MW	1,150.1
MCGU_UN01	McGuire	MW	1,158.0
MCGU_UN02	McGuire	MW	1,157.6
OCON_UN01	Oconee	MW	847.0
OCON_UN02	Oconee	MW	848.0
OCON_UN03	Oconee	MW	859.0
			7,179.7
Hours In Year			8,760
Generation GWhs			
CATA_UN01	Catawba	GWh	10,027
CATA_UN02	Catawba	GWh	9,120
MCGU_UN01	McGuire	GWh	8,799
MCGU_UN02	McGuire	GWh	9,938
OCON_UN01	Oconee	GWh	7,338
OCON_UN02	Oconee	GWh	6,714
OCON_UN03	Oconee	GWh	6,883
			58,819
	Proposed Nuclear Capacity Factor		93.52%

rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Second Revised Workpaper 2

	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs with NERC applied	9,272,460	9,193,324	9,256,473	9,253,276	6,900,340	6,908,486	6,998,101	57,782,460
Hours	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760
MDC	1,160.0	1,150.1	1,158.0	1,157.6	847.0	848.0	859.0	7,179.7
Capacity factor	91.25%	91.25%	91.25%	91.25%	93.00%	93.00%	93.00%	91.87%
Cost	$ 52,048,053	$ 51,603,849	$ 51,958,314	$ 51,940,367	$ 38,732,897	$ 38,778,626	$ 39,281,651	$ 324,343,758

Avg $/MWh	**5.6132**
Cents per kWh	**0.5613**

2017-2021	Capacity Rating	NCF Rating	Weighted Average	
Oconee 1	847.0	93.00	10.97%	
Oconee 2	848.0	93.00	10.98%	
Oconee 3	859.0	93.00	11.13%	
McGuire 1	1,158.0	91.25	14.72%	
McGuire 2	1,157.6	91.25	14.71%	
Catawba 1	1,160.0	91.25	14.74%	
Catawba 2	1,150.1	91.25	14.62%	
	7,179.7		**91.87%**	Wtd Avg on Capacity Rating

rounding differences may occur

Duke Energy Carolinas, LLC **Clark Second Revised Workpaper 3**
North Carolina Annual Fuel and Fuel Related Expense
North Carolina Generation and Purchased Power in MWhs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Resource Type	Sept 2023 - August 2024	
NUC Total (Gross)	58,819,128	
COAL Total	10,320,159	
Gas CT and CC total (Gross)	31,212,640	
Run of River	5,600,555	
Net pumped Storage	(4,083,743)	
Total Hydro	1,516,812	
Catawba Joint Owners	(14,888,880)	
Lee CC Joint Owners	(878,400)	
DEC owned solar	358,121	
Total Generation		86,459,580
Purchases for REPS Compliance	1,438,042	
Qualifying Facility Purchases - Non-REPS compliance	2,389,958	
Other Purchases	164,878	
Allocated Economic Purchases	1,329,474	
Joint Dispatch Purchases	6,466,906	
	11,789,258	
Total Generation and Purchased Power		98,248,839
Fuel Recovered Through Intersystem Sales	(1,148,043)	

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Duke Energy Carolinas, LLC **Clark Second Revised Workpaper 4**
North Carolina Annual Fuel and Fuel Related Expense
Projected Fuel and Fuel Related Costs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Resource Type	Sept 2023 - August 2024	
Nuclear Total (Gross)	$ 330,162,771	
COAL Total	398,104,637	
Gas CT and CC total (Gross)	1,179,963,909	
Catawba Joint Owner costs	(83,614,236)	
CC Joint Owner costs	(25,697,152)	
Non-Economic Fuel Expense Recovered through Reimbursement	(3,687,381)	*use the average of th
Reagents and gain/loss on sale of By-Products	24,944,696	Workpaper 9
Purchases for REPS Compliance - Energy	68,790,240	
Purchases for REPS Compliance - Capacity	14,931,581	
Purchases of Qualifying Facilities - Energy	59,039,401	
Purchases of Qualifying Facilities - Capacity	12,176,644	
Other Purchases	397,088	
JDA Savings Shared	(69,598,371)	Workpaper 5
Allocated Economic Purchase cost	52,870,968	Workpaper 5
Joint Dispatch purchases	206,598,811	Workpaper 6
Total Purchases	345,206,362	
Fuel Expense recovered through intersystem sales	(57,998,825)	Workpaper 5
Total System Fuel and Fuel Related Costs	**$ 2,107,384,780**	

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Joint Dispatch Fuel Impacts
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Second Revised Workpaper 5

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Positive numbers represent costs to ratepayers, Negative numbers represent removal of costs to ratepayers

	Allocated Economic Purchase Cost		**Economic Sales Cost**		**Fuel Transfer Payment**		**JDA Savings Payment**	
	DEP	**DEC**	**DEP**	**DEC**	**DEP**	**DEC**	**DEP**	**DEC**
9/1/2023	$ 4,976,440	$ 7,317,885	$ (674,018)	$ (305,418)	$ (23,724,256)	$ 23,724,256	$ 6,910,581	$ (6,910,581)
10/1/2023	$ 5,904,520	$ 6,517,440	$ (69,203)	$ (114,170)	$ (15,802,316)	$ 15,802,316	$ 11,215,995	$ (11,215,995)
11/1/2023	$ 2,503,327	$ 3,105,057	$ (1,223,486)	$ (674,629)	$ (18,519,025)	$ 18,519,025	$ 10,008,333	$ (10,008,333)
12/1/2023	$ 762,505	$ 1,041,966	$ (5,872,462)	$ (1,890,081)	$ (15,722,366)	$ 15,722,366	$ 4,518,477	$ (4,518,477)
1/1/2024	$ 2,893,193	$ 2,042,582	$ (10,525,081)	$ (11,843,518)	$ (13,602,107)	$ 13,602,107	$ 4,544,884	$ (4,544,884)
2/1/2024	$ 315,449	$ 384,533	$ (10,078,466)	$ (13,200,189)	$ (6,837,056)	$ 6,837,056	$ 2,614,179	$ (2,614,179)
3/1/2024	$ 1,955,226	$ 2,816,591	$ (622,625)	$ (648,265)	$ (10,251,414)	$ 10,251,414	$ 1,341,892	$ (1,341,892)
4/1/2024	$ 3,952,712	$ 6,000,661	$ (639,409)	$ (211,299)	$ (12,097,213)	$ 12,097,213	$ 1,413,004	$ (1,413,004)
5/1/2024	$ 654,154	$ 713,694	$ (1,763,746)	$ (237,095)	$ (14,639,411)	$ 14,639,411	$ 6,435,252	$ (6,435,252)
6/1/2024	$ 4,153,979	$ 5,991,152	$ (1,260,436)	$ (644,515)	$ (21,582,339)	$ 21,582,339	$ 3,725,538	$ (3,725,538)
7/1/2024	$ 3,609,443	$ 5,189,561	$ (2,532,634)	$ (1,768,613)	$ (17,455,853)	$ 17,455,853	$ 14,114,687	$ (14,114,687)
8/1/2024	$ 8,014,976	$ 11,749,845	$ (1,306,118)	$ (1,592,378)	$ (11,496,801)	$ 11,496,801	$ 2,755,548	$ (2,755,548)
Sept 23 - Aug 24		$ 52,870,968		$ (33,130,170)		$ 181,730,155		$ (69,598,371)

$ 206,598,811	Workpaper 6 - Transfer - Purchases
$ (24,868,655)	Workpaper 6 - Transfer - Sales
$ 181,730,155	Sept 22-Aug 23 Net Fuel Transfer Payment
$ (24,868,655)	Workpaper 6 - Transfer - Sales
$ (33,130,170)	Sept 23-Aug 24 Economic Sales Cost
$ (57,998,825)	**Total Fuel expense recovered through intersystem sales**

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Merger Payments
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Second Revised Workpaper 6

	Transfer Projection		Purchase Allocation Delta		Purchase Adjusted Transfer	Sale	Fossil Gen Cost		Sale Pre-Net Payments	Purchase
	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC
9/1/2023	606,726	20,805	50,315	(50,315)	657,041	20,805	36.94	26.37	548,621	24,272,877
10/1/2023	619,535	32,076	95,370	(95,370)	714,904	32,076	28.43	141.02	4,523,430	20,325,746
11/1/2023	744,209	8,765	33,471	(33,471)	777,680	8,765	25.47	147.32	1,291,176	19,810,201
12/1/2023	558,288	34,315	(6,026)	6,026	558,288	40,342	33.48	73.65	2,971,155	18,693,520
1/1/2024	364,075	36,080	10,140	(10,140)	374,215	36,080	40.82	46.37	1,673,120	15,275,228
2/1/2024	261,473	47,009	(1,221)	1,221	261,473	48,231	36.72	57.30	2,763,603	9,600,659
3/1/2024	395,731	100,349	(4,372)	4,372	395,731	104,721	34.26	31.57	3,306,397	13,557,811
4/1/2024	400,208	82,708	30,753	(30,753)	430,962	82,708	33.12	26.32	2,176,582	14,273,794
5/1/2024	682,741	36,797	7,545	(7,545)	690,286	36,797	22.54	25.00	919,824	15,559,236
6/1/2024	551,409	42,848	67,925	(67,925)	619,334	42,848	36.79	28.05	1,201,775	22,784,114
7/1/2024	501,238	41,647	55,203	(55,203)	556,441	41,647	33.71	31.28	1,302,736	18,758,589
8/1/2024	328,372	64,562	102,180	(102,180)	430,552	64,562	31.79	33.92	2,190,235	13,687,036
Sept 23 - Aug 24	6,014,005	547,961	441,282	(441,282)	6,466,906	559,580			$ 24,868,655	$ 206,598,811
									Net Pre-Net Payments	$ 181,730,155

rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.52%
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Second Revised Workpaper 7

Fall 2022 Forecast
Billed Sales Forecast
Sales Forecast - MWhs (000)

		Projected sales for the Billing Period	Remove impact of SC DERP Net Metered Generation	Adjusted Sales
North Carolina:				
	Residential	23,477,265		23,477,265
	General	23,838,527		23,838,527
	Industrial	13,270,457		13,270,457
	Lighting	238,480		238,480
	NC RETAIL	60,824,730	-	60,824,729
South Carolina:				
	Residential	7,223,610	136,278	7,359,888
	General	5,371,691	42,584	5,414,275
	Industrial	9,133,136	429	9,133,565
	Lighting	51,014	-	51,014
	SC RETAIL	21,779,451	179,291	21,958,742
Total Retail Sales				
	Residential	30,700,876	136,278	30,837,153
	General	29,210,218	42,584	29,252,802
	Industrial	22,403,593	429	22,404,022
	Lighting	289,494	-	289,494
	Retail Sales	82,604,181	179,291	82,783,471
	Wholesale	8,227,610	-	8,227,610
	Projected System MWH Sales for Fuel Factor	90,831,791	179,291	91,011,082
	NC as a percentage of total	**66.96%**		**66.83%**
	SC as a percentage of total	23.98%		24.13%
	Wholesale as a percentage of total	9.06%		9.04%
		100.00%		100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	179,291
Marginal fuel rate per MWh for SC NEM	$ 24.52
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215

System Fuel Expense	$ 2,107,384,780	Clark Exhibit 2 Schedule 1 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 2,111,780,996	Clark Exhibit 2 Schedule 1 Page 3 of 3, L5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**	
Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1	$ 2,107,384,780				
QF and REPS Compliance Purchased Power - Capacity	$ 27,108,225				
Other fuel costs	$ 2,080,276,555				
SC Net Metering Fuel Allocation adjustment	$ 4,396,215				
Jurisdictional fuel costs after adj.	$ 2,084,672,770				
Allocation to states/classes		66.83%	9.04%	24.13%	
Jurisdictional fuel costs	$ 2,084,672,770	$ 1,393,186,813	$ 188,454,418	$ 503,031,540	66.68%
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)	
Total system actual fuel costs	$ 2,080,276,555	$ 1,393,186,813	$ 188,454,418	$ 498,635,324	
QF and REPS Compliance Purchased Power - Capacity	27,108,225	18,076,112			
Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1	$ 2,107,384,780	**$ 1,411,262,925**			
		Exh.2, Sch. 1 page 3, Line 13			

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.52% and Normalized Test Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Second Revised Workpaper 7a

Fall 2022 Forecast
Billed Sales Forecast - Normalized Test Period Sales
Sales Forecast - MWhs (000)

	Test Period Sales	Customer Growth Adjustment	Weather Adjustment	Remove impact of SC DERP Net Metered generation	Normalized Test Period Sales
NC RETAIL	59,059,117	162,487	337,854	-	59,559,458
SC RETAIL	20,955,111	(8,320)	99,613	179,291	21,225,695
Wholesale	8,269,814	5,836	(306)	-	8,275,343
Normalized System MWH Sales for Fuel Factor	88,284,042	160,003	437,160	179,291	89,060,496
NC as a percentage of total	**66.90%**				**66.88%**
SC as a percentage of total	23.74%				23.83%
Wholesale as a percentage of total	9.37%				9.29%
	100.00%				100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	179,291
Marginal fuel rate per MWh for SC NEM	$ 24.52
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215

System Fuel Expense	$ 2,032,140,076	Clark Exhibit 2 Schedule 2 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 2,036,536,291	Clark Exhibit 2 Schedule 2 Page 3 of 3, L5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**
Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1	$ 2,032,140,076			
QF and REPS Compliance Purchased Power - Capacity	$ 27,108,225			
Other fuel costs	$ 2,005,031,851			
SC Net Metering Fuel Allocation adjustment	$ 4,396,215			
Jurisdictional fuel costs after adj.	$ 2,009,428,066			
Allocation to states/classes		66.88%	9.29%	23.83%
Jurisdictional fuel costs	$ 2,009,428,055	$ 1,343,810,646	$ 186,712,496	$ 478,904,904
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)
Total system actual fuel costs	$ 2,005,031,840	$ 1,343,810,646	$ 186,712,496	$ 474,508,689
QF and REPS Compliance Purchased Power - Capacity	27,108,225	18,076,112		
Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1	$ 2,032,140,065	**$ 1,361,886,758**		
		Exh. 2, Sch 2 page 3, Line 13		

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Second Revised Workpaper 7b

Fall 2022 Forecast
Billed Sales Forecast
Sales Forecast - MWhs (000)

		Projected sales for the Billing Period	Remove impact of SC DERP Net Metered generation	Adjusted Sales
North Carolina:				
	Residential	23,477,265		23,477,265
	General	23,838,527		23,838,527
	Industrial	13,270,457		13,270,457
	Lighting	238,480		238,480
	NC RETAIL	60,824,730	-	60,824,730
South Carolina:				
	Residential	7,223,610	136,278	7,359,888
	General	5,371,691	42,584	5,414,275
	Industrial	9,133,136	429	9,133,565
	Lighting	51,014	0	51,014
	SC RETAIL	21,779,451	179,291	21,958,742
Total Retail Sales				
	Residential	30,700,876	136,278	30,837,154
	General	29,210,218	42,584	29,252,802
	Industrial	22,403,593	429	22,404,022
	Lighting	289,494	-	289,494
	Retail Sales	82,604,181	179,291	82,783,472
	Wholesale	8,227,610	-	8,227,610
	Projected System MWh Sales for Fuel Factor	90,831,791	179,291	91,011,082
	NC as a percentage of total	**66.96%**		**66.83%**
	SC as a percentage of total	23.98%		24.13%
	Wholesale as a percentage of total	9.06%		9.04%
		100.00%		100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	179,291	
Marginal fuel rate per MWh for SC NEM	$ 24.52	
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
System Fuel Expense	$ 2,132,906,715	Clark Exhibit 2 Schedule 3 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,396,215	
Total Fuel Costs for Allocation	$ 2,137,302,931	Clark Exhibit 2 Schedule 3 Page 3 of 3, Line 5

Reconciliation	**System**	**NC Retail Customers**	**Wholesale**	**South Carolina Retail**
Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1	$ 2,132,906,715			
QF and REPS Compliance Purchased Power - Capacity	$ 27,108,225			
Other fuel costs	$ 2,105,798,490			
SC Net Metering Fuel Allocation adjustment	$ 4,396,215			
Jurisdictional fuel costs after adj.	$ 2,110,194,706			
Allocation to states/classes		66.83%	9.04%	24.13%
Jurisdictional fuel costs	$ 2,110,194,706	$ 1,410,243,122	$ 190,761,601	$ 509,189,982
Direct Assignment of Fuel benefit to SC Retail	$ (4,396,215)		$ -	$ (4,396,215)
Total system actual fuel costs	$ 2,105,798,490	$ 1,410,243,122	$ 190,761,601	$ 504,793,767
QF and REPS Compliance Purchased Power - Capacity	27,108,225	18,076,112		
Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1	$ 2,132,906,715	**$ 1,428,319,234**		
		Exh. 2, Sch.3 page 3, Line 13		

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Annualized Revenue
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Second Revised Workpaper 8

	January 2023 Actuals			Normalized Sales	
	Revenue	**kWh Sales**	**Cents/ kWh**	**Clark Exhibit 4**	**Total Annualized Revenues**
	(a)	(b)	(a)/(b) *100 = (c)	(d)	(c) * (d) * 10
Residential	$ 259,112,943	2,404,726,417	10.7752	22,892,401	$ 2,466,691,215
General	$ 161,395,026	2,001,691,757	8.0629	24,448,017	$ 1,971,226,718
Industrial	$ 55,270,705	891,437,613	6.2002	12,219,040	$ 757,602,036
Total	$ 475,778,674	5,297,855,787		59,559,458	$ 5,195,519,969

rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Reagents and ByProducts
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Second Revised Workpaper 9

Reagent and ByProduct projections

Date	Ammonia	Urea	Limestone	Magnesium Hydroxide	Calcium Carbonate	Lime	**Reagent Cost**	**Gypsum (Gain)/ Loss**	**Ash (Gain)/Loss**	**Steam (Gain)/Loss**	**Sale of By-Products (Gain)/Loss**
9/1/2022	$ 215,268	$ 20,510	$ 258,314	$ 37,104	$ 22,496	$ 13,158	**$ 566,851**	$ 72,900	$ (11,374)	$ (249,752)	**$ (188,226)**
10/1/2022	$ 126,192	$ 12,023	$ 151,427	$ 20,990	$ 12,726	$ 13,158	**$ 336,516**	$ 42,578	$ (7,798)	$ (249,752)	**$ (214,972)**
11/1/2022	$ 175,908	$ 16,760	$ 211,084	$ 22,395	$ 13,578	$ 13,158	**$ 452,884**	$ 52,334	$ (12,578)	$ (249,752)	**$ (209,995)**
12/1/2022	$ 1,809,326	$ 172,388	$ 2,171,130	$ 139,582	$ 84,629	$ 13,158	**$ 4,390,213**	$ 702,173	$ (219,291)	$ (249,752)	**$ 233,130**
1/1/2023	$ 2,582,989	$ 246,100	$ 3,099,500	$ 205,790	$ 124,770	$ 13,158	**$ 6,272,308**	$ 1,096,545	$ (268,116)	$ (249,752)	**$ 578,677**
2/1/2023	$ 2,113,676	$ 201,385	$ 2,536,340	$ 167,519	$ 101,567	$ 13,158	**$ 5,133,645**	$ 816,993	$ (238,439)	$ (249,752)	**$ 328,803**
3/1/2023	$ 447,777	$ 42,663	$ 537,317	$ 56,469	$ 34,237	$ 13,158	**$ 1,131,622**	$ 144,210	$ (32,598)	$ (249,752)	**$ (138,140)**
4/1/2023	$ 245,737	$ 23,413	$ 294,876	$ 33,856	$ 20,527	$ 13,158	**$ 631,567**	$ 69,849	$ (12,590)	$ (249,752)	**$ (192,493)**
5/1/2023	$ 183,122	$ 17,447	$ 219,740	$ 34,191	$ 20,730	$ 13,158	**$ 488,388**	$ 52,063	$ (3,750)	$ (249,752)	**$ (201,439)**
6/1/2023	$ 544,468	$ 51,875	$ 653,343	$ 56,548	$ 34,285	$ 13,158	**$ 1,353,677**	$ 163,414	$ (51,742)	$ (249,752)	**$ (138,080)**
7/1/2023	$ 916,015	$ 87,275	$ 1,099,187	$ 78,871	$ 47,819	$ 13,158	**$ 2,242,325**	$ 283,833	$ (91,686)	$ (260,498)	**$ (68,352)**
8/1/2023	$ 896,206	$ 85,388	$ 1,075,417	$ 92,289	$ 55,955	$ 13,158	**$ 2,218,412**	$ 292,195	$ (94,322)	$ (260,498)	**$ (62,626)**
	$ 10,256,683	$ 977,229	$ 12,307,675	$ 945,605	$ 573,319	$ 157,896	**$ 25,218,407**	$ 3,789,087	$ (1,044,284)	$ (3,018,514)	**$ (273,711)**

Total Reagent cost and Sale of By-products **$ 24,944,696**

rounding differences may occur

Duke Energy Carolinas, LLC **Clark Second Revised Workpaper 10**
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2022
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

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Line No.	Description	Forecast $	(Over)/Under Collection $	Total $
1	Amount in current docket	139,103,703	70,794,129	209,897,832
2	Amount in Sub 1263, prior year docket	100,735,755	13,526,437	114,262,192
3	Increase/(Decrease)	38,367,948	57,267,693	95,635,640
4	2.5% of 2022 NC retail revenue of $4,944,339,147			123,608,479
	Excess of purchased power growth over 2.5% of revenue			0

	E-7, Sub 1282			
WP 4	Purchases for REPS Compliance - Energy	68,790,240	66.83%	45,972,517
WP 4	Purchases for REPS Compliance - Capacity	14,931,581	66.68%	9,956,570
WP 4	Purchases	397,088	66.83%	265,374
WP 4	QF Energy	59,039,401	66.83%	39,456,032
WP 4	QF Capacity	12,176,644	66.68%	8,119,542
WP 4	Allocated Economic Purchase cost	52,870,968	66.83%	35,333,668
		208,205,922		139,103,703
	E-7, Sub 1263			
	Purchases for REPS Compliance	66,782,210	66.08%	44,126,819
	Purchases for REPS Compliance Capacity	14,610,064	66.68%	9,742,178
	Purchases	7,489,994	66.08%	4,949,066
	QF Energy	40,652,503	66.08%	26,861,429
	QF Capacity	8,445,498	66.68%	5,631,567
	Allocated Economic Purchase cost	14,263,480	66.08%	9,424,695
		152,243,749		100,735,755

