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Oct 26 2022

October 26, 2022

VIA ELECTRONIC FILING

Ms. A. Shonta Dunston, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

**RE: Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's
Informational Update on PSCSC IIJA and IRA Allowable *Ex Parte*
Briefing – Docket No. M-100, Sub 164**

Dear Ms. Dunston:

By this letter, Duke Energy Carolinas, LLC and Duke Energy Progress, LLC (the “Companies”) are providing the North Carolina Utilities Commission and interested parties with an informational update on the Companies’ continued involvement in the Infrastructure Investment and Jobs Act (“IIJA”) federal funding process.

On October 24, 2022, the Companies participated in an Allowable *Ex Parte* Briefing with the Public Service Commission of South Carolina to present the Companies’ approach to identifying and prioritizing opportunities under the IIJA and the Inflation Reduction Act. The Companies’ presentation is attached to this letter. A live stream of the October 24 briefing is available at: <https://www.scetv.org/live/public-service-commission>. The video archive is labeled “10/24/2022 – ND:2022-168-A”.

Please contact Jason Higginbotham (Jason.higginbotham@duke-energy.com) if there are any questions.

Sincerely,

Jack E. Jirak

Enclosure

cc: Jason Higginbotham
Parties of Record



**Public Service Commission of South Carolina
Allowable Ex Parte Briefing
Infrastructure Investment and Jobs Act
and
Inflation Reduction Act**

October 24, 2022

Agenda

01

Infrastructure Investment and Jobs Act (IIJA) Overview

02

IIJA Duke Prioritization Framework

03

Inflation Reduction Act (IRA)