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2022
Docket E-7, Sub 1282

Clark Second Revised Workpaper 10a

2022	**Jan-22**	**Feb-22**	**Mar-22**	**Apr-22**	**May-22**	**Jun-22**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**	**12 ME**
System KWH Sales - Sch 4, Adjusted	7,587,345,694	7,631,271,992	6,790,067,074	6,455,104,305	6,544,372,277	7,852,382,055	8,386,958,942	8,886,608,895	8,009,959,106	6,516,474,006	6,148,600,623	7,600,126,412	88,409,271,381
NC Retail KWH Sales - Sch 4	4,988,913,451	5,189,555,709	4,642,701,985	4,283,391,409	4,361,033,505	5,223,755,139	5,560,704,210	6,010,616,462	5,369,219,189	4,315,776,539	4,103,701,351	5,009,748,290	59,059,117,240
NC Retail % of Sales, Adjusted (Calc)	65.75%	68.00%	68.37%	66.36%	66.64%	66.52%	66.30%	67.64%	67.03%	66.23%	66.74%	65.92%	66.80%
NC retail production plant %	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%	66.68%
Fuel and Fuel related component of purchased power													
System Actual $ - Sch 3 Fuel$:	$ 37,348,658	$ 40,334,882	$ 28,936,616	$ 49,553,437	$ 53,977,979	$ 76,187,119	$ 84,243,384	$ 92,288,328	$ 54,398,279	$ 11,798,321	$ 41,689,819	$ 94,911,581	$ 665,668,403
System Actual $ - Sch 3 Fuel-related$; Economic Purchases	7,928,235	(1,570,627)	3,557,135	4,369,558	7,286,679	6,129,379	10,685,578	9,921,881	9,510,435	1,184,100	3,142,043	8,875,341	$ 71,019,737
System Actual $ - Sch 3 Fuel-related$; Purchased Power for REPS Compliance	4,142,352	3,490,134	3,995,856	3,290,332	5,192,821	5,283,840	5,430,924	5,998,047	5,270,163	5,163,446	4,802,114	4,257,583	$ 56,317,611
System Actual$ - Sch 3 Fuel-related$; SC DERP	153,840	153,265	196,932	137,675	248,854	297,053	290,834	285,229	257,994	240,417	248,173	229,623	$ 2,739,889
System Acutal $ - Sch 3 Fuel-related$; HB589 purpa Purchases	1,977,570	1,777,710	2,215,962	1,745,571	2,647,918	3,816,224	3,554,345	3,225,136	3,434,693	3,359,816	3,414,696	2,956,940	$ 34,126,582
Total System Economic & QF$	51,550,655	44,185,364	38,902,502	59,096,573	69,354,250	91,713,615	104,205,065	111,718,622	72,871,564	21,746,101	53,296,844	111,231,068	829,872,222
Less:													
Native Load Transfers, Native Load Transfer Benefit & DE - Progress fees	$ 30,480,569	$ 37,453,029	$ 26,486,545	$ 48,026,753	$ 49,193,125	$ 74,564,244	$ 75,622,595	$ 87,008,500	$ 47,113,469	$ 10,577,023	$ 40,068,662	$ 74,950,979	$ 601,545,494
Total System Economic $ without Native Load Transfers	$ 21,070,086	$ 6,732,335	$ 12,415,956	$ 11,069,820	$ 20,161,125	$ 17,149,371	$ 28,582,470	$ 24,710,121	$ 25,758,095	$ 11,169,078	$ 13,228,182	$ 36,280,089	$ 228,326,728
NC Actual $ (Calc)	$ 13,854,230	$ 4,578,244	$ 8,489,398	$ 7,345,562	$ 13,434,954	$ 11,408,527	$ 18,950,690	$ 16,713,131	$ 17,266,113	$ 7,397,136	$ 8,828,758	$ 23,914,617	$ 152,181,363
Billed rate (¢/kWh):	0.1378	0.1378	0.1378	0.1378	0.1378	0.1378	0.1378	0.1378	0.1367	0.1378	0.1378	0.1378	
Billed $:	$ 6,874,552	$ 7,151,030	$ 6,397,484	$ 5,902,367	$ 6,009,355	$ 7,198,156	$ 7,662,460	$ 8,282,423	$ 7,340,000	$ 5,946,992	$ 5,654,760	$ 6,903,261	$ 81,322,839
(Over)/ Under $:	$ 6,979,678	$ (2,572,786)	$ 2,091,914	$ 1,443,196	$ 7,425,600	$ 4,210,372	$ 11,288,231	$ 8,430,708	$ 9,926,113	$ 1,450,144	$ 3,173,998	$ 17,011,356	$ 70,858,524
Capacity component of purchased power													
System Actual $ - Capacity component of Cherokee County Cogen Purchases	$ -	$ (215,310)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (215,310)
System Actual $ - Capacity component of Purchased Power for REPS Compliance	631,201	645,219	680,737	463,766	802,115	701,461	827,443	2,753,196	2,319,960	2,511,631	2,238,491	639,202	$ 15,214,422
System Actual $ - Capacity component of HB589 Purpa QF purchases	14,255	14,801	19,366	14,471	24,039	29,036	28,404	28,368	25,409	23,627	24,299	22,399	$ 268,474
System Actual $ - Capacity component of SC DERP	312,476	340,840	349,198	316,395	389,774	481,428	581,279	1,661,830	1,443,022	1,553,118	1,525,519	414,939	$ 9,369,818
System Actual $ - Sch 2 pg 1 ANNUAL VIEW	$ 957,932	$ 785,549	$ 1,049,301	$ 794,633	$ 1,215,927	$ 1,211,925	$ 1,437,127	$ 4,443,394	$ 3,788,390	$ 4,088,375	$ 3,788,310	$ 1,076,540	$ 24,637,403
NC Actual $ (Calc) (1)	$ 638,761	$ 523,814	$ 699,688	$ 529,871	$ 810,796	$ 808,127	$ 958,294	$ 2,962,912	$ 2,526,147	$ 2,726,181	$ 2,526,093	$ 717,851	$ 16,428,537
Billed rate (¢/kWh):	0.0279	0.0279	0.0279	0.0279	0.0279	0.0279	0.0279	0.0279	0.0284	0.0279	0.0279	0.0279	
Billed $:	$ 1,390,793	$ 1,446,727	$ 1,294,277	$ 1,194,110	$ 1,215,755	$ 1,456,261	$ 1,550,195	$ 1,675,620	$ 1,525,438	$ 1,203,138	$ 1,144,016	$ 1,396,601	$ 16,492,931
(Over)/Under $:	$ (752,032)	$ (922,913)	$ (594,589)	$ (664,238)	$ (404,959)	$ (648,134)	$ (591,900)	$ 1,287,293	$ 1,000,709	$ 1,523,043	$ 1,382,077	$ (678,751)	$ (64,394)
TOTAL (Over)/ Under $:	**$ 6,227,647**	**$ (3,495,699)**	**$ 1,497,325**	**$ 778,957**	**$ 7,020,641**	**$ 3,562,238**	**$ 10,696,330**	**$ 9,718,001**	**$ 10,926,822**	**$ 2,973,187**	**$ 4,556,076**	**$ 16,332,605**	**$ 70,794,129**

Note: The billed rate for September and October are pro-rated based on number of billing days in cycle on new rate schedules.
(1) January - May NC actual capacity shown herein is adjusted to reflect use of 2021 production plant allocation factor. Actual true-up related to allocator was made as prior period adjustment in May 2022 of Schedule 4.

rounding differences may occur

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May 26 2023

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2021
Docket E-7, Sub 1282

Clark Second Revised Workpaper 10b

2021	**Jan-21**	**Feb-21**	**Mar-21**	**Apr-21**	**May-21**	**Jun-21**	**Jul-21**	**Aug-21**	**Sep-21**	**Oct-21**	**Nov-21**	**Dec-21**	**12 ME**
System KWH Sales - Sch 4, Adjusted	8,623,321,816	7,033,781,083	6,170,273,584	6,357,924,869	5,750,592,351	7,218,972,840	8,473,666,049	8,688,276,000	8,107,525,420	6,609,883,548	6,537,708,709	7,191,590,664	86,763,516,933
NC Retail KWH Sales - Sch 4	5,785,766,552	4,705,197,397	4,216,101,608	4,307,482,408	3,784,759,966	4,813,117,777	5,540,576,171	5,890,178,638	5,517,650,819	4,297,619,492	4,396,624,370	4,888,703,073	58,143,778,271
NC Retail % of Sales, Adjusted (Calc)	67.09%	66.89%	68.33%	67.75%	65.82%	66.67%	65.39%	67.79%	68.06%	65.02%	67.25%	67.98%	67.01%
NC retail production plant %	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%	66.98%
Fuel and Fuel related component of purchased power													
System Actual $ - Sch 3 Fuel$:	$ 14,110,987	$ 21,997,962	$ 7,288,155	$ 1,159,999	$ 6,909,766	$ 19,650,947	$ 27,256,372	$ 22,941,922	$ 20,301,410	$ 27,877,777	$ 27,842,536	$ 26,295,173	$ 223,633,006
System Actual $ - Sch 3 Fuel-related$; Economic Purchases	1,908,455	2,653,190	897,843	1,159,946	1,043,015	1,716,177	3,233,998	2,658,287	1,580,193	2,101,644	2,163,509	2,417,594	$ 23,533,851
System Actual $ - Sch 3 Fuel-related$; Purchased Power for REPS Compliance	3,836,471	3,851,010	3,578,469	1,634,328	5,557,142	6,244,501	5,777,306	6,144,771	5,617,037	5,684,750	4,972,836	4,406,882	$ 57,305,503
System Actual$ - Sch 3 Fuel-related$; SC DERP	148,221	63,773	117,353	217,851	155,453	263,492	427,484	260,031	242,117	236,248	246,176	205,494	$ 2,583,692
System Acutal $ - Sch 3 Fuel-related$; HB589 purpa Purchases	2,756,782	2,455,383	2,198,548	2,656,105	2,051,181	3,609,263	3,393,224	3,761,968	2,668,737	2,679,082	2,593,637	2,343,504	$ 33,167,413
Total System Economic & QF$	22,760,916	31,021,318	14,080,368	6,828,229	15,716,557	31,484,380	40,088,384	35,766,979	30,409,494	38,579,500	37,818,693	35,668,647	340,223,465
Less:													
Native Load Transfers, Native Load Transfer Benefit & DE - Progress fees	$ 13,085,320	$ 20,311,355	$ 6,186,575	$ 12,225	$ 6,203,819	$ 19,379,239	$ 26,072,774	$ 21,770,863	$ 19,434,801	$ 26,816,502	$ 23,378,784	$ 23,491,467	$ 206,143,723
Total System Economic $ without Native Load Transfers	$ 9,675,596	$ 10,709,964	$ 7,893,793	$ 6,816,004	$ 7,306,104	$ 8,232,386	$ 14,015,610	$ 13,996,116	$ 10,974,693	$ 11,762,998	$ 14,439,909	$ 12,177,179	$ 128,000,354
NC Actual $ (Calc)	$ 6,491,783	$ 7,164,353	$ 5,393,769	$ 4,617,830	$ 4,808,522	$ 5,488,793	$ 9,164,222	$ 9,488,606	$ 7,468,928	$ 7,648,076	$ 9,710,873	$ 8,277,809	$ 85,723,565
Billed rate (¢/kWh):	0.1367	0.1367	0.1367	0.1367	0.1367	0.1367	0.1367	0.1367	0.1363	0.1357	0.1357	0.1357	
Billed $:	$ 7,911,008	$ 6,433,522	$ 5,764,770	$ 5,889,717	$ 5,174,987	$ 6,581,084	$ 7,575,754	$ 8,053,773	$ 7,518,618	$ 5,832,583	$ 5,966,949	$ 6,634,781	$ 79,337,545
(Over)/ Under $:	$ (1,419,225)	$ 730,832	$ (371,001)	$ (1,271,887)	$ (366,465)	$ (1,092,291)	$ 1,588,468	$ 1,434,833	$ (49,690)	$ 1,815,493	$ 3,743,924	$ 1,643,028	$ 6,386,020
Capacity component of purchased power													
System Actual $ - Capacity component of Cherokee County Cogen Purchases	$ 430,619	$ 430,619	$ 215,311	$ 215,310	$ 322,964	$ 1,399,512	$ 3,229,644	$ 3,229,644	$ 645,929	$ 215,310	$ 215,310	$ 215,310	$ 10,765,481
System Actual $ - Capacity component of Purchased Power for REPS Compliance	679,198	657,904	611,495	370,864	1,021,112	874,770	880,403	2,930,150	2,610,093	2,651,828	2,162,592	642,188	$ 16,092,597
System Actual $ - Capacity component of HB589 Purpa QF purchases	401,588	376,607	536,828	347,396	110,548	427,589	1,222,705	1,697,840	1,371,802	1,324,805	834,474	281,956	$ 8,934,138
System Actual $ - Capacity component of SC DERP	14,999	7,491	12,697	15,442	14,837	24,880	38,885	24,278	22,766	22,049	24,646	19,907	$ 242,878
System Actual $ - Sch 2 pg 1 ANNUAL VIEW	$ 1,526,405	$ 1,472,621	$ 1,376,331	$ 949,012	$ 1,469,461	$ 2,726,751	$ 5,371,637	$ 7,881,912	$ 4,650,590	$ 4,213,992	$ 3,237,022	$ 1,159,361	$ 36,035,094
NC Actual $ (Calc) (1)	$ 1,022,340	$ 986,317	$ 921,825	$ 635,619	$ 984,201	$ 1,826,295	$ 3,597,760	$ 5,279,066	$ 3,114,825	$ 2,822,404	$ 2,168,059	$ 776,504	$ 24,135,214
Billed rate (¢/kWh):	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0294	0.0291	0.0289	0.0289	0.0289	
Billed $:	$ 1,698,557	$ 1,381,329	$ 1,237,743	$ 1,264,570	$ 1,111,112	$ 1,413,012	$ 1,626,576	$ 1,729,210	$ 1,608,069	$ 1,241,743	$ 1,270,349	$ 1,412,529	$ 16,994,798
(Over)/Under $:	$ (676,218)	$ (395,012)	$ (315,918)	$ (628,950)	$ (126,911)	$ 413,283	$ 1,971,184	$ 3,549,856	$ 1,506,756	$ 1,580,661	$ 897,710	$ (636,025)	$ 7,140,416
TOTAL (Over)/ Under $:	**$ (2,095,442)**	**$ 335,820**	**$ (686,918)**	**$ (1,900,837)**	**$ (493,375)**	**$ (679,008)**	**$ 3,559,653**	**$ 4,984,689**	**$ 1,457,065**	**$ 3,396,154**	**$ 4,641,634**	**$ 1,007,003**	**$ 13,526,437**

Note: The billed rate for September and October are pro-rated based on number of billing days in cycle on new rate schedules.
(1) January - May NC actual capacity shown herein is adjusted to reflect use of 2019 production plant allocation factor. Actual true-up related to allocator was made as prior period adjustment in June 2020 of Schedule 4.

rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Actual Sales by Jursidiction - Subject to Weather
Twelve Months Ended December 31, 2021
Docket E-7, Sub 1282

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Line #	Description	Reference	NORTH CAROLINA (MWhs)	SOUTH CAROLINA (MWhs)	TOTAL COMPANY (MWhs)	% NC	% SC
1	Residential	Company Records	22,419,810	6,932,595	29,352,406	76.38	23.62
2	Total General Service	Company Records	24,337,421	5,555,439	29,892,860		
3	less Lighting and Traffic Signals		326,292	83,069	409,361		
4	General Service subject to weather		24,011,129	5,472,369	29,483,499	81.44	18.56
5	Industrial	Company Records	12,301,885	8,467,077	20,768,963	59.23	40.77
6	Total Retail Sales	1+2+5	59,059,117	20,955,111	80,014,228		
7	Total Retail Sales subject to weather	1+4+5	58,732,825	20,872,042	79,604,867	73.78	26.22

This does not exclude Greenwood and includes the impact of SC DERP net metering generation
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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Weather Normalization Adjustment
Twelve Months Ended December 31, 2021
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Line #	Description	REFERENCE	Total Company MWh	NC RETAIL % To Total	NC RETAIL MWh	SC RETAIL % To Total	SC RETAIL MWh
	Residential						
1	Total Residential		448,056	76.38	342,225	23.62	105,831
	General Service						
2	Total General Service		8,558	81.44	6,970	18.56	1,588
	Industrial						
3	Total Industrial		(19,147)	59.23	(11,341)	40.77	(7,806)
4	Total Retail	L1+ L2+ L3	437,466		337,854		99,613
5	Wholesale		(306)				
6	Total Company	L4 + L5	437,160		337,854		99,613

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Weather Normalization Adjustment by Class by Month
Twelve Months Ended December 31, 2021
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	Residential	Commercial	Industrial	
2022	**TOTAL MWH ADJUSTMENT**	**TOTAL MWH ADJUSTMENT**	**TOTAL MWH ADJUSTMENT**	
JAN	430,826	41,682	(6,770)	
FEB	26,706	3,498	334	
MAR	196,589	16,797	229	
APR	57,319	1,598	(581)	
MAY	(79,111)	(16,277)	(3,799)	
JUN	(157,659)	(57,717)	(13,625)	
JUL	(87,489)	(31,423)	(6,855)	
AUG	7,117	4,384	604	
SEP	9,348	5,285	898	
OCT	-	26,141	6,943	
NOV	23,449	17,862	5,321	
DEC	20,961	(3,272)	(1,847)	
Total	**448,056**	**8,558**	**(19,147)**	**437,466**

Wholesale

2022	**TOTAL MWH ADJUSTMENT**
JAN	(2,917)
FEB	8,132
MAR	12,387
APR	7
MAY	(4,538)
JUN	(8,323)
JUL	(3,594)
AUG	2,515
SEP	1,554
OCT	(8,702)
NOV	11,971
DEC	(8,800)
Total	**(306)**

Note:	**The Resale customers include:**
1	Concord[1]
2	Dallas
3	Forest City
4	Kings Mountain[1]
5	Due West
6	Prosperity[2]
7	Lockhart
8	Western Carolina University
9	City of Highlands
10	Haywood
11	Piedmont
12	Rutherford
13	Blue Ridge
14	Greenwood[1]

[1]Wholesale load is no longer being served by Duke as of December 2018.
[2]Wholesale load is no longer being served by Duke as of December 2019.

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Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Customer Growth Adjustment to kWh Sales
Twelve Months Ended December 31, 2021
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Line	Estimation Method [1]	Rate Schedule	NC Proposed kWh [1] Adjustment	SC Proposed kWh Adjustment	Wholesale Proposed kWh Adjustment	Total Company
1	*Regression*	Residential	130,366,123	72,505,791		
2						
3		**General Service (Excluding Lighting):**				
4	*Customer*	General Service Small and Large	109,009,655	1,179,199		
5	*Regression*	Miscellaneous	(2,444,761)	(1,131,149)		
6		Total General	106,564,894	48,050		
7						
8		**Lighting:**				
9	*Regression*	T & T2 (GL/FL/PL/OL)[2]	(2,957,804)	(1,879,960)		
10	*Regression*	TS	18,088	(14,903)		
11		Total Lighting	(2,939,716)	(1,894,862)		
12						
13		**Industrial:**				
14	*Customer*	I - Textile	(28,808,158)	(776,997)		
15	*Customer*	I - Nontextile	(42,696,403)	(78,201,535)		
16		Total Industrial	(71,504,561)	(78,978,532)		
17						
18						
19		Total	162,486,740	(8,319,553)	5,835,657	160,002,845
					WP 13-2	

Notes:
[1] Two approved methods are used for estimating the growth adjustment depending on the class/schedule:
"Regression" refers to the use of Ordinary Least Squares Regression
"Customer" refers to the use of the Customer by Customer approach.
[2] T and T2 were combined due to North Carolina's FL & GL schedules being merged into OL & PL.
rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Customer Growth Adjustment to kWh Sales-Wholesale
Twelve Months Ended December 31, 2021
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Calculation of Customer Growth Adjustment to kWh Sales - Wholesale

Line No.		Reference	
1	Total System Resale (kWh Sales)	Company Records	9,637,002,447
2	Less Intersystem Sales	Exhibit 6, Sch 1	1,193,715,448
3	Total kWh Sales Excluding Intersystem Sales	L1 - L2	8,443,286,999
4	Residential Growth Factor	Line 8	0.6912
5	Adjustment to kWhs - Wholesale	L3 * L4 / 100	5,835,657
6	Total System Retail Residential kWh Sales	Company Records	29,352,405,508
7	2022 Proposed Adjustment kWh - Residential (NC+SC)	WP 13-1	202,871,914
8	Percent Adjustment	L7 / L6 * 100	0.6912

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INFRASTRUCTURE AND PROJECT FINANCE

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SECTOR IN-DEPTH
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Regulated Electric and Gas Utilities – US

Delays in fuel cost recovery pressuring utility credit quality

Summary

» **Utilities with significant share of natural gas in their generation portfolios are vulnerable to larger deferrals.** Vertically integrated electric utilities that generate a significant amount of their power from natural gas plants are contending with much higher fuel costs this year. The sharp increase in natural gas prices that began in the second half of 2021 has led to a substantial increase in under-recovered fuel cost balances for many utilities, with the financing of those balances amounting to as high as 10% of total debt for some issuers as of 30 June. We expect to see continued high deferred fuel expenses at these companies.