04

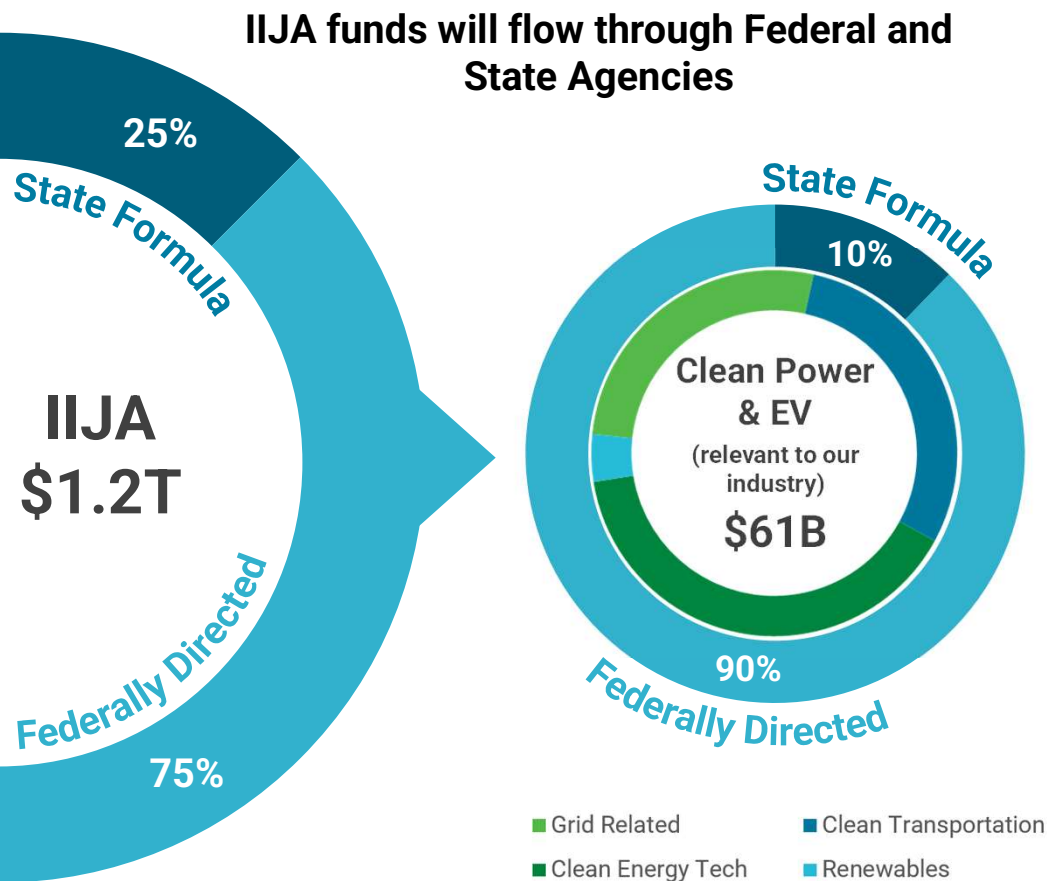
Deep Dive: IRA for Solar

Infrastructure Investment and Jobs Act (IIJA) Key Take-aways



- Duke Energy has a disciplined, prioritization approach that considers state specific needs and approaches to IIJA
- Much of IIJA funding does not apply directly to DEC/DEP operations in South Carolina
- Providing letters of support to cities and communities seeking funding for their own electric transportation needs
- Continuing to examine opportunities to complement prudent investment for the benefit of our customers
 - Key potential areas for SC: grid, hydro/pumped storage
 - Partnership opportunities: hydrogen

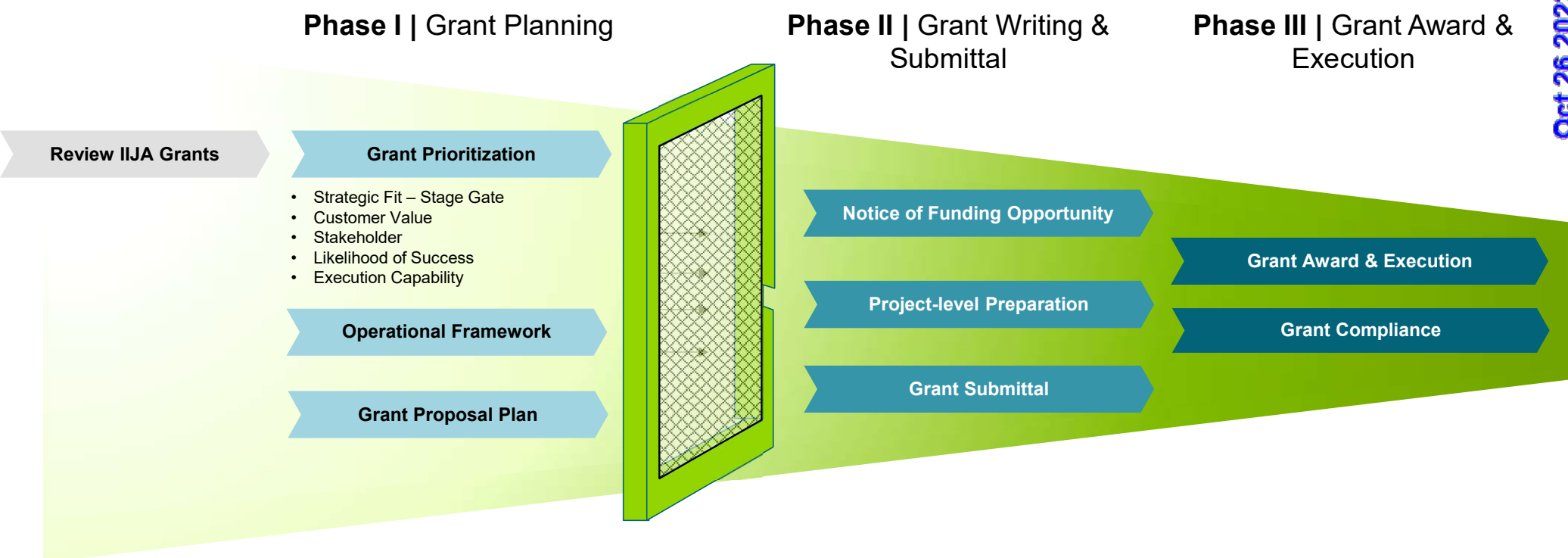
Infrastructure Investment and Jobs Act (IIJA) Overview



Infrastructure Opportunities (related to Energy Industry)	
\$17.6B+	Clean Transportation (EV charging infrastructure, school & transit buses)
\$9B	Hydrogen
\$12.1B	Carbon Capture Storage & Utilization
\$13B	Grid Resiliency and Smart Grid
\$500M	Energy Storage Demonstrations
\$2.5B	Advanced Nuclear
\$2.5B	Transmission
\$2.5B+	Renewables (including hydropower)
\$1.5B	Cybersecurity
\$100M	Methane Reduction
\$61B	Total of IIJA related to our Energy industry*

IIJA Prioritization Framework: Complementary to Duke's strategy and planning

Grant Lifecycle and Approach



See the Companies' IIJA Initial Comments (pgs. 14-15) and Reply Comments (pgs. 1-2) for explanation of the above graphic.