» **Fuel cost recovery will likely be over a longer period and amid added regulatory scrutiny.** More regulators are likely to extend fuel cost recovery periods to between 18 and 36 months, up from the typical 12 months, to ease the impact on customer electricity rates. Regulators in some states have already extended fuel recovery periods for various utilities, with such extensions sometime proposed by the utilities themselves. While fuel costs are unlikely to be disallowed, there may be cases where regulators ask for a prudence review as such costs become more significant.

» **Utilities will issue debt to finance under-recovered fuel costs, with securitization an option if costs get too high.** Companies need to finance under-recovered fuel costs, leading to incremental debt and pressuring financial metrics and liquidity positions at a time when there are other cost pressures facing these organizations. While we typically view changes in deferred fuel balances that are expected to be recovered in the near term as a short-term factor that does not affect cash flow from operations excluding changes in working capital, the incremental debt would be credit negative if it is in place for a longer period of time.

» **Some utilities are taking measures themselves to reduce impact on customer bills.** Social risks for the US regulated electric utility sector are rising as a result of higher energy bills stemming from high natural gas prices. Some utilities are working with regulators to better manage social risks associated with the affordability of customer bills as they seek to recover higher fuel costs. Utilities will continue to use energy commodity derivatives to hedge against exposure to rising costs for purchased power, fuel for generation and natural gas for customers. In addition, some companies may use existing regulatory liabilities to offset the impact of fuel costs on customer bills.

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Utilities with significant share of natural gas in their portfolios are vulnerable to larger deferrals

If natural gas prices remain high, regulated US electric utilities will likely face extended recovery periods for their elevated fuel costs as state regulators seek to mitigate the impact of such costs on customer bills. This would be credit negative for these utilities because they will likely have to finance under-recovered fuel costs with incremental debt. Hedges, more frequent fuel cost recovery filings and the potential to offset regulatory assets with regulatory liabilities could help utilities limit the overall increase in deferred fuel balances. Uncertainty about the timely recovery of purchased power and fuel costs is one of the key considerations driving our negative outlook on the US regulated utilities sector (see 2023 outlook negative due to higher natural gas prices, inflation and rising interest rates).

Exhibit 1
High natural gas prices lead to higher deferred fuel balances for US regulated utilities
Average monthly Henry Hub natural gas spot price per million British thermal units

Forecast prices as of 8 November 2022
Sources: US Energy Information Administration and SNL Market Intelligence

Vertically integrated electric utilities that generate a significant amount of their power from natural gas plants are the most vulnerable to higher fuel costs. US regulated utilities have fuel adjustment clauses that enable them to recover prudently incurred fuel costs, usually over the course of a year. Fuel costs are pass-through costs to customers and are generally fully recoverable through a fuel adjustment mechanism. Most rated vertically integrated utilities reset their fuel cost adjustment factors annually. The sharp increase in natural gas prices that started in the second half of 2021 has led to an increase in under-recovered fuel cost balances for many utilities, with the financing of those balances amounting to as high as 10% of total debt for some issuers as of 30 June.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

Bauer Rebuttal Exhibit 1
Docket No. E-7, Sub 1282

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Exhibit 2

US regulated utilities with significant gas-fired capacity are vulnerable to larger fuel cost deferrals

Company	State	Credit Rating	Outlook	Natural gas operating capacity %	Deferred fuel cost balance ($ million)		% of debt as of 30 June 2022	LTM CFO Pre-W/C to Debt
					2Q2022	FYE 2020		
Nevada Power Company	Nevada	Baa1	Stable	100%	386	39	12%	23.2%
Public Service Company of Oklahoma	Oklahoma	Baa1	Stable	72%	315	30	11%	13.9%
Entergy Mississippi, LLC	Mississippi	Baa1	Positive	88%	247	(15)	10%	19.1%
Appalachian Power Company	Virginia & West Virginia	Baa1	Stable	19%	513	5	9%	17.6%
Duke Energy Florida, LLC.	Florida	A3	Stable	75%	748	4	8%	21.4%
Sierra Pacific Power Company	Nevada	Baa1	Stable	74%	91	22	7%	19.0%
Entergy Texas, Inc.	Texas	Baa2	Stable	93%	189	(85)	7%	20.4%
Oklahoma Gas & Electric Company	Oklahoma & Arkansas	A3	Stable	74%	272	(29)	7%	23.3%
Southwestern Electric Power Company	Louisiana & Arkansas & Texas	Baa2	Stable	42%	286	3	7%	15.1%
Virginia Electric and Power Company	Virginia & North Carolina	A2	Stable	48%	1,129	(112)	6%	19.2%
Georgia Power Company	Georgia	Baa1	Stable	41%	948	(113)	6%	14.2%
Duke Energy Indiana, LLC.	Indiana	A2	Stable	42%	297	9	6%	21.8%
Duke Energy Carolinas, LLC	North Carolina & South Carolina	A2	Stable	27%	814	42	6%	23.0%
Arizona Public Service Company	Arizona	A3	Negative	56%	391	193	6%	17.7%
Tampa Electric Company	Florida	A3	Negative	80%	239	22	5%	21.3%
Entergy Louisiana, LLC	Louisiana	Baa1	Negative	76%	581	170	5%	9.6%
Florida Power & Light Company	Florida	A1	Stable	78%	1,106	94	5%	31.6%
Tucson Electric Power Company	Arizona	A3	Stable	61%	103	23	4%	24.7%
Cleco Power LLC	Louisiana & Mississippi	A3	Stable	66%	93	28	4%	10.6%
Dominion Energy South Carolina, Inc.	South Carolina	Baa2	Positive	59%	202	(56)	4%	15.1%
El Paso Electric Company	Texas & New Mexico	Baa2	Stable	71%	73	13	4%	13.7%
Entergy Arkansas, LLC	Arkansas	Baa1	Positive	41%	180	15	4%	18.0%

Deferred fuel costs balances do not include gas cost adjustment (GCA) balances.
All ratios are based on "adjusted" financial data and incorporate Moody's global standard adjustments for nonfinancial companies but do not reflect adjustments related to securitization.
Red and green shading represent CFO pre-WC to debt ratio below or above downgrade threshold, respectively.
Source: SNL Market Intelligence, companies filings and Moody's Financial Metrics

Fuel cost recovery likely over a longer period and amid added regulatory scrutiny

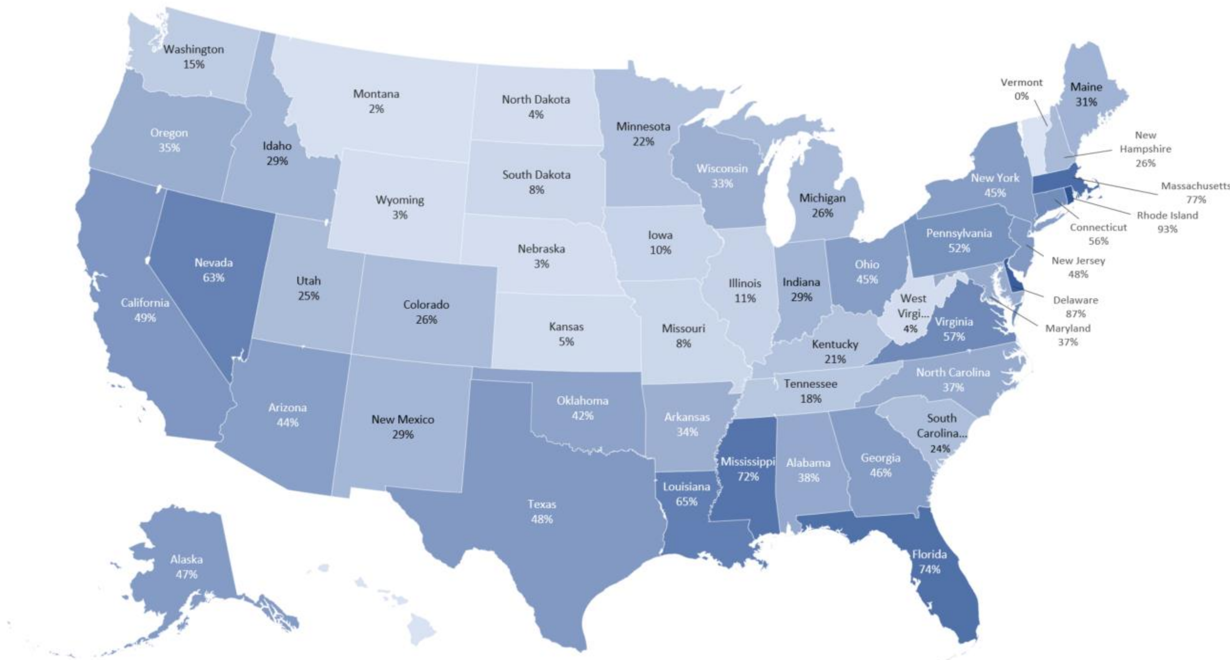
More regulators are likely to extend fuel cost recovery periods to between 18 and 36 months, up from the typical 12 months, to ease the impact on customer electricity rates. While some fuel rate adjustment proceedings are currently pending, regulators in some states have already extended fuel recovery periods to 36 months for Virginia Electric and Power Company (VEPCO, A2 stable); 24 months for Oklahoma Gas & Electric Company (OG&E, A3 stable)[1], Entergy Mississippi LLC (Baa1 positive) and Duke Energy Carolinas LLC (A2 stable) (in South Carolina); and 18 months for Tucson Electric Power Company (A3 stable). As shown in Exhibit 3, gas-fired power plants in accounts for about 57% of total generation in Virginia, 42% in Oklahoma, 72% in Mississippi, 24% in South Carolina and 44% in Arizona.

Most utilities will maintain credit supportive regulatory relationships and we expect them to eventually recover their higher fuel costs over time. While fuel costs are unlikely to be disallowed outright, there may be cases where regulators ask for a prudency review of fuel costs as they become more significant. In October, for example, the Oklahoma Corporation Commission required a review of OG&E's fuel cost rider rate increase, which had been approved earlier this year and was expected to support a 24-month recovery period for $424 million of fuel costs.

Exhibit 3

Ten states derive more than half of their power generation from natural gas

Percentage of total power generation derived from natural gas-fired plants by state in 2021



Source: US Energy Information Administration

Utilities will issue debt to finance under-recovered fuel costs, with securitization an option if costs get too high

Companies need to finance under-recovered fuel costs, which will result in incremental debt, pressuring financial metrics and liquidity positions at a time when there are other cost pressures facing these organizations. While we typically view changes in deferred fuel balances that are expected to be recovered in the near term as a short-term factor that does not affect cash flow from operations excluding changes in working capital, the incremental debt would be credit negative if it is in place for a longer period of time. In addition, there is a possibility that some regulators will not approve the recovery of incremental interest expenses related to this debt, which would hurt operating cash flow.

For example, the Virginia State Corporation Commission did not approve VEPCO's request to recover $27.5 million of financing costs related to debt issued to address an increase in fuel costs. If deferred fuel balances continue to increase and become substantial, some companies may consider using securitization to finance them, which will enable them to receive an upfront payment associated with the future recovery of fuel costs, while lessening the impact of cost recovery on customer bills. This was done by several utilities in the Texas region following the severe February 2021 Winter Storm Uri.

At the moment, transmission and distribution (T&D) companies and natural gas local distribution companies (LDCs) do not have significant deferral balances due to their hedging strategies and more timely mechanisms to recover gas costs at LDC's generally. However, LDC's face the risk of a material increase in their deferred costs during the peak winter season.

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Some utilities are taking measures themselves to reduce the impact on customer bills

Social risks for the US regulated electric sector are rising as a result of higher energy bills stemming from high natural gas prices. Some utilities are working with regulators to better manage social risks associated with the affordability of customer bills as they seek recovery of higher fuel costs. Utilities will continue to use energy commodity derivatives to hedge against exposure to rising costs for purchased power, fuel for generation and natural gas for customers. In addition, some companies may use existing regulated liabilities to offset the impact of fuel costs on customer bills. For instance, Alabama Power Company (A1 stable) reduced its under-recovered fuel balance with a $126 million rate stabilization and equalization refund with the remaining $55 million refunded back to customers in July. Entergy Mississippi is offsetting a fuel costs increase with a $200 million refund from its June settlement with the Mississippi Public Service Commission regarding a rate dispute involving Entergy Corporation's (Baa2 negative) Grand Gulf Nuclear Station.

Some utilities may delay their fuel cost recovery filings themselves to mitigate increased social risks. For example, Florida investor-owned utilities Florida Power & Light Company (A1 stable), Duke Energy Florida LLC. (A3 stable) and Tampa Electric Company (A3 negative) notified the Florida Public Service Commission in April that they continue to face higher-than-expected fuel costs. However, none of the utilities requested a "mid-course correction" from the Florida PSC at that time, which could have allowed them to pass along the increased costs to customers in the subsequent months. In September, Florida utilities filed petitions proposing an increase of their 2023 fuel cost recovery factors but left open the possibility of requesting recovery of the 2022 under-recovered fuel costs in the future.

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Appendix

Exhibit 4

Many utilities with significant deferred balances have moderately negative credit exposure to demographic and societal trends related to affordability concerns

ESG credit impact scores, social issuer profile scores and social risk category scores for select US regulated utilities with significant deferred fuel cost balances

Company	Credit impact score (CIS)	Social issuer profile score	Customer Relations	Demographic & Societal Trends	Financial Strategy & Risk Management
Nevada Power Company	CIS-3	S-3	2	3	1
Public Service Company of Oklahoma	CIS-3	S-3	2	3	2
Entergy Mississippi, LLC	CIS-3	S-3	2	3	2
Entergy Texas, Inc.	CIS-3	S-3	2	3	2
Oklahoma Gas & Electric Company	CIS-3	S-3	2	3	2
Virginia Electric and Power Company	CIS-3	S-3	2	3	2
Arizona Public Service Company	CIS-3	S-4	3	4	2
Tampa Electric Company	CIS-3	S-3	2	3	2
Entergy Louisiana, LLC	CIS-3	S-3	2	3	2
Florida Power & Light Company	CIS-3	S-3	2	3	2
Cleco Power LLC	CIS-3	S-3	2	3	2
Dominion Energy South Carolina, Inc.	CIS-3	S-3	2	3	2
El Paso Electric Company	CIS-3	S-3	2	3	2
Entergy Arkansas, LLC	CIS-3	S-3	2	3	2

Credit impact scores and issuer profile scores indicate credit exposure to ESG considerations. The scores are based on five-point scale where 1 is positive, 2 is neutral-to-low, 3 is moderately negative, 4 is highly negative and 5 is very highly negative.
Source: Moody's Investors Service

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Moody's related publications

Sector research

- Regulated Electric and Gas Utilities – US: Inflation, high natural gas prices complicate prospects for supportive rate increases, 11 November 2022
- Regulated Electric and Gas Utilities – US: California utility wildfire mitigation efforts have reduced liability exposure, 10 November 2022
- Regulated Electric and Gas Utilities – US: 2023 outlook negative due to higher natural gas prices, inflation and rising interest rates, 10 November 2022
- Regulated Electric Utilities – US: Environmental risks drive capital spending increases, pressuring credit quality, 3 November 2022
- Regulated Electric Utilities – US: Regulatory support, storm cost recovery provisions to mitigate Hurricane Ian impact, 30 September 2022
- Regulated Electric and Gas Utilities – US: High natural gas prices, inflation and rising interest rates increase social risk, 13 June 2022
- Regulated Electric and Gas Utilities – US: 2022 outlook stable on sustained regulatory support for robust investment cycle, 4 November 2021
- Regulated Electric and Gas Utilities – US: FAQ on the growing use of securitization bonds by investor-owned regulated utilities, 4 November 2021
- Regulated Electric and Gas Utilities – Global: ESG considerations have an overall credit negative impact on utilities with generation, 1 June 2021
- Regulated Electric and Gas Utilities – US: Storm costs in south-central US are credit negative for region's regulated utilities, 5 March 2021
- Regulated Electric Utilities – US: High holdco debt limits Financial flexibility, heightens vulnerability to external shocks, 23 February 2021
- Regulated Electric and Gas Utilities — US: Latest political intervention into regulatory oversight is credit negative for New York utilities, 13 November 2020
- Regulated Electric & Gas Utilities – North America: Shifting environmental agendas raise long-term credit risk for natural gas investments, 30 September 2020
- Regulated Electric, Gas and Water Utilities – US: Coronavirus outbreak delays rate cases, but regulatory support remains intact, 6 April 2020
- Regulated electric and gas utilities – US: Grid hardening, regulatory support key to credit quality as climate hazards worsen, 2 March 2020

Endnotes

1 The 24-month recovery period was contested and could result in an extended recovery period pending commission decision.

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CREDIT OPINION
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Update

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RATINGS

Duke Energy Carolinas, LLC

Domicile	Charlotte, North Carolina, United States
Long Term Rating	A2
Type	LT Issuer Rating
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Duke Energy Carolinas, LLC

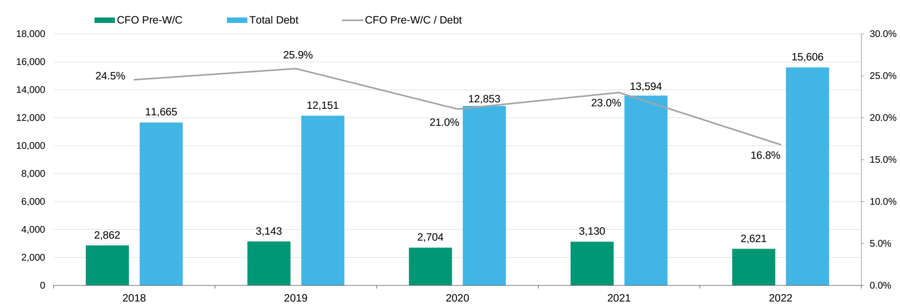
Update to credit analysis

Summary

Duke Energy Carolinas' (Duke Carolinas) credit reflects its low business and operating risk profile and supportive regulatory environments in both North and South Carolina. Our view also considers the company's position as the largest subsidiary within the Duke Energy Corporation (Duke, Baa2 stable) family, making up about a third of its rate base. North Carolina's House Bill (HB) 951, signed into law in October 2021 to guide the states clean energy transition, will be an important driver of the company's credit quality going forward. Over the next two years, we expect Duke Carolinas to maintain credit metrics that are supportive of its current A2 credit rating, including a ratio of cash flow from operations excluding changes in working capital (CFO pre-WC) to debt sustained in the low 20% range.

Exhibit 1

Historical CFO Pre-WC, Total Debt and CFO Pre-WC to Debt ($ MM)



Note: The 2022 CFO pre-WC to debt ratio, excluding the financial impact of storm cost securitization and the cash flow impact of deferred fuel costs which we expect to be recovered by the end of 2024, would have been 21.3%, see Exhibit 3 for details.
Source: Moody's Financial Metrics™

Credit Strengths

» Credit supportive regulatory environments

» New multiyear performance based ratemaking (PBR) framework in North Carolina could reduce regulatory lag

» Growing service territories

Credit Challenges

» Weakened financial metrics

» Regulatory lag due to lack of rider/tracker mechanisms for cost recovery

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» High capital expenditures

» Storm prone service territory

Rating Outlook

The stable outlook recognizes Duke Carolinas' supportive regulatory relationships in North and South Carolina and an improving regulatory framework in North Carolina. The stable outlook assumes that the utility will recover its prudently incurred costs in a relatively timely manner, and that the company will fund its significant capital program in a manner that supports its balance sheet. The stable outlook further assumes that Duke Carolinas will demonstrate credit metrics that are supportive of its credit rating, including a ratio of cash flow from operations excluding changes in working capital (CFO pre-WC) to debt in the low 20% range.

Factors that Could Lead to an Upgrade

» Credit positive changes in the utility's regulatory framework, including more riders and trackers to reduce regulatory lag and improve cash flow.

» Increased cash flow, or a reduction in leverage, enabling the company to maintain a ratio of CFO pre-WC to debt of around 25% or above.

Factors that Could Lead to a Downgrade

» A decline in the credit supportiveness of Duke Carolinas' regulatory relationships in North or South Carolina.

» Additional capital expenditures or other capital needs that result in a material increase in debt levels or are not recoverable.

» A ratio of CFO pre-WC to debt, excluding the financial effects of storm cost securitization, remaining below 21% on a sustained basis.

Key Indicators

Exhibit 2
Duke Energy Carolinas, LLC [1]

	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
CFO Pre-W/C + Interest / Interest	6.9x	7.3x	6.2x	6.5x	5.3x
CFO Pre-W/C / Debt	24.5%	25.9%	21.0%	23.0%	16.8%
CFO Pre-W/C – Dividends / Debt	18.1%	23.6%	16.4%	18.6%	16.5%
Debt / Capitalization	43.3%	42.2%	43.1%	43.7%	44.4%

[1]All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
Note: The 2022 CFO pre-WC to debt ratio, excluding the financial impact of storm cost securitization and the cash flow impact of deferred fuel costs which we expect to be recovered by the end of 2024, would have been 21.3%, see Exhibit 3 for details.
Source: Moody's Financial Metrics™

Profile

Duke Carolinas is a vertically integrated electric utility serving approximately 2.8 million customers in North Carolina (about 2 million) and South Carolina. The utility is the largest subsidiary of Duke and is regulated by the North Carolina Utilities Commission (NCUC) and the Public Service Commission of South Carolina (PSCSC).

Detailed Credit Considerations

Credit supportive regulatory environments

The regulatory environments in both North and South Carolina have historically been credit supportive with regard to rate decisions, ultimate recovery of prudently incurred costs, authorized returns and equity layers. Utilities have been able to reach settlement agreements on traditional rate making parameters, which we view positively, leaving only more contentious items, such as the recovery

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of coal ash remediation spending, to be fully litigated. In January 2021, Duke Carolinas reached a settlement agreement in North Carolina with key intervenors resolving all prior issues regarding coal ash and establishing a framework for future recovery.

Despite this generally collaborative environment, utilities in North and South Carolina do not benefit from tracking mechanisms that could serve to reduce regulatory lag on investment in their systems or to speed the recovery of coal ash remediation spending. However, North Carolina's new performance-based ratemaking (PBR) framework, as authorized in HB 951, is a positive development towards mitigating regulatory lag.

North Carolina – HB 951, signed into law in October 2021, directs the North Carolina Utilities Commission (NCUC), in collaboration with the state's utilities and other stakeholders, to develop a plan to reduce carbon emissions by 70% by 2030 relative to 2005 levels and achieve carbon neutrality by 2050 via the least cost means, while maintaining reliability. It also allows Duke's North Carolina utilities to own and rate base 55% of commission approved new solar generation facilities and fully rate base all other approved new sources of generation. For early subcritical coal power plant retirements, the law allows for the securitization of 50% of the remaining net book value. In addition, the law authorizes the NCUC to consider multiyear rate plans (MYRP) and PBR as well as revenue decoupling, a mechanism we view as credit positive, for residential customers.

Pursuant to HB 951, Duke Carolinas filed its first PBR application with the NCUC in January 2023, requesting recovery of forecast capital expenditures over a three-year MYRP period. The company requested an $823 million revenue increase over three years, including a $501 million increase for the first year effective 1 January 2024, $172 million for the second year and $150 million for the third year. The request is based on a 10.4% ROE and 53% equity layer. The PBR application includes an earnings sharing mechanism, a residential decoupling mechanism and performance based incentives as authorized under HB 951. Duke Carolinas requested that interim rates be made effective on 1 September 2023.

In January 2021, Duke announced a settlement agreement with the North Carolina Attorney General's Office, the Public Staff and the Sierra Club that resolved all issues surrounding historical coal ash remediation prudence and cost recovery in the state. The settlement, approved in March 2021, affirmed the cost recovery provisions for coal ash spending that were approved in the NCUC's 2018 rate decision, which included a five year amortization period with a full debt and equity return. Duke Carolinas was also authorized to recover approved coal ash costs in its 2019 rate case over five years and earn a debt and equity return on the deferred balance; however the equity rate earned during the amortization period was set 150 basis points below the 9.6% ROE approved in the 2019 rate case.

The coal ash settlement also limits the scope of future rate proceedings and establishes that, through 2030, the company will continue to be able to earn a debt and equity return for coal ash remediation spending, with the equity rate set at 150 basis points below the prevailing ROE. As part of the settlement, Duke Carolinas agreed not to seek recovery of a portion of its deferred coal ash expenditures and, as a result, the company recorded an estimated $454 million pre-tax impairment charge and refunded approximately $50 million of previously collected wholesale revenues. This represents a sharing of costs with shareholders and was a provision sought by parties to the settlement.

In May 2021, the NCUC approved the securitization of deferred storm costs at Duke Carolinas and issued an order allowing the company to issue storm recovery bonds to recover $237 million of storm costs, including carrying and financing costs, over a period of 20 years. The bonds were issued in November 2021.

South Carolina - (approximately 25% of rate base) The PSCSC's May 2019 order in Duke Carolinas' most recent rate case denied recovery of the majority of the company's incremental South Carolina allocated spending on coal ash remediation because the incremental costs were a result of North Carolina's coal ash law. However, the balance of the order (which included an approved 53% equity ratio) was generally credit supportive. The company appealed the coal ash disallowance to the Supreme Court of South Carolina. On 27 October 2021, the Supreme Court affirmed the PSCSC's May 2019 order disallowing recovery of certain CCR compliance and coal ash insurance litigation costs. Consequently, Duke Carolinas recognized approximately $160 million of impairment charges and a $31 million increase in other income for fiscal year 2021. In February 2022, the South Carolina Supreme Court denied a petition for rehearing, filed by Duke Carolinas in November 2021, on several issues including the decision on coal ash cost recovery.

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On a more positive note, the South Carolina order continued authorization of the utility's ability to earn a full weighted average cost of capital return on its previously approved coal ash remediation spending. The order also shortened the recovery period to five years, versus a previously approved fifteen years.

Financial metrics expected to recover and remain supportive of the current credit rating

Duke Carolinas' historically strong financial coverage metrics have declined materially in recent years, including a ratio of CFO pre-WC to debt falling from 25% in 2018 and 2019 to around 22% in 2020 and 2021 and 17% in 2023. Drivers of this decline have included spending for coal ash remediation, new generation and grid modernization, as well as the negative cash flow impact of tax reform, the coronavirus pandemic and unusually severe storms.

Going forward, we expect the company's credit metrics to recover from the low levels exhibited in 2023, with CFO pre-WC to debt returning the low 20% range. Nevertheless, recovery of ongoing coal ash remediation spending (which still must be recovered via general base rate case proceedings) and elevated spending for grid modernization and generation transition investments will continue to maintain pressure on credit metrics. Our analysis focuses on financial metrics that exclude the impacts of storm cost securitization debt because Duke Carolinas simply acts as a conduit for the repayment of a customer obligation as mandated by law.

The company's 2022 credit metrics were particularly weak, including a ratio of CFO pre-WC/debt of 17% when adjusted for securitization, primarily due to significant deferred fuel costs. After adjusting for the cash flow impact of deferred fuel costs, substantially all which we expect to be recovered by the end of 2024, the CFO pre-WC to debt ratio would have been 21.3% as shown below. Duke Carolinas has filed for recovery of these fuel costs over a 12 month period effective September 2023. A final commission order is expected in August 2023.

Exhibit 3
Duke Carolinas adjusted 2022 CFO pre-WC to debt detail

	2022
Cash flow from operations (GAAP)	1,569
Exclude changes in current assets/liabilites (working capital)	867
Unadjusted CFO pre-WC	2,436
Primary adjustments	
Lease	35
Capitalized Interest	(50)
ARO (Coal Ash)	200
Other analyst adjustments	
Securitization	(12)
LT deferred fuel costs	668
Preliminary adjusted CFO pre-WC (excl. other analyst adjustments)	**2,621**
Fully adjusted CFO pre-WC (incl. other analyst adjustments)	**3,277**
Debt (GAAP)	15,499
Primary adjustments	
Pension	10
Lease	97
Other analyst adjustments	
Securitization	(228)
Preliminary adjusted debt (excluding other analyst adjustments)	**15,606**
Fully adjusted debt (including other analyst adjustments)	**15,378**
Preliminary adjusted CFO pre-WC/debt	**16.8%**
Fully adjusted CFO pre-WC/debt	**21.3%**

Source: Moody's Investors Service, Company

Our analysis of Duke Carolinas credit includes the impact of its current settlement agreements in North Carolina. Our calculation of Duke Carolinas' credit metrics reflects our treatment of coal ash remediation expenditures as akin to a capital investment rather than an operating expense. We have taken this view in light of the fact that the company has been allowed to earn a debt and equity return

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on its approved deferral balances. Although the settlement incorporates a discount to the equity return, bringing it to 150 basis points below the prevailing ROE, we recognize that regulatory commissions have the discretion to establish different ROEs for particular investments, or for use in various riders.

Capital expenditures to remain elevated

Capital expenditures (inclusive of coal ash remediation spending) at Duke Carolinas have been on the rise, and were $3.5 billion in 2022, up from $2.9 billion in 2021. Going forward, the company's current five year capital plan includes average annual spending of about $4.1 billion, as it spends more for electric distribution, new generation and grid modernization investments in transmission.

Pursuant to the HB 951 requirement that the NCUC develop, together with the state's utilities, a plan to reduce carbon emissions by 70% by 2030 and achieve carbon neutrality by 2050, Duke Carolinas and sister company Duke Energy Progress, LLC (A2 stable) filed an initial carbon plan with the NCUC in May 2022. In December 2022, the NCUC issued an order adopting an initial carbon plan, with near-term procurement and development action items. North Carolina's carbon reduction plan will drive a substantial portion of Duke and its Carolina utilities' capital expenditures going forward.

Although HB 951 is North Carolina legislation, we expect Duke Carolinas to also work with regulators in South Carolina to achieve its carbon reduction goals without cost recovery disallowances as occurred with coal ash cost recovery in the company's 2019 South Carolina rate case order.

Ongoing coal ash remediation

Duke has continued to refine its estimates of coal ash remediation spending since it first recognized an asset retirement obligation in 2014. In December 2019, the company reached an agreement with the North Carolina Department of Environmental Quality (NCDEQ) establishing the means and time frames for remediation of its remaining coal ash basins. The settlement calls for the full excavation of the majority of the ash over a period of 15-20 years. As of 31 December 2022, Duke Carolinas' total remaining coal ash related asset retirement obligation was estimated at about $2.3 billion. Payments for coal ash related asset retirement obligations were $182 million in 2021 and $200 million in 2022. Going forward, the company forecasts environmental spending, inclusive of coal ash remediation, to be at a level of around $200-$275 million per year.

Duke Carolinas' coal ash basin closure and remediation spending is not recovered via trackers or other automatic cost recovery provisions and must be recovered via base rate case filings. As a result, there will likely continue to be regulatory lag in the recovery of these costs.

ESG considerations

Duke Carolinas' ESG Credit Impact Score is CIS-3 (Moderately Negative)

Exhibit 4
ESG Credit Impact Score

CIS-3

Moderately Negative

For an issuer scored CIS-3 (Moderately Negative), its ESG attributes are overall considered as having a limited impact on the current rating, with greater potential for future negative impact over time. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-2.

Source: Moody's Investors Service

Duke Carolinas' ESG Credit Impact Score is moderately negative (**CIS-3**), where its ESG attributes are overall considered as having a limited impact on the current rating, with greater potential for future negative impact over time. Duke Carolinas' **CIS-3** reflects highly negative environmental risk, moderately negative social risk and neutral to low governance risk.

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Exhibit 5
ESG Issuer Profile Scores

ENVIRONMENTAL	SOCIAL	GOVERNANCE
E-4	S-3	G-2
Highly Negative	Moderately Negative	Neutral-to-Low

Source: Moody's Investors Service

Environmental

Duke Carolinas' highly negative exposure to environmental risk (**E-4** issuer profile score) reflects the vulnerability of its service territory to hurricanes and tropical storms which can cause costly damage to physical assets. The company's fossil fuel generation fleet presents moderate exposure to carbon transition risk, and its coal and nuclear fleets also expose the company to moderate risks of waste management and pollution. Risks associated with water management and natural capital are neutral to the company's credit profile.

Social

Duke Carolinas' exposure to social risks is moderately negative (**S-3** issuer profile score) because the operation of nuclear facilities heightens the risk of responsible production, while demographics and societal trends that increase public concern over environmental, social, or affordability issues could lead to adverse regulatory or political intervention. Risks related to customer relations, employee health and safety and human capital are neutral to the company's credit profile.

Governance

Duke Carolinas' **G-2** governance issuer profile score is driven by that of its parent Duke. Duke's governance (**G-2** issuer profile score) is broadly in line with other utilities and does not pose a particular risk. Duke Carolinas' governance profile is supported by neutral to low risks associated with financial strategy and risk management, management credibility and track record, organizational structure, compliance and reporting and board structure policies and procedures.

ESG Issuer Profile Scores and Credit Impact Scores for Duke Carolinas are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for Duke Carolinas on Moodys.com and view the ESG Scores section.

Liquidity Analysis

We expect Duke Carolinas to maintain adequate liquidity. For the year ended 31 December 2022, Duke Carolinas generated approximately $1.6 billion of cash from operations (CFO), invested approximately $3.3 billion in capital expenditures (excluding coal ash remediation spending) and upstreamed $50 million in dividend payments to parent Duke, resulting in negative free cash flow (FCF) of about $1.8 billion. Going forward, we expect Duke Carolinas to remain cash flow negative with cash shortfalls funded via a combination of internal and external sources.

Duke Carolinas' liquidity sources include access to funding from Duke's commercial paper program through the Duke system money pool, and direct borrowings from the money pool. As of 31 December 2022, the utility had $1.925 billion of borrowing capacity under Duke's $9 billion master credit facility. As of 31 December 2022, the utility had around $1.5 billion of commercial paper outstanding, and $4 million of letters of credit outstanding, reducing its available capacity under the parent master credit facility to approximately $388 million.

Duke's master credit facility terminates in March 2028. The facility does not contain a material adverse change clause for new borrowings and has a single financial covenant requiring that Duke and its utility subsidiaries each maintain a consolidated debt to capitalization ratio of no more than 65%, except for Piedmont Natural Gas Company (Piedmont). The debt to capitalization covenant for Piedmont is a maximum of 70%. As of 31 December 2022, Duke reported that all entities were in compliance with the covenant and we estimate Duke Carolinas' ratio was about 50%.

Duke Carolinas' nearest long-term debt maturity is $471 million of account receivable securitization debt due in January 2025.

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Rating Methodology and Scorecard Factors

Exhibit 6

Methodology Scorecard Factors

Duke Energy Carolinas, LLC

Regulated Electric and Gas Utilities Industry Scorecard [1][2]	Current FY 12/31/2022		Moody's 12-18 Month Forward View As of Date Published [3]	
Factor 1 : Regulatory Framework (25%)	**Measure**	**Score**	**Measure**	**Score**
a) Legislative and Judicial Underpinnings of the Regulatory Framework	A	A	A	A
b) Consistency and Predictability of Regulation	Aa	Aa	Aa	Aa
Factor 2 : Ability to Recover Costs and Earn Returns (25%)				
a) Timeliness of Recovery of Operating and Capital Costs	A	A	A	A
b) Sufficiency of Rates and Returns	A	A	A	A
Factor 3 : Diversification (10%)				
a) Market Position	A	A	A	A
b) Generation and Fuel Diversity	A	A	A	A
Factor 4 : Financial Strength (40%)				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	6.0x	A	5.5x - 6.5x	Aa
b) CFO pre-WC / Debt (3 Year Avg)	20.1%	Baa	20% - 22%	Baa
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	17.1%	A	15% - 20%	A
d) Debt / Capitalization (3 Year Avg)	43.8%	A	40% - 45%	A
Rating:				
Scorecard-Indicated Outcome Before Notching Adjustment		A2		A2
HoldCo Structural Subordination Notching		0		0
a) Scorecard-Indicated Outcome		A2		A2
b) Actual Rating Assigned		A2		A2

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 12/31/2022
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Source: Moody's Financial Metrics™

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Appendix

Exhibit 7

Cash Flow and Credit Metrics [1]

CF Metrics	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
As Adjusted					
FFO	**3,129**	**3,230**	**2,857**	**2,993**	**3,421**
+/- Other	-267	-87	-153	137	-800
CFO Pre-WC	**2,862**	**3,143**	**2,704**	**3,130**	**2,621**
+/- ΔWC	-96	-144	255	-233	-867
CFO	**2,766**	**2,999**	**2,959**	**2,897**	**1,754**
- Div	750	275	600	600	50
- Capex	2,942	3,010	2,860	2,891	3,495
FCF	**-926**	**-286**	**-501**	**-594**	**-1,791**
(CFO Pre-W/C) / Debt	24.5%	25.9%	21.0%	23.0%	16.8%
(CFO Pre-W/C - Dividends) / Debt	18.1%	23.6%	16.4%	18.6%	16.5%
FFO / Debt	26.8%	26.6%	22.2%	22.0%	21.9%
RCF / Debt	20.4%	24.3%	17.6%	17.6%	21.6%
Revenue	7,300	7,395	7,015	7,102	7,857
Interest Expense	482	498	519	571	611
Net Income	1,025	1,348	1,267	1,442	1,504
Total Assets	40,121	44,023	45,020	47,133	50,296
Total Liabilities	28,542	31,315	31,888	33,265	34,894
Total Equity	11,579	12,708	13,132	13,868	15,403

[1] All figures and ratios are calculated using Moody's estimates and standard adjustments. Periods are Financial Year-End unless indicated. LTM = Last Twelve Months
Source: Moody's Financial Metrics™

Exhibit 8

Peer Comparison Table [1]

	Duke Energy Carolinas, LLC A2 (Stable)			Duke Energy Progress, LLC A2 (Stable)			Virginia Electric and Power Company A2 (Stable)			Alabama Power Company A1 (Stable)		
(In US millions)	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-20	FYE Dec-21	FYE Dec-22
Revenue	7,015	7,102	7,857	5,422	5,780	6,753	7,763	7,470	9,654	5,830	6,413	7,817
CFO Pre-W/C	2,704	3,130	2,621	1,798	2,240	2,061	2,960	3,374	3,543	2,276	2,287	2,202
Total Debt	12,853	13,594	15,606	9,940	10,852	12,253	15,022	16,061	19,528	9,257	9,957	10,711
CFO Pre-W/C + Interest / Interest	6.2x	6.5x	5.3x	7.3x	8.0x	6.0x	5.8x	6.0x	5.7x	7.5x	7.4x	6.7x
CFO Pre-W/C / Debt	21.0%	23.0%	16.8%	18.1%	20.6%	16.8%	19.7%	21.0%	18.1%	24.6%	23.0%	20.6%
CFO Pre-W/C – Dividends / Debt	16.4%	18.6%	16.5%	14.1%	14.2%	14.8%	16.8%	19.1%	18.1%	14.3%	13.2%	11.1%
Debt / Capitalization	43.1%	43.7%	44.4%	46.2%	48.0%	49.0%	46.5%	45.7%	48.7%	41.0%	40.8%	40.6%

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End. LTM = Last Twelve Months. RUR* = Ratings under Review, where UPG = for upgrade and DNG = for downgrade
Source: Moody's Financial Metrics™

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Ratings

Exhibit 9

Category	Moody's Rating
DUKE ENERGY CAROLINAS, LLC	
Outlook	Stable
Issuer Rating	A2
First Mortgage Bonds	Aa3
Senior Secured Shelf	(P)Aa3
Senior Unsecured	A2
PARENT: DUKE ENERGY CORPORATION	
Outlook	Stable
Issuer Rating	Baa2
Sr Unsec Bank Credit Facility	Baa2
Senior Unsecured	Baa2
Jr Subordinate	Baa3
Pref. Stock	Ba1
Commercial Paper	P-2

Source: Moody's Investors Service

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Regulated Electric and Gas Utilities – US

2023 outlook negative due to higher natural gas prices, inflation and rising interest rates

Summary

» **We have revised our outlook on the US regulated utilities sector to negative from stable.** We changed the outlook because of increasingly challenging business and financial conditions stemming from higher natural gas prices, inflation and rising interest rates. These developments raise residential customer affordability issues, increasing the level of uncertainty with regard to the timely recovery of costs for fuel and purchased power, as well as for rate cases more broadly.

» **Natural gas prices, inflation and interest rates drive social risk.** High natural gas prices and inflation may persist into 2023, which could hurt cash flow recovery should regulators seek to limit the impact on customer bills by delaying recovery or approving lower rate increases. We still think most state regulators will remain supportive, but utilities and commissions will face heightened public scrutiny amid affordability concerns.

» **Financial metrics already under pressure with little cushion entering 2023.** The sector's aggregate funds from operations (FFO)-to-debt ratio has remained between 14% and 15% since 2019, and we estimate the ratio will be closer to 14% in 2023 with a high potential of temporarily falling below this level depending on how much and how widespread cost recovery is delayed.

» **Capital spending and dividends will be sustained at a steady clip, weighing on financial performance.** These adverse business conditions come at a time when we expect the sector to maintain elevated capital spending focused on reducing carbon emissions to make progress toward net zero goals and overall system reliability, while maintaining their dividend payouts.

» **What could change our outlook:** The outlook could return to stable if the sector's regulatory support remains intact, natural gas prices settle at a level where most utilities are able to fully recover fuel and purchased power costs without a delay beyond 12 months, overall inflation moderates, interest rates stabilize and/or the sector's aggregate (FFO)-to-debt ratio remains between 14% to 15%. We could change our outlook to positive if utility regulation turns broadly more credit supportive resulting in timelier cash flow recovery or we expect the sector's aggregate (FFO)-to-debt ratio to rise above 17% on a sustained basis.

Bauer Rebuttal Exhibit 3
Docket No. E-7, Sub 1282
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Outlook definition

The negative outlook reflects our view of credit fundamentals in the US regulated electric and gas utilities sector over the next 12 months. Sector outlooks are distinct from rating outlooks, which, in additional to sector dynamics, also reflects issuers' specific characteristics and actions. A sector outlook does not represent a sum of upgrades, downgrades or ratings under review or an average of rating outlooks.

High natural gas prices, inflation and interest rates increase social risk for utilities

We changed our outlook on the US regulated electric and gas utilities sector because of increasingly challenging business and financial conditions stemming from higher natural gas prices, inflation and interest rates. These considerations raise residential customer affordability issues, increasing the level of uncertainty with regard to the timely recovery of costs for fuel and purchased power, as well as for rate cases more broadly.

Exhibit 1
Global credit themes affecting US regulated electric and gas utilities in 2023

Higher rates, slower growth

- Elevated inflation and higher interest rates will cut into economic growth.
- Higher natural gas prices may persist into 2023 which could hurt cash flow recovery over the next 12 months.
- Rising interest rates increases the cost of borrowing and presents a further challenge for a sector that is highly reliant on debt financing.

Geopolitical realignments

- Natural gas prices are key component of most utility customer bills, and sustained higher natural gas prices make it more difficult for utilities to maintain low customer rates.
- Higher natural gas prices are being driven by restrained investment in production and rising uncertainty of future supply, as well as a high geopolitical risk premium.

Social challenges

- Higher inflation elevates social risk as regulators are focused on customer affordabilty.
- Current and future regulatory proceedings will receive increased scrutiny because of the sensitivity to residential customer bills that are in some cases already higher due to recently increased base rates.

Climate exposure & mitigation

- High capital investment will continue as utilities focus on reducing carbon emissions to make progress toward net zero goals and for overall system reliability.
- The Inflation Reduction Act (IRA) will support investments to reduce the cost of develping clean energy-related projects and to facilitate the carbon transition.
- Although the IRA is credit positive, it does not fully mitigate the increased cost pressures associated with carbon reduction in the sector.

Source: Moody's Investors Service

High natural gas prices and inflation may persist into 2023, which could hurt cash flow recovery, especially if regulators seek to reduce the impact on customer bills and delay or otherwise limit full cost recovery of other operating expenses during general rate case proceedings. Under normal business and operating conditions, utilities are able to pass through purchased power and fuel costs to customers. While recovery periods vary, utilities typically recover commodity costs within 12 months through a filing outside of a general rate case.