South Carolina IIJA Opportunities

SOUTH CAROLINA



SC IIJA OPPORTUNITIES



**ROADS &
BRIDGES**



**EV / CLEAN
TRANSPORT**



**ENERGY
(inc. GRID)**

DUKE RELEVANT IIJA PRIORITIES

Grant Type



GRID RESILIENCY



GRID MOD



HYDRO



HYDROGEN



ELECTRIFICATION

Type of Pursuit

Apply

Apply

Apply

Partner

Letter of Support

STATE FORMULA FUNDING



**IIJA PUBLIC EV
CHARGING
INFRASTRUCTURE**

\$70M



**IIJA GRID
FUNDING**

\$26M



South Carolina New Opportunities within Electric Vehicles (EVs)



Harry Lightsey · 2nd
Secretary of Commerce at State of South Carolina
Department of Commerce
6d · 🌐

Today, South Carolina took a major leap forward in positioning the state for continued automotive growth for many years to come. It's critical that our state's workforce, economy and infrastructure continue to evolve with industry innovations. Today's Governor's EV Summit and Governor McMaster's subsequent executive order announcement unveiled South Carolina's concerted and collaborative effort to position our state to meet the demands of a rapidly-changing auto industry.

I'm proud to stand with state leadership to build upon decades of established automotive successes, while fueling local innovation and skill development that will prepare all South Carolinians for careers of the future.

Read more about Governor McMaster's executive order: <https://lnkd.in/gYc4hZsh>



BMW Manufacturing Co., LLC

65,292 followers
2h · 🌐

+ Follow

Plant Spartanburg is going electric! The BMW Group announced on Wednesday, October 19, that it will invest \$1.7 billion to build electric vehicles at Plant Spartanburg. About \$1 billion of the new investment will prepare the plant for the production of battery-electric vehicles. An additional \$700 million will be used to build a new high-voltage battery assembly facility in nearby Woodruff, SC, expanding the BMW Group's footprint in the state.

The new Woodruff facility will be more than one million square feet and produce next-generation batteries for fully electric vehicles. About 300 new jobs will be created on site.

"For decades, Plant Spartanburg has been a cornerstone of the global success of the BMW Group. The home of the BMW X models that are so popular all over the world. Going forward it will also be a major driver for our electrification strategy, and we will produce at least six fully electric BMW X models here by 2030. That means: The 'Home of the X' is also becoming the 'Home of the Battery Electric Vehicle,'" said Zipse on Wednesday. "In addition, we can showcase BMW Group's 'local for local' principle: Our newly developed sixth generation battery cells, which were specifically designed for the next generation NEUE KLASSE electric vehicles, will be sourced here in South Carolina – where X goes electric."

"This is a very important step for Plant Spartanburg as we continue our legacy of producing high-quality vehicles, and build on the success of the last 30 years," said Robert Engelhorn, President and CEO, BMW Manufacturing Co. "With this latest investment, we futureproof our operations and prepare the plant for electrification and new technologies, ensuring both the long-term success of our company and our position as an attractive and viable employer in the state of South Carolina."

For more details, go to <https://lnkd.in/gwKMvVTx>

#BMWManufacturing #PlantSpartanburg #BMWGroup #advancedmanufacturing #Upstate #ourlegacyourfuture #GoingElectric #ElectricMobility

South Carolina IIJA Opportunities for Electric Vehicles (EVs)

South Carolina could get nearly \$70M for electric vehicle chargers by 2026

Associated Press

8 months ago



SC receiving \$25M to install EV chargers along interstate highways

Dianté Gibbs

3 weeks ago



"Under SC NEVI, the state will grow its charging network of approximately 918 public charging ports with high-powered chargers along the almost 759 miles of designated EV corridors within the state. Funding will come from \$25.3 million allocated from the Bipartisan Infrastructure Law for the fiscal years 2022 and 2023. Over the course of the federal five-year plan (2022-2026), South Carolina would receive an estimated \$69,998,769 in federal funds."