Although regulatory cost recovery mechanisms remain unchanged, utilities have substantial purchased power and fuel costs to recoup in addition to rate base growth investments. These costs have the potential to lead to substantial rate hikes, increasing the risk that regulators will defer some cost recovery to later dates. The regulatory environment could turn less supportive, resulting in insufficient rate increases, a delay in the recovery of purchased power and fuel costs or costs being spread out over a longer period of time, which increases the time between expense and eventual recovery leading to a decline in near-term credit metrics. Utilities that operate in service territories with poor demographics or weak local economies are at higher risk because high inflation could limit the willingness of regulators to allow utilities to pass through their costs to customer all at once.

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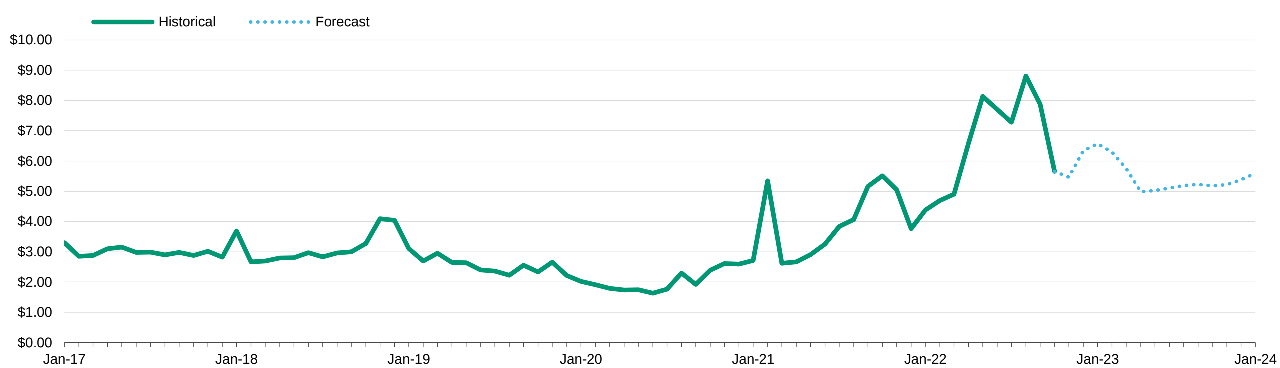
Affordability is an important credit analysis consideration in the demographic and societal trend category of our social risk classification for private-sector issuers. High natural gas prices, high inflation and rising interest rates have increased social risks, creating an adverse business environment for utilities that will persist into 2023. We expect utilities to work with regulators to structure rate plans that benefit both the utility and their customer base similar to Virginia Electric and Power Company (A2 stable) and Duke Energy Carolinas, LLC (A2 stable), which both agreed to recover their purchase power costs over a two- or three-year period. That said, the rise in social risks and affordability concerns could lead to degradation in regulatory support and adverse rate case outcomes.

Higher demand and low inventories have driven up natural gas prices, a key driver of most monthly residential electric and gas bills. While the average monthly spot price at Henry Hub mostly ranged between $3.00 and $5.00 per million British thermal units (MMBtu) through most of 2021, prices began to surge in early 2022 peaking at $8.81 MMBtu in August, a level not seen since 2008. Natural gas prices may sustain at higher levels through 2023 because of restrained investment in production and rising uncertainty about the expansion of future supplies, plus a high geopolitical risk premium (see Energy - Global Outlook - Widespread slowdown in demand and rising costs curtails earnings growth). As shown in Exhibit 2, the forward Henry Hub natural gas price curve is expected to remain above $5.00 MMBtu in 2023. We expect natural gas prices to be much higher than our medium-term Henry Hub natural gas price range of $2.50-$3.50/MMBtu in 2023 (see Europe's supply insecurity leads natural gas prices higher as US production costs rise). High natural gas prices make it difficult for utilities to maintain low customer rates, particularly considering the rate increases they need to support large capital expenditure programs and measures to curb carbon emissions.

Exhibit 2

Persistently high natural gas prices are a key component of rising customer bills

Average monthly Henry Hub natural gas spot price per million British thermal units (MMBtu)



Forecast prices as of 8 November 2022

Source: US Energy Information Administration

Rising interest rates will increase financing costs

The US consumer price index (CPI) continues to rise despite the Federal Reserve's moves to tighten monetary policy. According to the October 2022 CPI, consumer prices increased 0.4% from September and 7.7% from the year-earlier period. In addition to dampening consumer sentiment, the continued rise in inflation makes it more likely that the Fed will continue raising interest rates, increasing the cost of borrowing for the capital- and debt-intensive utility sector (see US economy is slowing, but not so fast that Fed will jettison policy tightening).

For many years, regulated utilities enjoyed a long period of low natural gas prices and interest rates, enabling them to grow rate base substantially while keeping customer rates low. Because regulators are sensitive to electric and gas service affordability, particularly for residential customers, low gas prices and interest rates have facilitated a trend of constructive rate making and credit supportive regulatory outcomes.

We would consider returning our outlook to stable if the sector's regulatory support remains intact, and business conditions improve such that natural gas prices settle at a level where utilities are able to fully recover purchased power and fuel costs without delay beyond 12 months, overall inflation moderates, interest rates stabilize and/or the sector's aggregate (FFO)-to-debt ratio remains

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between 14% to 15%. We could change our outlook to positive if utility regulation turns broadly more credit supportive resulting in timelier cash flow recovery or we expect the sector's aggregate (FFO)-to-debt ratio rising above 17% on a sustained basis.

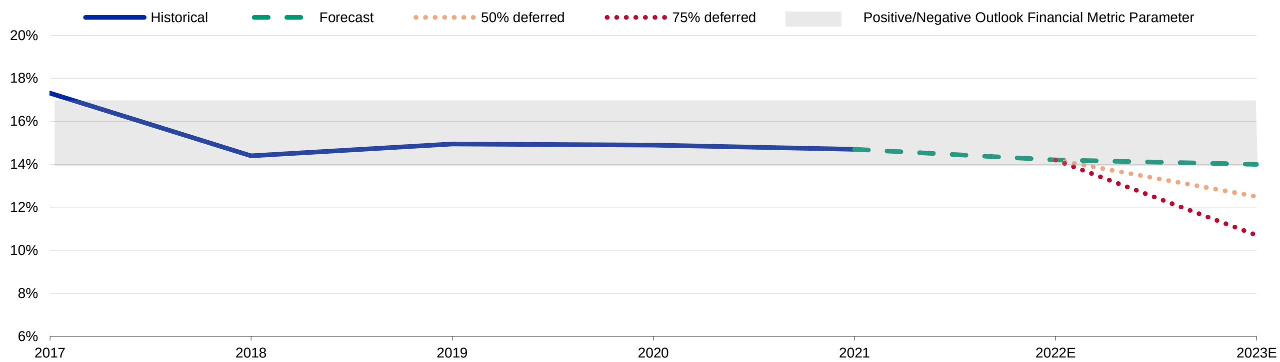
Financial metrics are under pressure with little cushion entering 2023

The sector's aggregate (FFO)-to-debt ratio settled between 14% and 15%, as seen in Exhibit 3, after declining from the high teens following the impact of Tax Reform in 2017 and increased debt issuance to support high capital expenditures. We estimate that the ratio will be closer to 14% in 2023 and that it is likely to temporarily fall below this level depending on how widespread the delay becomes for purchase power, fuel or other operating expenses. Although we typically look through business cycles that result in weaker financial metrics, our analysis of individual utilities will focus on their ability to maintain strong regulatory support for overall cost recovery and how quickly financial metrics will improve.

Exhibit 3

Widespread cost recovery delays could temporarily weaken financial metrics

Historical and forecast aggregate ratio of (FFO)-to-debt for rated US investor owned utility sector



Forecast scenario assumes full recovery of purchased power, fuel costs and operating expenses within 12 months
Down cases assume a 50% or 75% deferral of purchase power beyond 12 months and minimal rate increases
Source: Moody's Investors Service

The average allowed return on equity (ROE) remains relatively flat at about 9.45%, compared to 9.5% in 2021. We expect ROEs to be sustained at current levels through 2023 because most requests for rate increases have been approved without lowering ROEs, as was common in many previous rate cases. Rising interest rates could lead to higher ROEs in some instances, although there is likely to be a lag because of the timing of rate cases, which typically take up to a year to resolve. In addition, the aggregate earned ROE lags the allowed ROE by about 70 basis points because of the large number of deferrals related to one-time costs incurred since 2020 for the coronavirus pandemic, wildfires, storms and delays in general rate case filings during the pandemic. Regulatory asset balances for these costs also add pressure on ratepayers. Regulators could delay the pace of recovery of these items as a lever to minimize the impact on customer bills as has been the case for New York utilities over the past several years. The commission used rate modifiers and extended regulatory asset recovery to keep customer bill increases at 2%. This resulted in significant lag in cash flow recovery, leading to weaker credit metrics and ultimately driving rating downgrades of the New York utilities.

Utilities were well positioned to manage through a short period of higher natural gas prices because of their procurement strategies, which include both physical and financial hedging that was mostly done during a period of lower spot prices in 2021. Because natural gas prices have remained at higher levels for an extended period of time, procurement of natural gas at these higher prices has resulted in ballooning purchased power and fuel cost balances that make it more difficult to pass through to customers all at once particularly during a period of high inflation and rising interest rates. Current and future rate case filings and other regulatory requests will likely experience heightened scrutiny because of the sensitivity of increasing residential customer bills. These bills had already been rising because of increased base rates.

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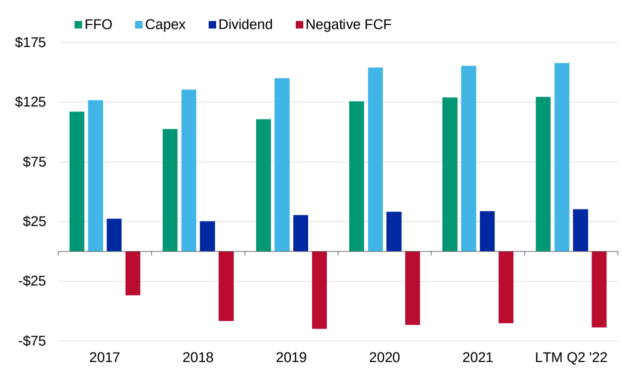
Capital spending and dividends will be sustained at steady clip, weighing on financial performance

Utilities are likely to maintain their high levels of capital spending as they focus on reducing carbon emissions to further their progress toward net-zero targets and invest in overall system resilience (see Environmental risks drive capital spending increases, pressuring credit quality). Following the passage of the US Inflation Reduction Act of 2022, capital expenditures could increase even further because the legislation will reduce the cost of developing clean energy-related projects and help facilitate the sector's carbon transition (see Inflation Reduction Act's renewable, nuclear and other energy credits are credit positive). Although credit positive, the Inflation Reduction Act's provisions are not sufficient to offset the combined adverse effects of high natural gas prices, inflation and rising interest rates. While the sector is willing to issue more equity than it has in the recent past (such as through the use of at-the-market programs), debt issuance and even asset sale proceeds will drive the funding of capital spending programs with limited new common equity issuance, despite the relatively high valuations of most regulated utilities.

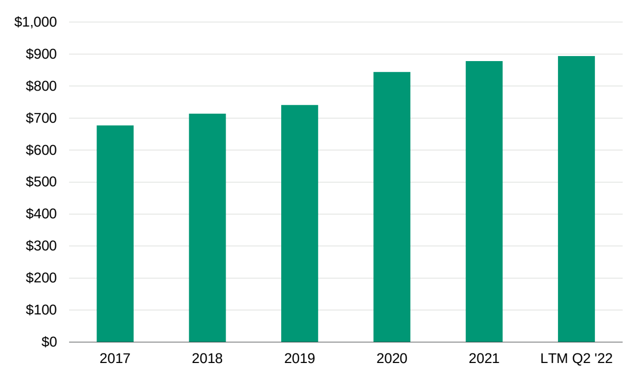
The sector has benefitted from regulatory outcomes that have supported rate base growth over the years. As shown in Exhibit 4, growth in FFO and capital spending has been relatively steady since 2017 because regulators have generally authorized timely recovery of prudent investments. This favorable business environment benefitted from a strong US economy, low natural gas prices and low interest rates, providing the means for companies to grow their dividend payments by about 5.2% since 2017. At the same time, the sector has experienced a substantial growth in negative free cash flow (FCF) of about 11.5% since 2017, which has contributed to the growth in total debt shown in Exhibit 5. Utility subsidiaries have some flexibility to absorb cost pressures by cutting back on capital spending and reducing dividends should there be a need to respond to an adverse regulatory climate. However, holding companies generally have little to no cushion in their financial metrics in light of the sector's continued high parent leverage to support capital expenditures and dividends.

Exhibit 4
Steadily increasing capital investment and dividend payout weighing on financial metrics
Historical FFO, capital expenditures, dividend and negative FCF for rated US investor owned utility sector



5-year CAGR: FFO - 2.0%, Capex - 4.5%, Dividend - 5.2%, Negative FCF - 11.5%
($ billions)
Source: Moody's Investors Service

Exhibit 5
Sector's total debt has increased to fund capital investment and negative free cash flow
Historical aggregate total debt for rated US investor owned utility sector



5-year CAGR - 5.7%
($ billions)
Source: Moody's Investors Service

Although the US investor-owned utility sector is facing significant headwinds, it continues to benefit from the fact that they operate critical infrastructure assets and are subject to strong regulation. The sector continues to experience relatively high equity valuations and strong capital markets access because it is often the sector that is most favored by investors in times of stress, as most recently seen during the volatile market conditions caused by the coronavirus pandemic in early 2020. Additionally, utilities maintain robust liquidity profiles through readily available multiyear facilities with modest covenant terms.

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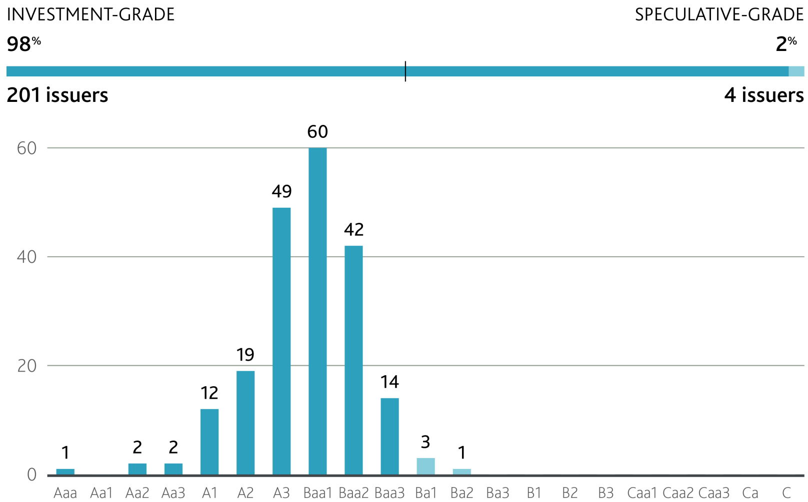
Appendix A

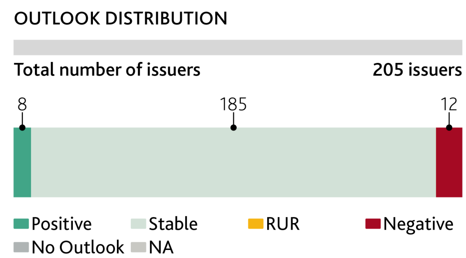
Exhibit 6

Distribution of long-term ratings and rating outlooks for US regulated electric and gas utilities

Ratings and rating outlooks distribution by number of issuers as of 1 November 2022

RATING DISTRIBUTION BY NUMBER OF ISSUERS





Includes holding companies and operating subsidiaries.
Source: Moody's Investors Service

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Appendix B

Exhibit 7
Utility holding companies
Data for the most recent 12-month period available ($ millions)

Issuer	Rating and Outlook	CFO Pre-WC	Total Debt	CFO Pre-WC/Debt	Capex	Dividends
Berkshire Hathaway Energy Company	A3 stable	$ 8,634	$ 54,716	16%	$ 7,309	$ -
Vectren Utility Holdings, Inc.	A3 stable	$ 445	$ 2,461	18%	$ 633	$ 40
NextEra Energy, Inc.	(P)Baa1 stable	$ 9,415	$ 63,407	15%	$ 16,377	$ 3,184
Ameren Corporation	Baa1 stable	$ 2,367	$ 14,650	16%	$ 3,316	$ 588
OGE Energy Corp.	Baa1 stable	$ 733	$ 5,033	15%	$ 881	$ 327
PPL Corporation[1]	Baa1 stable	$ 1,909	$ 13,784	14%	$ 2,035	$ 1,092
WEC Energy Group, Inc.	Baa1 stable	$ 2,485	$ 15,376	16%	$ 2,282	$ 886
Xcel Energy Inc.	Baa1 stable	$ 4,058	$ 24,209	17%	$ 4,349	$ 972
Eversource Energy	Baa1 negative	$ 2,560	$ 21,842	12%	$ 3,666	$ 831
Pinnacle West Capital Corporation	Baa1 negative	$ 1,205	$ 8,013	15%	$ 1,510	$ 375
Alliant Energy Corporation	Baa2 stable	$ 1,172	$ 8,394	14%	$ 1,304	$ 415
American Electric Power Company, Inc.	Baa2 stable	$ 5,391	$ 38,267	14%	$ 6,442	$ 1,577
Avangrid, Inc.	Baa2 stable	$ 1,497	$ 8,995	17%	$ 2,908	$ 681
Black Hills Corporation	Baa2 stable	$ 704	$ 4,488	16%	$ 652	$ 151
CenterPoint Energy, Inc.	Baa2 stable	$ 2,283	$ 15,658	15%	$ 3,929	$ 416
CMS Energy Corporation	Baa2 stable	$ 1,873	$ 12,223	15%	$ 2,300	$ 529
Consolidated Edison, Inc.	Baa2 stable	$ 3,913	$ 26,230	15%	$ 4,243	$ 1,067
Dominion Energy, Inc.	Baa2 stable	$ 5,039	$ 45,421	11%	$ 6,670	$ 2,116
DTE Energy Company	Baa2 stable	$ 2,366	$ 19,312	12%	$ 3,385	$ 713
Duke Energy Corporation	Baa2 stable	$ 10,516	$ 72,528	14%	$ 11,160	$ 3,147
Evergy, Inc.	Baa2 stable	$ 2,004	$ 12,899	16%	$ 2,223	$ 517
Exelon Corporation	Baa2 stable	$ 5,176	$ 42,511	12%	$ 8,146	$ 1,413
IDACORP, Inc.	Baa2 stable	$ 337	$ 2,646	13%	$ 354	$ 150
NiSource Inc.	Baa2 stable	$ 1,506	$ 10,950	14%	$ 1,997	$ 363
Otter Tail Corporation	Baa2 stable	$ 409	$ 949	43%	$ 170	$ 67
Public Service Enterprise Group Incorporated	Baa2 stable	$ 2,732	$ 21,368	13%	$ 2,946	$ 1,056
Sempra Energy	Baa2 stable	$ 4,498	$ 27,118	17%	$ 4,968	$ 1,408
Southern Company (The)	Baa2 stable	$ 7,979	$ 54,354	15%	$ 8,416	$ 2,825
Southwest Gas Holdings, Inc.	Baa2 stable	$ 666	$ 6,424	10%	$ 761	$ 149
Spire Inc.	Baa2 stable	$ 426	$ 4,320	10%	$ 569	$ 140
Unitil Corporation	Baa2 stable	$ 126	$ 619	20%	$ 120	$ 25
Entergy Corporation	Baa2 negative	$ 3,223	$ 29,060	11%	$ 6,375	$ 804

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Issuer	Rating and Outlook	CFO Pre-WC	Total Debt	CFO Pre-WC/Debt	Capex	Dividends
Edison International	Baa3 positive	$ 3,085	$ 30,725	10%	$ 5,610	$ 1,018
Cleco Corporate Holdings LLC	Baa3 stable	$ 345	$ 3,900	9%	$ 278	$ 133
Duquesne Light Holdings, Inc.	Baa3 stable	$ 388	$ 2,783	14%	$ 375	$ 58
Emera Inc.	Baa3 negative	$ 1,127	$ 13,214	8%	$ 1,902	$ 363
Fortis Inc.	Baa3 stable	$ 2,477	$ 21,943	11%	$ 2,845	$ 502
PNM Resources, Inc.	Baa3 stable	$ 605	$ 4,194	14%	$ 643	$ 116
Puget Energy, Inc.	Baa3 stable	$ 830	$ 7,064	12%	$ 983	$ 62
IPALCO Enterprises, Inc.	Baa3 stable	$ 344	$ 2,970	12%	$ 415	$ 139
FirstEnergy Corp.	Ba1 positive	$ 2,675	$ 24,027	11%	$ 2,714	$ 880
DPL Inc.	Ba1 negative	$ 114	$ 1,638	7%	$ 243	$ -
PG&E Corporation	Ba2 stable *	$ 5,542	$ 50,803	11%	$ 9,116	$ -

All ratios are based on GAAP "Adjusted" financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations, but may not include all analytical adjustments.
List excludes intermediate holding companies unless the ultimate parent company is excluded from the holding company peer group (e.g. AES Corporation) or is domiciled outside of the US.
[1] PPL Corp.'s credit metric includes the total debt but partial cash flow from NECO due to the timing of the completed acquisition.
*PG&E Corporation is a Corporate Family Rating
Source: Moody's Investors Service

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Exhibit 8

Vertically integrated operating companies

Data for the most recent 12-month period available ($ millions)

Issuer	Rating and Outlook	CFO Pre-WC	Total Debt	CFO Pre-WC/Debt	Capex	Dividends
Alabama Power Company	A1 stable	$ 2,125	$ 10,079	21%	$ 2,137	$ 1,000
Consumers Energy Company	A1 stable*	$ 2,133	$ 8,691	25%	$ 2,233	$ 775
Florida Power & Light Company	A1 stable	$ 6,808	$ 21,535	32%	$ 8,264	$ 2,105
Madison Gas and Electric Company	A1 stable	$ 173	$ 689	25%	$ 144	$ 17
MidAmerican Energy Company	A1 stable	$ 1,934	$ 7,836	25%	$ 2,054	$ -
Southern Indiana Gas & Electric Company	A1 stable	$ 229	$ 1,004	23%	$ 310	$ 30
DTE Electric Company	A2 stable	$ 2,007	$ 10,611	19%	$ 2,730	$ 734
Duke Energy Carolinas, LLC	A2 stable	$ 3,291	$ 14,303	23%	$ 3,163	$ -
Duke Energy Indiana, LLC.	A2 stable	$ 1,096	$ 5,023	22%	$ 941	$ 362
Duke Energy Progress, LLC	A2 stable	$ 2,286	$ 11,093	21%	$ 2,077	$ 950
Northern States Power Company (Minnesota)	A2 stable	$ 1,234	$ 7,025	18%	$ 1,780	$ 478
Northern States Power Company (Wisconsin)	A2 stable	$ 250	$ 1,058	24%	$ 308	$ 113
Virginia Electric and Power Company	A2 stable	$ 3,386	$ 17,622	19%	$ 4,066	$ -
Wisconsin Electric Power Company [1]	A2 stable	$ 853	$ 6,125	14%	$ 914	$ 580
Wisconsin Public Service Corporation	A2 stable	$ 459	$ 1,885	24%	$ 399	$ 260
Indiana Michigan Power Company	A3 positive	$ 849	$ 3,420	25%	$ 726	$ 200
Cleco Power LLC	A3 stable	$ 231	$ 2,173	11%	$ 269	$ 52
Duke Energy Florida, LLC.	A3 stable	$ 1,984	$ 9,252	21%	$ 2,145	$ -
Kentucky Utilities Co.	A3 stable	$ 699	$ 2,983	23%	$ 608	$ 298
Louisville Gas & Electric Company	A3 stable	$ 567	$ 2,419	23%	$ 439	$ 219
Oklahoma Gas & Electric Company	A3 stable	$ 962	$ 4,137	23%	$ 880	$ 265
Otter Tail Power Company	A3 stable	$ 180	$ 823	22%	$ 136	$ 53
PacifiCorp	A3 stable	$ 1,710	$ 8,799	19%	$ 1,567	$ 250
Portland General Electric Company	A3 stable	$ 584	$ 3,616	16%	$ 666	$ 154
Public Service Company of Colorado	A3 stable	$ 1,403	$ 7,073	20%	$ 1,792	$ 479
Tucson Electric Power Company	A3 stable	$ 525	$ 2,333	23%	$ 527	$ 63
Wisconsin Power and Light Company	A3 stable	$ 367	$ 2,806	13%	$ 824	$ 172
Tampa Electric Company	A3 negative	$ 938	$ 4,397	21%	$ 1,399	$ 471
Arizona Public Service Company	A3 negative	$ 1,242	$ 7,014	18%	$ 1,495	$ 382
Entergy Arkansas, LLC	Baa1 positive	$ 858	$ 4,763	18%	$ 994	$ 86
Entergy Mississippi, LLC	Baa1 positive	$ 487	$ 2,553	19%	$ 664	$ -
Union Electric Company	(P)Baa1 stable	$ 1,071	$ 6,445	17%	$ 1,772	$ 24
Appalachian Power Company	Baa1 stable	$ 911	$ 5,490	17%	$ 943	$ 75
Duke Energy Kentucky, Inc.	Baa1 stable	$ 134	$ 853	16%	$ 164	$ -
Empire District Electric Company (The)	Baa1 stable	$ 231	$ 1,200	19%	$ 318	$ -
Evergy Kansas Central, Inc.	Baa1 stable	$ 976	$ 5,326	18%	$ 914	$ 465
Evergy Metro, Inc.	Baa1 stable	$ 758	$ 3,498	22%	$ 793	$ 50
Georgia Power Company	Baa1 stable	$ 2,610	$ 15,076	17%	$ 3,916	$ 1,670
Hawaiian Electric Company, Inc.	Baa1 stable	$ 413	$ 2,183	19%	$ 301	$ 119
Idaho Power Company	Baa1 stable	$ 289	$ 2,646	11%	$ 354	$ 150

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Issuer	Rating and Outlook	CFO Pre-WC	Total Debt	CFO Pre-WC/Debt	Capex	Dividends
Indianapolis Power & Light Company	Baa1 stable	$ 370	$ 2,097	18%	$ 414	$ 162
Interstate Power and Light Company	Baa1 stable	$ 667	$ 3,774	18%	$ 365	$ 360
Mississippi Power Company	Baa1 stable	$ 383	$ 1,572	24%	$ 225	$ 163
Nevada Power Company	Baa1 stable	$ 722	$ 3,115	23%	$ 579	$ 200
Newfoundland Power Inc.	Baa1 stable	$ 102	$ 537	19%	$ 103	$ 27
Northern Indiana Public Service Company	Baa1 stable	$ 817	$ 2,992	27%	$ 821	$ -
Public Service Company of Oklahoma	Baa1 stable	$ 389	$ 2,950	13%	$ 396	$ 10
Puget Sound Energy, Inc.	Baa1 stable	$ 867	$ 5,175	17%	$ 954	$ 149
Sierra Pacific Power Company	Baa1 stable	$ 242	$ 1,278	19%	$ 370	$ 70
Superior Water, Light and Power Company	Baa1 stable	$ 14	$ 50	27%	$ 13	$ -
ALLETE, Inc.	Baa1 stable	$ 317	$ 2,167	15%	$ 276	$ 138
Entergy Louisiana, LLC	Baa1 negative	$ 1,030	$ 10,727	10%	$ 3,622	$ 185
Dominion Energy South Carolina, Inc.	Baa2 positive	$ 715	$ 4,737	15%	$ 698	$ 301
NorthWestern Corporation	Baa2 stable	$ 357	$ 2,633	14%	$ 487	$ 133
Avista Corp.	(P)Baa2 stable	$ 304	$ 2,671	11%	$ 442	$ 124
El Paso Electric Company	Baa2 stable	$ 259	$ 1,887	14%	$ 387	$ 130
Entergy Texas, Inc.	Baa2 stable	$ 568	$ 2,782	20%	$ 602	$ -
Evergy Missouri West, Inc.	Baa2 stable	$ 263	$ 1,706	15%	$ 490	$ -
Liberty Utilities Co.	Baa2 stable	$ 399	$ 2,631	15%	$ 667	$ -
Monongahela Power Company	Baa2 stable	$ 195	$ 2,006	10%	$ 249	$ 106
Public Service Company of New Mexico	Baa2 stable	$ 406	$ 2,043	20%	$ 675	$ 61
Southwestern Electric Power Company	Baa2 stable	$ 520	$ 3,941	13%	$ 499	$ 17
Southwestern Public Service Company	Baa2 stable	$ 647	$ 3,252	20%	$ 507	$ 290
Avista Corp.	(P)Baa2 stable	$ 304	$ 2,671	11%	$ 442	$ 124
Pacific Gas & Electric Company	Baa3 stable*	$ 5,817	$ 46,149	13%	$ 9,091	$ 425
Alaska Electric Light and Power Company(AELP)	Baa3 stable	$ 16	$ 122	13%	$ 5	$ 6
Kentucky Power Company	Baa3 stable	$ 132	$ 1,245	11%	$ 200	$ -
Entergy New Orleans, LLC.	Ba1 negative	$ 128	$ 868	15%	$ 242	$ -

All ratios are based on GAAP "Adjusted" financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations, but may not include all analytical adjustments.
[1] These ratios do not reflect the adjustments related to the Power the Future lease agreements.
*First mortgage bond rating
Source: Moody's Investors Service

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Exhibit 9

Transmission and distribution operating companies

Data for the most recent 12-month period available ($ millions)

Issuer	Rating and Outlook	CFO Pre-WC	Total Debt	CFO Pre-WC/Debt	Capex	Dividends
NSTAR Electric Company	A1 negative	$ 885	$ 4,547	19%	$ 1,030	$ 144
Oncor Electric Delivery Company LLC	A2 stable*	$ 1,790	$ 11,931	15%	$ 2,736	$ 859
PECO Energy Company	A2 stable	$ 927	$ 4,515	21%	$ 1,321	$ 370
Ameren Illinois Company	(P)A3 stable	$ 1,159	$ 4,551	25%	$ 1,485	$ -
Baltimore Gas and Electric Company	A3 stable	$ 894	$ 4,475	20%	$ 1,213	$ 296
Commonwealth Edison Company	A3 stable	$ 1,548	$ 10,675	15%	$ 2,436	$ 543
Connecticut Light and Power Company (The)	A3 stable	$ 897	$ 4,349	21%	$ 909	$ 347
Duquesne Light Company	A3 stable	$ 389	$ 1,454	27%	$ 357	$ 60
FortisBC Energy Inc.	A3 stable	$ 332	$ 2,610	12%	$ 461	$ 133
Hydro One Inc.	A3 stable	$ 1,724	$ 11,492	15%	$ 1,547	$ 503
Jersey Central Power & Light Company	A3 stable	$ 559	$ 2,366	24%	$ 371	$ 105
Metropolitan Edison Company	A3 stable	$ 257	$ 1,172	22%	$ 143	$ 145
Narragansett Electric Company	A3 stable	$ 259	$ 1,544	17%	$ 379	$ -
Ohio Edison Company	A3 stable	$ 366	$ 1,266	29%	$ 285	$ 271
Pennsylvania Power Company	A3 stable	$ 61	$ 267	23%	$ 41	$ 26
PPL Electric Utilities Corporation	A3 stable	$ 916	$ 4,486	20%	$ 897	$ 298
Public Service Company of New Hampshire	A3 stable	$ 336	$ 1,756	19%	$ 452	$ 102
Public Service Electric and Gas Company	A3 stable	$ 1,973	$ 12,528	16%	$ 2,627	$ -
West Penn Power Company	A3 stable	$ 238	$ 1,018	23%	$ 190	$ 90
San Diego Gas & Electric Company	(P)A3 stable	$ 1,750	$ 9,204	19%	$ 2,266	$ 300
United Illuminating Company	Baa1 positive	$ 237	$ 1,131	21%	$ 215	$ 115
Atlantic City Electric Company	Baa1 stable	$ 335	$ 1,769	19%	$ 394	$ 97
CenterPoint Energy Houston Electric, LLC	Baa1 stable	$ 943	$ 6,170	15%	$ 2,272	$ 67
Central Hudson Gas & Electric Corporation	Baa1 stable	$ 124	$ 1,079	11%	$ 227	$ -
Consolidated Edison Company of New York, Inc.	Baa1 stable	$ 3,326	$ 21,065	16%	$ 3,818	$ 984
Delmarva Power & Light Company	Baa1 stable	$ 397	$ 1,995	20%	$ 422	$ 140
Duke Energy Ohio, Inc.	Baa1 stable	$ 568	$ 3,834	15%	$ 829	$ -
Fitchburg Gas & Electric Light Company	Baa1 stable	$ 32	$ 161	20%	$ 27	$ 6
FortisAlberta Inc.	Baa1 stable	$ 296	$ 1,915	15%	$ 302	$ 69
Massachusetts Electric Company	Baa1 stable	$ 192	$ 1,940	10%	$ 344	$ -
New York State Electric and Gas Corporation	Baa1 stable	$ 123	$ 2,285	5%	$ 756	$ 270
Niagara Mohawk Power Corporation	Baa1 stable	$ 729	$ 4,025	18%	$ 900	$ 275
Ohio Power Company	Baa1 stable	$ 561	$ 3,512	16%	$ 777	$ 86
Pennsylvania Electric Company	Baa1 stable	$ 257	$ 1,545	17%	$ 147	$ 265
Potomac Electric Power Company	Baa1 stable	$ 542	$ 3,765	14%	$ 817	$ 445
Rochester Gas & Electric Corporation	Baa1 stable	$ 164	$ 1,547	11%	$ 435	$ 250
Texas-New Mexico Power Company	Baa1 stable	$ 181	$ 1,110	16%	$ 396	$ -
Unitil Energy Systems, Inc.	Baa1 stable	$ 35	$ 127	27%	$ 23	$ 5

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Issuer	Rating and Outlook	CFO Pre-WC	Total Debt	CFO Pre-WC/Debt	Capex	Dividends
Southern California Edison Company	Baa2 positive	$ 3,228	$ 26,762	12%	$ 5,610	$ 1,085
AEP Texas Inc.	Baa2 stable	$ 747	$ 6,202	12%	$ 1,162	$ -
Electric Transmission Texas, LLC	Baa2 stable	$ 237	$ 1,601	15%	$ 122	$ 70
National Grid North America Inc.	Baa2 stable	$ 2,191	$ 20,609	11%	$ 4,171	$ -
National Grid USA	Baa2 stable	$ 1,948	$ 24,045	8%	$ 4,156	$ -
Orange and Rockland Utilities, Inc.	Baa2 stable	$ 185	$ 1,149	16%	$ 223	$ 54
Potomac Edison Company (The)	Baa2 stable	$ 174	$ 755	23%	$ 141	$ -
Toledo Edison Company	Baa2 stable	$ 102	$ 486	21%	$ 60	$ 47
Cleveland Electric Illuminating Company (The)	Baa3 stable	$ 209	$ 1,617	13%	$ 190	$ 53
Dayton Power & Light Company	Baa2 negative	$ 138	$ 766	18%	$ 241	$ 69

All ratios are based on GAAP "Adjusted" financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations, but may not include all analytical adjustments.
*First mortgage bond rating
Source: Moody's Investors Service

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Exhibit 10

Local gas distribution operating companies

Data for the most recent 12-month period available ($ millions)

Issuer	Rating and Outlook	CFO Pre-WC	Total Debt	CFO Pre-WC/Debt	Capex	Dividends
Atmos Energy Corporation	A1 stable	$ 1,357	$ 8,193	17%	$ 2,362	$ 362
New Jersey Natural Gas Company	A1 stable*	$ 295	$ 1,316	22%	$ 364	$ -
Spire Missouri Inc.	A1 negative *	$ 40	$ 2,039	2%	$ 362	$ -
Connecticut Natural Gas Corporation	A2 stable	$ 67	$ 276	24%	$ 69	$ 35
Northern Illinois Gas Company	A2 stable	$ 506	$ 2,383	21%	$ 736	$ -
Peoples Gas Light and Coke Company	A2 stable	$ 484	$ 1,964	25%	$ 536	$ 395
Southern California Gas Company	A2 stable	$ 1,154	$ 6,092	19%	$ 1,994	$ 25
Spire Alabama Inc.	A2 stable	$ 126	$ 839	15%	$ 148	$ 22
UGI Utilities, Inc.	A2 negative	$ 365	$ 1,541	24%	$ 432	$ -
Berkshire Gas Company	A3 stable	$ 10	$ 82	13%	$ 19	$ 10
CenterPoint Energy Resources Corp.	A3 stable	$ 909	$ 4,585	20%	$ 1,038	$ -
DTE Gas Company	A3 stable	$ 408	$ 2,091	20%	$ 604	$ 156
ONE Gas, Inc	A3 stable	$ 461	$ 4,242	11%	$ 540	$ 129
Piedmont Natural Gas Company, Inc.	A3 stable	$ 537	$ 3,415	16%	$ 821	$ -
Questar Gas Company	A3 stable	$ 207	$ 1,103	19%	$ 301	$ -
SEMCO Energy, Inc.	A3 stable	$ 126	$ 529	24%	$ 93	$ 30
South Jersey Gas Company	A3 stable	$ 253	$ 1,164	22%	$ 225	$ -
Southern Connecticut Gas Company	A3 stable	$ 34	$ 377	9%	$ 104	$ 30
UNS Gas, Inc.	A3 stable	$ 24	$ 105	22%	$ 27	$ -
Washington Gas Light Company	A3 stable	$ 325	$ 1,838	18%	$ 539	$ 100
Wisconsin Gas LLC	A3 negative	$ 174	$ 856	20%	$ 194	$ 50
Boston Gas Company	Baa1 stable	$ 500	$ 2,242	22%	$ 646	$ 43
FortisBC Inc.	Baa1 stable	$ 100	$ 1,002	10%	$ 109	$ 38
KeySpan Gas East Corporation	Baa1 stable	$ 256	$ 1,561	16%	$ 410	$ -
Northwest Natural Gas Company	(P)Baa1 stable	$ 199	$ 1,289	15%	$ 311	$ 58
PNG Companies LLC	Baa1 stable*	$ 264	$ 1,517	17%	$ 280	$ 75
Public Service Co. of North Carolina, Inc.	Baa1 stable	$ 146	$ 1,109	13%	$ 156	$ 92
Southern Company Gas Capital	Baa1 stable	$ 1,264	$ 8,181	15%	$ 1,437	$ 530
Southwest Gas Corporation	Baa1 stable	$ 484	$ 3,346	14%	$ 620	$ 118
Yankee Gas Services Company	Baa1 stable	$ 122	$ 907	13%	$ 236	$ 46
Northern Utilities, Inc.	Baa1 stable	$ 49	$ 270	18%	$ 62	$ 14
Boston Gas Company	Baa1 stable	$ 500	$ 2,242	22%	$ 646	$ 43
Brooklyn Union Gas Company, The	Baa2 stable	$ 261	$ 2,694	10%	$ 712	$ -

All ratios are based on GAAP "Adjusted" financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations, but may not include all analytical adjustments.
*First mortgage bond rating
Source: Moody's Investors Service

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Moody's related publications

Sector research

» Regulated Electric and Gas Utilities – US: Environmental risks drive capital spending increases, pressuring credit quality, 3 November 2022

» Regulated Electric Utilities – US: Regulatory support, storm cost recovery provisions to mitigate Hurricane Ian impact, 30 September 2022

» Electric Utilities and Power Companies – US: Inflation Reduction Act's renewable, nuclear and other energy credits are credit positive, 11 August 2022

» Government Policy – US: Inflation Reduction Act will build economic resilience, but its costs and benefits vary by sector, 10 August 2022

» Regulated Electric and Gas Utilities – US: Regulated cost recovery provides Dominion credit advantage versus offshore wind peers, 20 July 2022

» Regulated Electric and Gas Utilities – US: Offshore wind projects raise business risk, but credit implications depend on execution, 20 July 2022

» Regulated Electric and Gas Utilities – US: High natural gas prices, inflation and rising interest rates increase social risk, 13 June 2022

» Electric Utilities and Power Companies – US: Renewable energy developers and owners to benefit from solar tariff exemption 8 June 2022

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Rating Action: Moody's affirms Duke Energy and subsidiary ratings; changes outlook of Duke Energy Kentucky to negative

24 Apr 2023

New York, April 24, 2023 -- Moody's Investors Service (Moody's) affirmed the ratings of Duke Energy Corporation (Duke, Baa2) along with the ratings of its utility subsidiaries: Duke Energy Carolinas, LLC (Duke Energy Carolinas, A2), Duke Energy Progress, LLC (Duke Energy Progress, A2), Duke Energy Florida, LLC. (Duke Energy Florida, A3), Duke Energy Indiana, LLC. (Duke Energy Indiana A2), Duke Energy Ohio, Inc. (Duke Energy Ohio, Baa1), Duke Energy Kentucky, Inc. (Duke Energy Kentucky, Baa1), and Piedmont Natural Gas Company, Inc. (Piedmont, A3). Moody's also affirmed the ratings of Duke's intermediate subsidiary holding company, Progress Energy, Inc. (Progress Energy, Baa1).

At the same time, Moody's changed the rating outlook of Duke Energy Kentucky to negative from stable. The rating outlook for Duke and all of its other subsidiaries is stable.

RATINGS RATIONALE

"The ratings affirmation of Duke and its subsidiaries reflects our expectation that continued credit supportive regulation will help the utilities to maintain their credit quality despite substantial capital investment programs" stated Nana Hamilton, VP- Senior Analyst. "Duke Energy Kentucky's negative outlook reflects the potential that historically weak credit metrics will be sustained going forward should the outcome of the company's pending rate case be unfavorable" added Hamilton.

Over the next two years, we expect Duke's ratio of operating cash flow excluding changes in working capital (CFO pre-WC) to debt ratio to be maintained in the 13%-15% range that we have indicated as appropriate for its current Baa2 rating, albeit at the bottom half of that range, leaving it with little financial flexibility. The company's 2022 credit metrics were materially lower than that range, including a ratio of CFO pre-WC to debt of 11.3% (adjusted for securitization and Duke's proportional ownership of Duke Energy Indiana), primarily due to about $3.9 billion in deferred fuel costs. Adjusting for the cash flow impact of these deferred fuel costs, substantially all which we expect to be recovered by the end of 2024, the CFO pre-WC to debt ratio would have been 12.9%.

With no equity issuances in its financing plan and one of the largest capital expenditure programs in the utilities sector, Duke's credit metrics will remain under pressure. However, we expect continued credit supportive regulation, particularly in Duke's largest service territories in North Carolina, Florida and Indiana, to help the company maintain debt coverage metrics within our expected range for the current rating. Duke is also currently pursuing a sale of its commercial renewables business and proceeds from a successful sale would provide additional funds to supplement debt financing.

The ratings affirmation and stable outlooks at Duke Energy Carolinas and Duke Energy Progress consider what we expect will be credit supportive outcomes of currently pending rate cases at both utilities. Despite generally collaborative regulatory relationships, Duke's Carolina utilities, which combined make up approximately 55% of its earnings base, have historically not benefited from tracking mechanisms that could serve to reduce regulatory lag on investments. However, pursuant to legislation passed in October 2021, both utilities are requesting multi-year performance based rate plans for the first time in North Carolina which we view as a positive development toward mitigating this regulatory lag. Both utilities' 2022 credit metrics were depressed by significant under-recovered fuel costs with Duke Energy Carolinas requesting a 12 month recovery of these costs effective September 2023 and Duke Energy Progress expected to request 12 month recovery effective December 2023. A final commission order is expected for Duke Energy Carolinas in August 2023. Over the next two years, we expect both utilities to produce a ratio of CFO pre-WC to debt in the 20%-22% range, excluding the financial impact of storm cost securitization.

The affirmation of Duke Energy Florida's ratings recognizes credit supportive regulation in Florida that allows for timely recovery of costs and investments. This is especially important for Duke Energy Florida whose service territory is highly exposed to hurricanes. The relatively quick restoration of power to about one million customers within three days after Hurricane Ian exited the state in October 2022 demonstrates the success of its infrastructure hardening investments. As of 31 December 2022, Duke Energy Florida had about $353 million of deferred Hurricane Ian costs and has received regulatory approval to recover costs associated with Ian over 12 months and to replenish its storm reserve. Duke Energy Florida's 2022 credit metrics were negatively impacted by the higher debt incurred to fund storm costs and high fuel costs. Over the next two years, we expect the utility will be able to maintain a ratio of CFO pre-WC to debt of around 20%, excluding the financial impact of securitization bonds associated with the retirement of its Crystal River nuclear plant.

The affirmation of intermediate parent company Progress Energy's rating is driven by the affirmation of the ratings of subsidiaries Duke Energy Progress and Duke Energy Florida. The Baa1 rating reflects the structurally subordinate position of its debt vis-à-vis the debt at these two subsidiaries. The percentage of intermediate parent level debt as compared to total consolidated Progress Energy debt has decreased significantly over time and at year-end 2022 was approximately 7%, down from 20% in 2021. This is due to a $450 million maturity in 2022 and higher debt at its subsidiaries to fund higher fuel costs and storm costs. Excluding securitization bonds and associated cash flow impacts, we expect Progress Energy to generate a ratio of CFO pre-WC to debt in the high teens over the next two years.

The affirmation of Duke Energy Indiana's rating acknowledges credit supportive regulation in Indiana including forward looking test years for rate cases and several authorized rider/tracker provisions that permit timely recovery of expenditures. Duke closed the second phase of its minority sale of Duke Energy Indiana to GIC in December 2022, with Duke Energy Indiana issuing an additional 8.85% of its membership interests in exchange for approximately $1 billion, following a sale of 11.05% of its membership interests in September 2021. Our assessment of Duke's credit quality proportionally consolidates the 80.1% of Duke Energy Indiana that it now owns.

We expect Duke Energy Indiana to produce credit metrics in line with our expectations for its rating over the next two years, including a ratio of CFO pre-WC to debt in the low 20% range. However, credit metrics will be pressured beyond 2025 when capital expenditures are forecast to significantly increase to about $1.5 billion annually, up from an already high annual average of around $900 million. The utility's transition away from coal, which represents about 70% of its generation portfolio, is the primary driver of the increase in capital spending. Despite timely cost recovery mechanisms, the sheer size of its capital expenditure program will increase regulatory lag and require more frequent rate case activity.

Duke Energy Ohio's Baa1 rating affirmation reflects a credit supportive regulatory environment that includes a large number of riders and trackers for investments in the company's transmission and distribution system. Credit metrics have been at the weak end of our expectation for the rating over

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the last three years, including a ratio of CFO pre-WC to debt averaging 15.1%, as the utility has continued to make significant investments in transmission and distribution. With a recently approved electric rate increase effective January 2023 and a pending natural gas rate case, we expect Duke Energy Ohio to maintain a ratio of CFO pre-WC to debt in the 15% - 17% range over the next two years. Longer-term, Duke Energy Ohio's next electric security plan (ESP), which will be effective in 2026, will be important to its future credit quality.

The negative outlook on Duke Energy Kentucky reflects a history of weak credit metrics, including a CFO pre-WC to debt averaging 15.2% in recent years, consistently below our minimum expectation of 17% for its Baa1 rating. These weak metrics may persist depending on the outcome of its currently pending electric rate case. Although Duke Energy Kentucky benefits from several cost recovery mechanisms, including recovery of fuel, purchased power, and environmental compliance costs and the use of a forward test year in rate cases, the company's cash flow has been flat since 2018 relative to a compound annual growth rate in debt of about 10%. In its electric rate case, Duke Energy Kentucky has requested a revenue increase of $75 million based on a 10.35% return on equity and a 52.51% equity layer. A final decision is expected by the end of the second quarter of 2023 and will be important to our assessment of the company's Baa1 credit rating.

The affirmation of Piedmont's A3 rating reflects its low business risk as a regulated natural gas local distribution company operating in supportive regulatory jurisdictions in North Carolina, South Carolina and Tennessee. Substantial capital expenditures, averaging about $870 million annually over the last three years, have kept pressure on debt coverage metrics, with an average CFO pre-WC to debt ratio of 14.3%. Piedmont has not paid a dividend to Duke since 2016, which has helped to support the utility's credit profile through a period of high capital expenditures. The company forecasts annual capital expenditures to be in the $900 million to $950 million range over the next two years as it continues to invest in infrastructure to support customer growth and system integrity. We expect credit metrics to remain pressured over the next two years, with a ratio of CFO pre-WC to debt in the 15%-16% range but see improving debt coverage metrics beyond 2024 when the utility's capital spending is forecast to moderate to a range of $600 million to $700 million annually.

Rating Outlook

The stable outlook for Duke and its subsidiaries, with the exception of Duke Energy Kentucky, reflects our expectation that the companies will maintain supportive regulatory relationships in all of their jurisdictions. The outlook also assumes management will manage its operating, capital and financing plans in a manner that supports credit quality and enables the maintenance of credit metrics that are consistent with our expectations.

FACTORS THAT COULD LEAD TO AN UPGRADE OR DOWNGRADE OF THE RATINGS

Factors that ould Lead to an Upgrade

While unlikely in the near term, upward pressure on the ratings could develop if regulatory environments were to become more supportive, resulting in increased cash flow, or if there were to be reductions in leverage leading to materially stronger credit metrics.

For example, at Duke, an upgrade could be considered if it exhibits a consolidated ratio of CFO pre-WC to debt above 15% on a sustainable basis; at Duke Energy Carolinas, Duke Energy Progress and Duke Energy Indiana, a ratio above 25%; at Duke Energy Florida, a ratio above 22%; at Duke Energy Ohio, a ratio at or above 19% (down from 20% previously); and at Duke Energy Kentucky a ratio above 21% (down from 22% previously). An upgrade of Duke Energy Progress or Duke Energy Florida could put upward pressure on the rating of Progress Energy. At Piedmont, a ratio of CFO pre-

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WC to debt above 19% (up from 18% previously) could put upward pressure on the rating.

Factors that Could Lead to a Downgrade

Downward rating action could be considered if there were to be a deterioration in the credit supportiveness of the regulatory relationships at Duke's subsidiaries, that could result in a reduction in cash flow. A material increase in operating or capital expenditures that is not able to be recovered on a timely basis, or an increase in leverage leading to weaker credit metrics could also put downward pressure on the ratings.

For example, at Duke, a downgrade could be considered if the consolidated ratio of CFO pre-WC to debt sustained below 13%; at Duke Energy Carolinas and Duke Energy Progress a ratio maintained below 21% (up from 20% previously); at Duke Energy Indiana a ratio maintained below 22%; at Duke Energy Florida a ratio below 19%; at Duke Energy Ohio a ratio below 15%; and at Duke Energy Kentucky a ratio below 17%. A downgrade of Duke Energy Progress or Duke Energy Florida could put downward pressure on the rating of Progress Energy. At Piedmont, a ratio of CFO pre-WC to debt below 15% (up from 14% previously) could put downward pressure on the rating.

Headquartered in Charlotte, North Carolina, Duke is a large energy holding company with mostly regulated utility operations. Its main business consists of its electric utilities and infrastructure business segment, which serves approximately 8.2 million retail electric customers in six US states and made up about 90% of Duke's 2021 earnings base. Duke's gas utilities and infrastructure businesses provide natural gas to approximately 1.6 million customers located in five states.

Affirmations:

..Issuer: Duke Energy Corporation

.... Issuer Rating, Affirmed Baa2

....Senior Unsecured Conv./Exch. Bond/Debenture, Affirmed Baa2

....Senior Unsecured Regular Bond/Debenture, Affirmed Baa2

....Senior Unsecured Shelf, Affirmed (P)Baa2

....Junior Subordinated Regular Bond/Debenture, Affirmed Baa3

....Pref. Stock Preferred Stock, Affirmed Ba1

....Pref. Shelf, Affirmed (P)Ba1

....Senior Unsecured Bank Credit Facility, Affirmed Baa2

....Senior Unsecured Commercial Paper, Affirmed P-2

..Issuer: Duke Energy Indiana, LLC.

.... Issuer Rating, Affirmed A2

....Senior Unsecured Regular Bond/Debenture, Affirmed A2

....Senior Unsecured Shelf, Affirmed (P)A2

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....Senior Secured First Mortgage Bonds, Affirmed Aa3

....Underlying Senior Secured First Mortgage Bonds, Affirmed Aa3

....Backed Senior Secured First Mortgage Bonds, Affirmed Aa3

....Senior Secured Regular Bond/Debenture, Affirmed Aa3

....Senior Secured Shelf, Affirmed (P)Aa3

..Issuer: Duke Energy Ohio, Inc.

.... Issuer Rating, Affirmed Baa1

....Senior Unsecured Regular Bond/Debenture, Affirmed Baa1

....Senior Unsecured Shelf, Affirmed (P)Baa1

....Senior Secured First Mortgage Bonds, Affirmed A2

....Senior Secured Shelf, Affirmed (P)A2

..Issuer: Duke Energy Kentucky, Inc.

....Senior Unsecured Regular Bond/Debenture, Affirmed Baa1

..Issuer: Duke Energy Carolinas, LLC

.... Issuer Rating, Affirmed A2

....Senior Unsecured Regular Bond/Debenture, Affirmed A2

....Senior Unsecured Shelf, Affirmed (P)A2

....Senior Secured First Mortgage Bonds, Affirmed Aa3

....Senior Secured Shelf, Affirmed (P)Aa3

..Issuer: Piedmont Natural Gas Company, Inc.

....Senior Unsecured Regular Bond/Debenture, Affirmed A3

..Issuer: Progress Energy, Inc.

....Senior Unsecured Regular Bond/Debenture, Affirmed Baa1

..Issuer: Duke Energy Progress, LLC

.... Issuer Rating, Affirmed A2

....Senior Unsecured Shelf, Affirmed (P)A2

....Senior Secured First Mortgage Bonds, Affirmed Aa3

....Senior Secured Shelf, Affirmed (P)Aa3

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..Issuer: Duke Energy Florida, LLC.

.... Issuer Rating, Affirmed A3

....Senior Unsecured Regular Bond/Debenture, Affirmed A3

....Underlying Senior Unsecured Regular Bond/Debenture, Affirmed A3

....Backed Senior Unsecured Regular Bond/Debenture, Affirmed A3

....Senior Unsecured Shelf, Affirmed (P)A3

....Senior Secured First Mortgage Bonds, Affirmed A1

....Underlying Senior Secured First Mortgage Bonds, Affirmed A1

....Backed Senior Secured First Mortgage Bonds, Affirmed A1

....Senior Secured Shelf, Affirmed (P)A1

..Issuer: Boone (County of) KY

....Senior Unsecured Revenue Bonds, Affirmed Baa1

....Underlying Senior Unsecured Revenue Bonds, Affirmed Baa1

....Backed Senior Unsecured Revenue Bonds, Affirmed Baa1

..Issuer: CITRUS (COUNTY OF) FL

....Underlying Senior Secured Revenue Bonds, Affirmed A1

....Backed Senior Secured Revenue Bonds, Affirmed A1

..Issuer: Indiana Finance Authority

....Senior Secured Revenue Bonds, Affirmed Aa3

....Senior Unsecured Revenue Bonds, Affirmed A2

....Underlying Senior Unsecured Revenue Bonds, Affirmed A2

....Backed Senior Unsecured Revenue Bonds, Affirmed A2

....Senior Unsecured Revenue Bonds, Affirmed VMIG 1

..Issuer: North Carolina Capital Facilities Fin. Agy.

....Backed Senior Secured Revenue Bonds, Affirmed Aa3

....Underlying Senior Unsecured Revenue Bonds, Affirmed A2

....Backed Senior Unsecured Revenue Bonds, Affirmed A2

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..Issuer: Ohio Air Quality Development Authority

....Senior Unsecured Revenue Bonds, Affirmed Baa1

....Underlying Senior Unsecured Revenue Bonds, Affirmed Baa1

....Backed Unsecured Revenue Bonds, Affirmed Baa1

..Issuer: Ohio Water Development Authority

....Underlying Unsecured Revenue Bonds, Affirmed Baa1

....Backed Senior Unsecured Revenue Bonds, Affirmed Baa1

..Issuer: Public Finance Authority

....Backed Senior Secured Revenue Bonds, Affirmed Aa3

..Issuer: Wake County I.F. & P.C.F.A., NC (The)

....Underlying Senior Secured Revenue Bonds, Affirmed Aa3

....Backed Senior Secured Revenue Bonds, Affirmed Aa3

Outlook Actions:

..Issuer: Duke Energy Corporation

....Outlook, Remains Stable

..Issuer: Duke Energy Indiana, LLC.

....Outlook, Remains Stable

..Issuer: Duke Energy Ohio, Inc.

....Outlook, Remains Stable

..Issuer: Duke Energy Kentucky, Inc.

....Outlook, Changed To Negative From Stable

..Issuer: Duke Energy Carolinas, LLC

....Outlook, Remains Stable

..Issuer: Piedmont Natural Gas Company, Inc.

....Outlook, Remains Stable

..Issuer: Progress Energy, Inc.

....Outlook, Remains Stable

..Issuer: Duke Energy Progress, LLC

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....Outlook, Remains Stable

..Issuer: Duke Energy Florida, LLC.

....Outlook, Remains Stable

The principal methodology used in these ratings was Regulated Electric and Gas Utilities published in June 2017 and available at https://ratings.moodys.com/api/rmc-documents/68547. Alternatively, please see the Rating Methodologies page on https://ratings.moodys.com for a copy of this methodology.

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DEC Special Exhibit 1
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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1282

In the Matter of: Application of Duke Energy Carolinas, LLC Pursuant to N.C.G.S. § 62-133.2 and Commission Rule R8-55 Relating to Fuel and Fuel-Related Charge Adjustments for Electric Utilities	)))))))	**AGREEMENT AND STIPULATION OF PARTIAL SETTLEMENT**

Duke Energy Carolinas, LLC ("DEC" or the "Company") and the Public Staff – North Carolina Utilities Commission (the "Public Staff"), collectively referred to herein as the "Stipulating Parties," by and through counsel and pursuant to N.C. Gen. Stat. § 62-69, respectfully submit the following Agreement and Stipulation of Partial Settlement ("Stipulation") for consideration by the North Carolina Utilities Commission ("Commission") in the above captioned docket.

I. BACKGROUND

1. On February 28, 2023, the Company filed its Application in the above-captioned docket requesting a change in its fuel charges effective for service rendered on and after September 1, 2023. The net effect of the Company's request as filed would increase the monthly bill of a typical residential customer using 1,000 kilowatt hours per month by $18.90, excluding regulatory fee.

2. Also on February 28, 2023, the Company filed the direct testimonies and exhibits of witnesses Kevin Houston, Steven D. Capps, David Johnson, Sigourney Clark, John D. Swez and Jeffery Flanagan.

3. On March 1, 2023, the Company filed a correction to its Application filed on February 28, 2023.

4. On March 16, 2023, the Commission issued an *Order Scheduling Hearing, Requiring Filing of Testimony, Establishing Discovery Guidelines, and Requiring Public Notice* that, among other things, scheduled an expert witness hearing to be held on May 30, 2023.

5. On May 4, 2023, the Company filed the supplemental testimonies and exhibits of Sigourney Clark and John D. Swez.

6. On May 9, 2023, the Public Staff filed the direct testimonies and exhibits of Darrell Brown, Fenge Zhang and Evan D. Lawrence.

7. Also on May 9, 2023, intervenor Carolina Industrial Group for Fair Utility Rates III ("CIGFUR III") filed the direct testimony of Brian C. Collins.

8. On May 18, 2023, the Company filed the rebuttal testimonies and exhibits of Jeffrey Flanagan and John Swez along with the joint rebuttal testimony of Sigourney Clark and Chris Bauer.

9. On May 19, 2023, the Company filed corrected exhibits and workpapers of Sigourney Clark.

10. On May 26, 2023, the company filed revised rebuttal testimony of Jeffrey Flanagan and John Swez, along with revised joint rebuttal testimony and second revised exhibits of Sigourney Clark and Chris Bauer.

11. In the direct testimony of the Public Staff, witness Lawrence contends that the Company's request for a 16.5% bill impact[1] from this proceeding, together with the rate increase sought by the Company in the proposed Multi-Year Rate Plan in Docket No.

[1] This bill impact represents the increase to a residential customer on Schedule RS using 1,000 kWh per month.

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E-7, Sub 1276,[2] now pending before the Commission, would represent an enormous rate increase for the Company's ratepayers and that the Company should take measures to mitigate the impact of the requested rate increase for ratepayers. Witness Lawrence offered several options the Company could take to mitigate the rate increase with one option being for the Company to defer collection of the current under collection of fuel for a period of twenty-four months, as opposed to a 12-month recovery period.

12. In response to the Public Staff's proposed rate mitigation testimony, the Company filed the rebuttal testimony of witness Chris Bauer. In rebuttal, witness Bauer offered testimony that the Company cannot agree to mitigate the impact on customer bills without serious detrimental impacts to the Company's credit rating. Witness Bauer states in his rebuttal testimony that the Company needs to recover its prudent fuel costs in this proceeding by the end of calendar year 2024 to maintain financial health, which is beneficial to its customers.

13. The Company and the Public Staff conducted substantial discovery on the issues raised in this Application and have engaged in substantial negotiations to agree on a mitigation strategy.

14. The Stipulating Parties desire to resolve and settle issues that will reduce the number of unresolved issues in this docket.

15. The Stipulating Parties agree and stipulate as follows:

II. UNRESOLVED ISSUES

The Stipulating Parties have not reached a compromise on either the outages at the Company's Belews Creek Plant and the W. S. Lee Steam Station or the timing of filing of

[2] DEC has requested a 10.5% Rate Year 1 increase for the residential class.

the results of the Public Staff's investigation into same ("Unresolved Issues") and agree that such issues should be litigated and determined by the Commission.

III. RESOLVED ISSUES

The Stipulating Parties have reached an agreement regarding mitigation of the recovery of under-recovered fuel costs as follows:

1. Test period under-recovered fuel costs will be recovered over a 16-month period as opposed to a 12-month period.

2. Four percent (4%) interest will be applied to the difference between what the Company is expected to recover over the 16-month stipulated period compared to what the Company would have expected to recover over the 12-month period. Using this calculation, the total amount of the 4% interest is $6.656 million to be paid by North Carolina retail customers.

3. The Company will incorporate the April 2023 Spring fuel forecast to set the prospective billing period component of the fuel rate. In addition, the Company will correct the error in the April 2023 Spring fuel forecast it referenced in the revised rebuttal testimony of Sigourney Clark and Chris Bauer, filed on May 26, 2023.

4. The billing to all customer classes will utilize equal percent methodology.

IV. RATE IMPACT OF THE STIPULATION

1. The above Stipulation will result in a 13.31% rate increase, down from the approximately filed 18% requested increase.

2. The total net fuel and fuel-related cost factors, by customer class, shall be as follows, exclusive of the regulatory fee: 3.8950 cents/kWh for Residential customers, 3.5020 cents/kWh for General Service and Lighting customers and 3.2422 cents/kWh for

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Industrial customers.

3. The prospective fuel and fuel-related cost factors, by customer class, shall be as follows, exclusive of the regulatory fee: 2.6287 cents/kWh for Residential customers, 2.2596 cents/kWh for General Service and Lighting customers and 1.9328 cents/kWh for Industrial customers.

4. The EMF (experience modification factor) cost factors, by customer class, shall be as follows, exclusive of the regulatory fee: 1.2579 cents/kWh for Residential customers, 1.2342 cents/kWh for General Service and Lighting customers and 1.3007 cents/kWh for Industrial customers.

5. The EMF interest increment cost factors, by customer class, shall be as follows, exclusive of the regulatory fee: 0.0084 cents/kWh for Residential customers, 0.0082 cents/kWh for General Service and Lighting customers and 0.0087 cents/kWh for Industrial customers.

V. AGREEMENT IN SUPPORT OF SETTLEMENT; NON-WAIVER

1. The Stipulating Parties shall act in good faith and use their best efforts to recommend to the Commission that this Stipulation be accepted and approved. The Stipulating Parties further agree that this Stipulation is in the public interest because it reflects a give-and take of contested issues and results in rates (with respect to the stipulated issues) that are just and reasonable. The Stipulating Parties intend to support the reasonableness of this Stipulation in any hearing before the Commission and any proposed order or brief in this docket.

2. Neither this Stipulation nor any of the terms shall be admissible in any court or Commission except insofar as such court or Commission is addressing litigation arising

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out of the implementation of the terms herein or the approval of this Stipulation. This Stipulation shall not be cited as precedent by any of the Parties regarding any issue in any other proceeding or docket before this Commission or in any court.

3. The provisions of this Stipulation do not reflect any position asserted by any of the Stipulating Parties but reflect instead the compromise and settlement among the Stipulating Parties as to all the issues covered hereby. No Party waives any right to assert any position in any future proceeding or docket before the Commission or in any court.

4. This Stipulation is a product of negotiation among the Stipulating Parties, and no provision of this Stipulation shall be strictly construed in favor of or against any Party.

VI. RECEIPT OF TESTIMONY AND WAIVER OF CROSS-EXAMINATION

The pre-filed testimony and exhibits or portions thereof of the Stipulating Parties on Resolved Issues may be received in evidence without objection, and each Party waives all right to cross examine any witness with respect to such pre-filed testimony and exhibits. If, however, questions are asked by any Commissioner, or if questions are asked or positions are taken by any person who is not a Stipulating Party, then any Stipulating Party may respond to such questions by presenting testimony or exhibits and cross-examining any witness with respect to such testimony and exhibits.

VII. STIPULATION BINDING ONLY IF ACCEPTED IN ITS ENTIRETY

This Stipulation is the product of negotiation and compromise of a complex set of issues, and no portion of this Stipulation is or will be binding on any of the Stipulating Parties unless the entire Agreement and Stipulation is accepted by the Commission. If the Commission rejects any part of this Stipulation or approves this Stipulation subject to any

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change or condition or if the Commission's approval of this Stipulation is rejected or conditioned by a reviewing court, the Stipulating Parties agree to meet and discuss the applicable Commission or court order within five business days of its issuance and to attempt in good faith to determine if they are willing to modify the Stipulation consistent with the order. No Party shall withdraw from the Stipulation prior to complying with the foregoing sentence. If any Party withdraws from the Stipulation, each Party retains the right to seek additional procedures before the Commission, including cross-examination of witnesses, with respect to issues addressed by the Stipulation and shall be bound or prejudiced by the terms and conditions of the Stipulation.

VIII. COUNTERPARTS

This Stipulation may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Execution by electronic signature shall be deemed to be, and shall have the same effect as, execution by original signature.

IX. MERGER CLAUSE

This Stipulation supersedes all prior agreements and understandings between the Stipulating Parties as to the issues discussed herein and may not be changed or terminated orally, and no attempted change, termination, or waiver of any of the provisions hereof shall be binding unless in writing and signed by the parties hereto.

The foregoing is agreed and stipulated this the 31st day of May, 2023.

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DUKE ENERGY CAROLINAS, LLC

By: ______________________

PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION

By: ______________________

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DUKE ENERGY CAROLINAS, LLC

By: ______________________________

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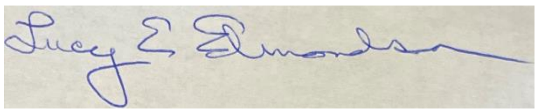
By: 

Lucy E. Edmondson

Chief Counsel

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STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-7, SUB 1282

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	
Application of Duke Energy Carolinas, LLC	)	
Pursuant to G.S. 62-133.2 and NCUC Rule	)	**DUKE ENERGY CAROLINAS,**
R8-55 Relating to Fuel and Fuel-Related	)	**LLC'S APPLICATION**
Charge Adjustments for Electric Utilities	)	

Duke Energy Carolinas, LLC ("DEC," "Company," or "Applicant"), pursuant to North Carolina General Statutes ("N.C. Gen. Stat.") § 62-133.2 and North Carolina Utilities Commission ("NCUC" or the "Commission") Rule R8-55, hereby makes this Application to adjust the fuel and fuel-related cost component of its electric rates. In support thereof, the Applicant respectfully shows the Commission the following:

1. The Applicant's general offices are located at 526 South Church Street, Charlotte, North Carolina, and its mailing address is:

   Duke Energy Carolinas, LLC
   P. O. Box 1006
   Charlotte, North Carolina 28201-1006

2. The names and addresses of Applicant's attorneys are:

   Ladawn S. Toon
   Associate General Counsel
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Copies of all pleadings, testimony, orders and correspondence in this proceeding should be served upon the attorneys listed above.

3. NCUC Rule R8-55 provides that the Commission shall schedule annual hearings pursuant to N.C. Gen. Stat. § 62-133.2 in order to review changes in the cost of fuel and fuel-related costs since the last general rate case for each utility generating electric power by means of fossil and/or nuclear fuel for the purpose of furnishing North Carolina retail electric service. Rule R8-55 schedules an annual cost of fuel and fuel-related costs adjustment hearing for DEC and requires that DEC use a calendar year test period (12 months ended December 31). Therefore, the test period used in this Application for these proceedings is the calendar year 2022.

4. In Docket No. E-7, Sub 1263, DEC's last fuel case, the Commission approved the following base fuel and fuel-related costs factors (excluding gross receipts tax and regulatory fee):

Residential - 2.4866 ¢ per kWh
Commercial - 2.4471 ¢ per kWh
Industrial - 2.4122 ¢ per kWh

5. In this Application, DEC proposes base fuel and fuel-related costs factors (excluding gross receipts tax and regulatory fee) of:

Residential - 2.7126¢ per kWh
Commercial - 2.2553¢ per kWh

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Industrial - 1.7127¢ per kWh

The base fuel and fuel-related cost factors should be adjusted for the Experience Modification Factor ("EMF") by an increment/(decrement) (excluding gross receipts tax and regulatory fee) of:

Residential - 1.6644¢ per kWh
Commercial - 1.6649¢ per kWh
Industrial - 1.7267¢ per kWh

The base fuel and fuel-related costs factors should also be adjusted for the EMF interest (decrement) (excluding gross receipts tax and regulatory fee) of:

Residential - 0¢ per kWh
Commercial - 0¢ per kWh
Industrial - 0¢ per kWh

This results in composite fuel and fuel-related costs factors (excluding gross receipts tax and regulatory fee) of:

Residential - 4.3770¢ per kWh
Commercial - 3.9202¢ per kWh
Industrial - 3.4394¢ per kWh

The new fuel factors would have an effective date of September 1, 2023.

6. The information and data required to be filed by NCUC Rule R8-55 is contained in the testimony and exhibits of Sigourney Clark, Jeffery Flanagan, John Swez, David Johnson, Kevin Houston and Steven D. Capps which are being filed simultaneously with this Application and incorporated herein by reference.

7. For comparison, in accordance with Rule R8-55(d)(1) and R8-55(e)(3), base fuel and fuel-related costs factors were also calculated based on the most recent North American Electric Reliability Corporation ("NERC") five-year national weighted average nuclear capacity factor (91.87%) and projected period sales and the methodology used for

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fuel costs in DEC's last general rate case. These base fuel and fuel-related costs factors are:

	NERC Average	Last General Rate Case
Residential -	4.4116¢ per kWh	4.3435¢ per kWh
Commercial -	3.9471¢ per kWh	3.8366¢ per kWh
Industrial -	3.4582¢ per kWh	3.4807¢ per kWh

WHEREFORE, Duke Energy Carolinas, LLC requests that the Commission issue an order approving composite fuel and fuel-related costs factors (excluding gross receipts tax and regulatory fee) of:

Residential -	4.3770¢ per kWh
Commercial -	3.9202¢ per kWh
Industrial -	3.4394¢ per kWh

Respectfully submitted this 28th day of February, 2023.

By: ______________________

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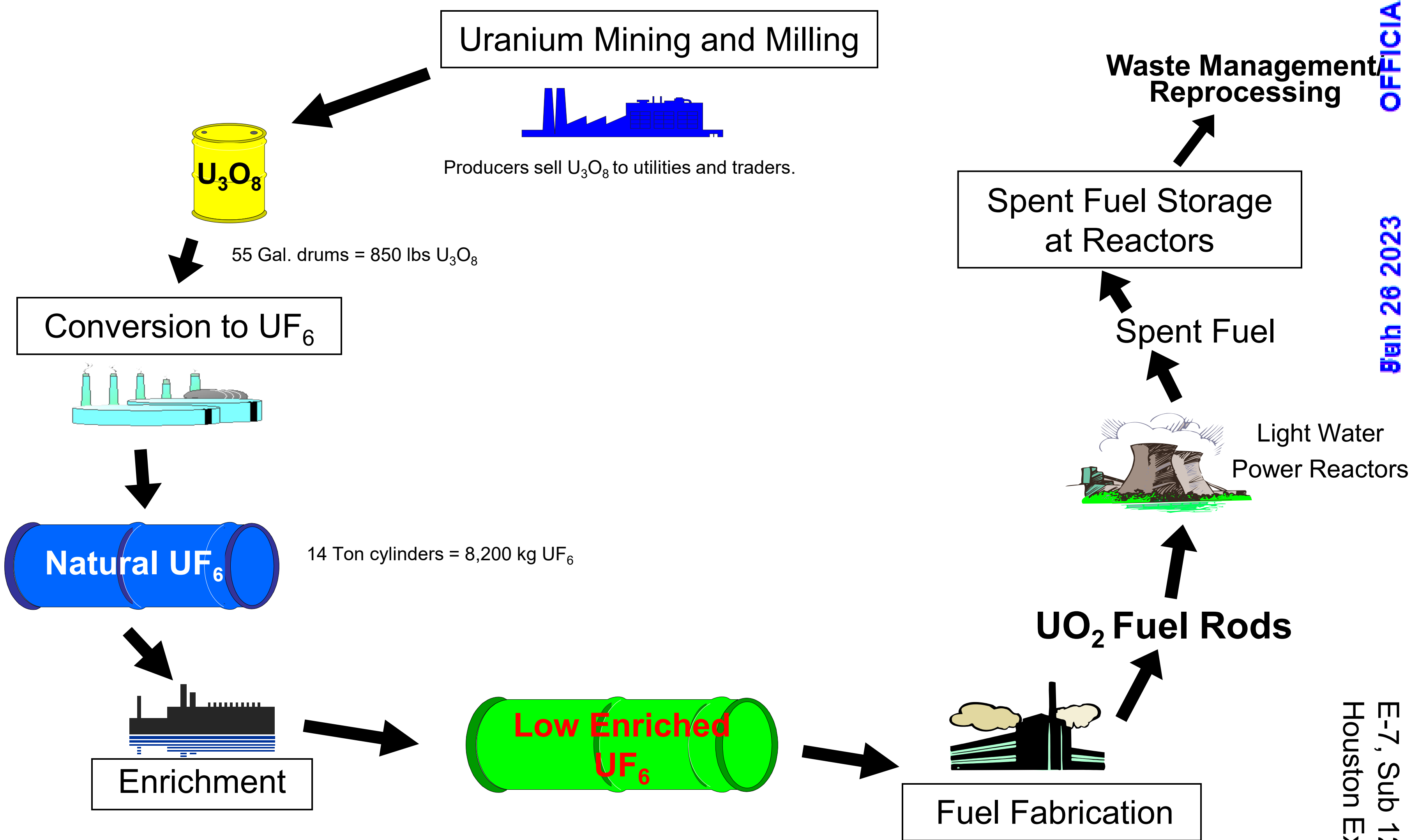
ATTORNEYS FOR DUKE ENERGY CAROLINAS, LLC

The Nuclear Fuel Cycle

/A



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E-7, Sub 1282
Houston Exhibit 1

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E-7, Sub 1282
Houston Exhibit 2

Duke Energy Carolinas, LLC Nuclear Fuel Procurement Practices

The Company's nuclear fuel procurement practices are summarized below:

- Near and long-term consumption forecasts are computed based on factors such as: nuclear system operational projections given fleet outage/maintenance schedules, adequate fuel cycle design margins to key safety licensing limitations, and economic tradeoffs between required volumes of uranium and enrichment necessary to produce the required volume of enriched uranium.
- Nuclear system inventory targets are determined and designed to provide: reliability, insulation from market volatility, and sensitivity to evolving market conditions. Inventories are monitored on an ongoing basis.
- On an ongoing basis, existing purchase commitments are compared with consumption and inventory requirements to ascertain additional needs.
- Qualified suppliers are invited to make proposals to satisfy additional or future contract needs.
- Contracts are awarded based on the most attractive evaluated offer, considering factors such as price, reliability, flexibility and supply source diversification/portfolio security of supply.
- For uranium concentrates, conversion and enrichment services, long term supply contracts are relied upon to fulfill the largest portion of forward requirements. By staggering long-term contracts over time, the Company's purchases within a given year consist of a blend of contract prices negotiated at many different periods in the markets, which has the effect of smoothing out the Company's exposure to price volatility. Due to the technical complexities of changing suppliers, fabrication services are generally sourced to a single domestic supplier on a plant-by-plant basis using multi-year contracts.
- Spot market opportunities are evaluated from time to time to supplement long-term contract supplies as appropriate based on comparison to other supply options.
- Delivered volumes of nuclear fuel products and services are monitored against contract commitments. The quality and volume of deliveries are confirmed by the delivery facility to which the Company has instructed delivery. Payments for such delivered volumes are made after the Company's receipt of such delivery facility confirmations.

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Exhibit 1: Outages investigated by the Public Staff

Plant	Unit	Start Date	End Date	Outage Duration (hours)	Scheduled/ Unscheduled	Cause
Oconee	2	2/5/2022	2/21/2022	396.12	Unscheduled	Due to loss of all unit 2 reactor coolant pumps, caused by a failed sensing circuit fuse
McGuire	2	2/21/2022	2/27/2022	127.38	Unscheduled	Due to a main feedwater control valve failing closed
WS Lee	CC GT 11	3/11/2022	3/31/2022	481.78	N/A	Turbine damage internally
Belews Creek	2	3/17/2022	4/22/2022	885.98	N/A	Unit 2 Planned Outage for Boiler Minor, ITOT Project, Turbine valve work, etc.
Belews Creek	2	4/22/2022	5/8/2022	396.58	N/A	Foreign material found in the IP turbine. Required removal of IP turbine shell to rem
Belews Creek	2	5/8/2022	5/8/2022	10.00	N/A	IP Turbine Vibration Troubleshoo ing
Belews Creek	2	5/9/2022	5/12/2022	76.00	N/A	Adjusted ground strap along wi h installing a balance shot for #5 bearing vibra ion.
Catawba	2	4/23/2022	4/28/2022	121.60	Unscheduled	Multiple dropped control rods during periodic control rod movement tes ing
McGuire	1	5/1/2022	5/9/2022	196.62	Unscheduled	Refueling outage extension due to main generator hydrogen seal leak
Belews Creek	1	8/12/2022	8/17/2022	116.00	N/A	1A SAH Plugged. Offline SAH wash.
Belews Creek	1	8/17/2022	8/22/2022	130.00	N/A	1-BU-207A Stem nut was stripped.
Belews Creek	2	8/31/2022	10/29/2022	1,409.50	N/A	Belews Creek 2 tripped offline. 2-LP2 Turbine crossover pipe damage.
Belews Creek	2	10/30/2022	11/7/2022	191.00	N/A	Belews Creek 2 manually tripped offline due to water leak in exciter.
Catawba	2	9/10/2022	10/22/2022	508.57	Scheduled	Refueling Outage
Catawba	2	10/22/2022	10/24/2022	104.03	Unscheduled	Extension to the planned refueling outage due to delays in head peening, and reactor SCRAM during startup due to loss of 2B main feedwater pump turbine
WS Lee	CC ST 10	11/3/2022	12/11/2022	911.55	N/A	Generator inspection.
WS Lee	CC ST 10	12/11/2022	12/31/2022*	500.87	N/A	Fire damage discovered in the ST compartment

* This outage extended in to January of 2023, which is not part of he test year in this case.

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Lawrence Exhbit 2 is Confidential E-2, Sub 1282

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Lawrence Exhibit X: Rate Mitigation Scenarios

Option 1: Rates as filed

	Residential			General Service/Lighting			Industrial		
	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024
EMF Rate (cents per kWh)	0.4863	1.6635	1.6635	0.6254	1.6638	1.6638	0.5726	1.7256	1.7256
EMF Interest Increment Rate (cents per kWh)	0	0	0	0	0	0	0	0	0
EMF Rate Total (cents per kWh)	0.4863	1.6635	1.6635	0.6254	1.6638	1.6638	0.5726	1.7256	1.7256
Increase from previous rate (cents per kWh)		1.1772	0		1.0384	0		1.1530	0
Total RES Bill	$114.56	$133.45	$133.45						

Residential 12-Month Average Rate: 1.6635 cents per kWh

General Service/Lighting 12-Month Average Rate: 1.6638 cents per kWh

Industrial 12-Month Average Rate: 1.7256 cents per kWh

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Option 2:

	Residential			General Service/Lighting			Industrial		
	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024
EMF Rate (cents per kWh)	0.4863	0.8318	2.4953	0.6254	0.8319	2.4957	0.5726	0.8628	2.5884
EMF Interest Increment Rate (cents per kWh)	0	0.0000	0.0000	0	0.0000	0.0000	0.0000	0.0000	0.0000
EMF Rate Total (cents per kWh)	0.4863	0.8318	2.4953	0.6254	0.8319	2.4957	0.5726	0.8628	2.5884
Increase from previous rate (cents per kWh)		0.3455	1.6635		0.2065	1.6638		0.2902	1.7256
Total RES Bill	$114.56	$125.18	$144.98						

Residential 12-Month Average Rate: 1.6635 cents per kWh

General Service/Lighting 12-Month Average Rate: 1.6638 cents per kWh

Industrial 12-Month Average Rate: 1.7256 cents per kWh

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Option 3:

	Residential			General Service/Lighting			Industrial		
	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024
EMF Rate (cents per kWh)	0.4863	0.6654	1.5526	0.6254	0.66552	1.55288	0.5726	0.6902	1.6106
EMF Interest Increment Rate (cents per kWh)	0	0.0901	0.0901	0	0.0901	0.0901	0.0000	0.0935	0.0935
EMF Rate Total (cents per kWh)	0.4863	0.7555	1.6427	0.6254	0.7556	1.6430	0.5726	0.7837	1.7041
Increase from previous rate (cents per kWh)		0.26920	0.88720		0.1302	0.8874		0.2111	0.9203
Total RES Bill	$114.56	$124.42	$133.30						

Residential 12-Month Average Rate: 1.1090 cents per kWh

General Service/Lighting 12-Month Average Rate: 1.1092 cents per kWh

Industrial 12-Month Average Rate: 1.1504 cents per kWh

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Option 4:

	Residential			General Service/Lighting			Industrial		
	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024
EMF Rate (cents per kWh)	0.4863	0.41585	1.24755	0.6254	0.41595	1.24785	0.5726	0.4314	1.2942
EMF Interest Increment Rate (cents per kWh)	0	0.1352	0.1352	0	0.1352	0.1352	0.0000	0.1402	0.1402
EMF Rate Total (cents per kWh)	0.4863	0.5511	1.3828	0.6254	0.5512	1.3831	0.5726	0.5716	1.4344
Increase from previous rate (cents per kWh)		0.0648	0.8317		-0.0742	0.8319		-0.0010	0.8628
Total RES Bill	$114.56	$121.02	$129.34						

Residential 12-Month Average Rate: 0.8317 cents per kWh

General Service/Lighting 12-Month Average Rate: 0.8319 cents per kWh

Industrial 12-Month Average Rate: 0.8628 cents per kWh

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Option 5:

	Residential			General Service/Lighting			Industrial		
	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024	Currently in effect	Period 1 September 1, 2023	Period 2 March 1, 2024
EMF Rate (cents per kWh)	0.4863	0.27725	0.8322	0.6254	0.2773	0.8319	0.5726	0.2876	0.8628
EMF Interest Increment Rate (cents per kWh)	0	0.4020	0.1006	0	0.4021	0.4021	0.0000	0.4170	0.4170
EMF Rate Total (cents per kWh)	0.4863	0.6793	0.9328	0.6254	0.6794	1.2340	0.5726	0.7046	1.2798
Increase from previous rate (cents per kWh)		0.1930	0.2536		0.0540	0.5546		0.1320	0.5752
Total RES Bill	$114.56	$121.02	$129.34						

Residential 12-Month Average Rate: 0.5545 cents per kWh

General Service/Lighting 12-Month Average Rate: 0.5546 cents per kWh

Industrial 12-Month Average Rate: 0.5752 cents per kWh

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Public Staff
Docket No. E-7, Sub 1282
2023 DEC Fuel
Public Staff Data Request No. 6
Item No. 6-8
Page 1 of 1

DUKE ENERGY CAROLINAS, LLC

Request:

Please provide DEC's preferred EMF recovery option, along with an explanation of why it is the preferred option.

a. If DEC's preferred option is to proceed "as filed", please identify its second most desirable option, and explain why.

Response:

North Carolina General Statue 62.133-2(d) prescribes the parameters for fuel recovery, where "...The Commission shall incorporate in its cost of fuel and fuel-related costs determination under this subsection the experienced over-recovery or under-recovery of reasonable costs of fuel and fuel-related costs prudently incurred during the test period....in fixing an increment or decrement rider...and the over-recovery or under-recovery portion of the increment or decrement shall be reflected in rates for 12 months...".

The recovery method that is set forth by this statute is DEC's preferred EMF recovery option.

DEC would like to have a conference call with Public Staff to discuss data request 6. We will work with Public Staff technical contacts to get this conference call scheduled in the coming days.

Responder: Sigourney Clark, Rates & Reg. Strategy Manager

CUCA Public Staff Panel Cross Exhibit 1 I/A

Summary of EMF Adjustments - 17 Years

			EMF Overcollection (millions)	EMF Undercollection (millions)
1	E-7, Sub 805	DEC Fuel Rider (2006)	$ 3.7	
2	E-7, Sub 825	DEC Fuel Rider (2007)		$ 56.2
3	E-7, Sub 847	DEC Fuel Rider (2008)		$ 32.0
4	E-7, Sub 875	DEC Fuel Rider (2009)		$ 124.7
5	E-7, Sub 934	DEC Fuel Rider (2010)	$ 151.1	
6	E-7, Sub 982	DEC Fuel Rider (2011)	$ 10.3	
7	E-7, Sub 1002	DEC Fuel Rider (2012)		$ 18.5
8	E-7, Sub 1033	DEC Fuel Rider (2013)	$ 47.3	
9	E-7, Sub 1051	DEC Fuel Rider (2014)	$ 5.3	
10	E-7, Sub 1072	DEC Fuel Rider (2015)		$ 10.0
11	E-7, Sub 1104	DEC Fuel Rider (2016)	$ 41.0	
12	E-7, Sub 1129	DEC Fuel Rider (2017)	$ 44.0	
13	E-7, Sub 1163	DEC Fuel Rider (2018)		$ 73.3
14	E-7, Sub 1190	DEC Fuel Rider (2019)		$ 78.2
15	E-7, Sub 1228	DEC Fuel Rider (2020)		$ 57.1
16	E-7, Sub 1250	DEC Fuel Rider (2021)		$ 20.5
17	E-7, Sub 1263	DEC Fuel Rider (2022)		$ 327.0
	TOTAL		$ 302.7	$ 797.5
	E-7, Sub 1283	DEC Fuel Rider (2023)		$ 999.0

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