Source: [South Carolina plans for electric vehicle charging infrastructure | wltx.com](https://www.wltx.com/news/south-carolina-plans-for-electric-vehicle-charging-infrastructure/)

Deep Dive: Competitive Grid Resilience Grants – 40101(c)



- \$2.5 billion in funding available FY22-25
 - \$918 million available FY22-23
- Duke Energy eligible to apply directly
- Goal of Funding:
 - Reduce the likelihood and consequence of impacts to the grid due to extreme weather, wildfires and natural disasters
- DOE Technical Approaches of Interest & Prioritization:
 - DOE is particularly interested in applications for adaptive storage deployment, microgrid deployment, and the undergrounding of distribution and transmission lines*
 - DOE will prioritize applications that address community transformations or the ability to leverage capital investment

Anticipated # of FY22-23 Awards	10 (3 of which to small utilities)
Max Award Size	Total of last 3-years of resilience investments OR \$100 million (whichever is lower)
Anticipated Period of Performance	60 months
Minimum Cost Share	50% (33% for small utilities)
Additional Requirements	1) Community benefits plan; 2) report on resilience investments; 3) evidence that investments are incremental; and 4) biennial report to congress

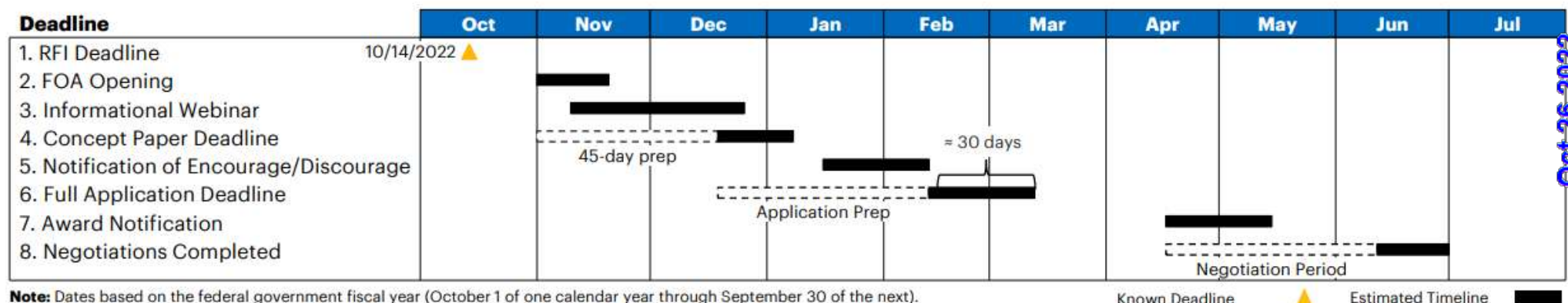
*Other eligible activities include: 1) weatherization technologies and equipment; 2) fire-resistant technologies and fire prevention systems; 3) monitoring and control technologies; 4) undergrounding of electrical equipment; 5) utility pole management; 6) relocation of power lines or reconductoring of power lines with low-sag, advanced conductors; 7) vegetation and fuel-load management; 8) use/construction of DERs for enhancing system adaptive capacity during disruptive events (including microgrids and battery storage subcomponents); 9) adaptive protection technologies; 10) advanced modeling technologies; 11) hardening of power lines, facilities, substations or other systems; and 12) replacement of old overhead conductors and underground cables

Grid Program Timeline (as of October 2022; subject to change based on RFI responses)



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Applicants will have ~30 days from receiving DOE feedback (encourage/discourage) to submit full applications



1

RFI Deadline

- RFI may address one or more of the 46 questions
- To be Submitted electronically to GDORFI@hq.doe.gov no later than 5:00pm (EDT) on October 14, 2022
- 20 pages in length, 12-point font, 1-inch margins

2

FOA Opening

- Official Funding Opportunity Announcement (FOA) published, outlining Concept Paper and Full Application requirements

3

Informational Webinar

- For each topic, a concept paper must be submitted to qualify for the Full Application. The DOE will issue an Encourage / Discourage notification to prioritize candidates

4

Concept Paper Deadline

- 12 pages of overview; 5-page appendix of capabilities
- Applicants should cover how the project meets the eligible uses for a topic area and present team capabilities and qualifications

5

Decision Notification

- Applicants will be notified via email if they are encouraged or discouraged to apply
- Full applications can be submitted regardless of outcome

6

Full Application Deadline

- Applicants will submit 16-18 unique documents
- Applications must include a Community Benefits Plan (Community and Labor Engagement, Justice40, Buy America)

7

Award Negotiation

- Award negotiation process is expected to take 60 days
- Awardees will be publicly announced

8

Negotiations Completed

- Award disbursed to selected candidates and follow up on next steps

Inflation Reduction Act of 2022 (“IRA”) – Overview of Major Provisions

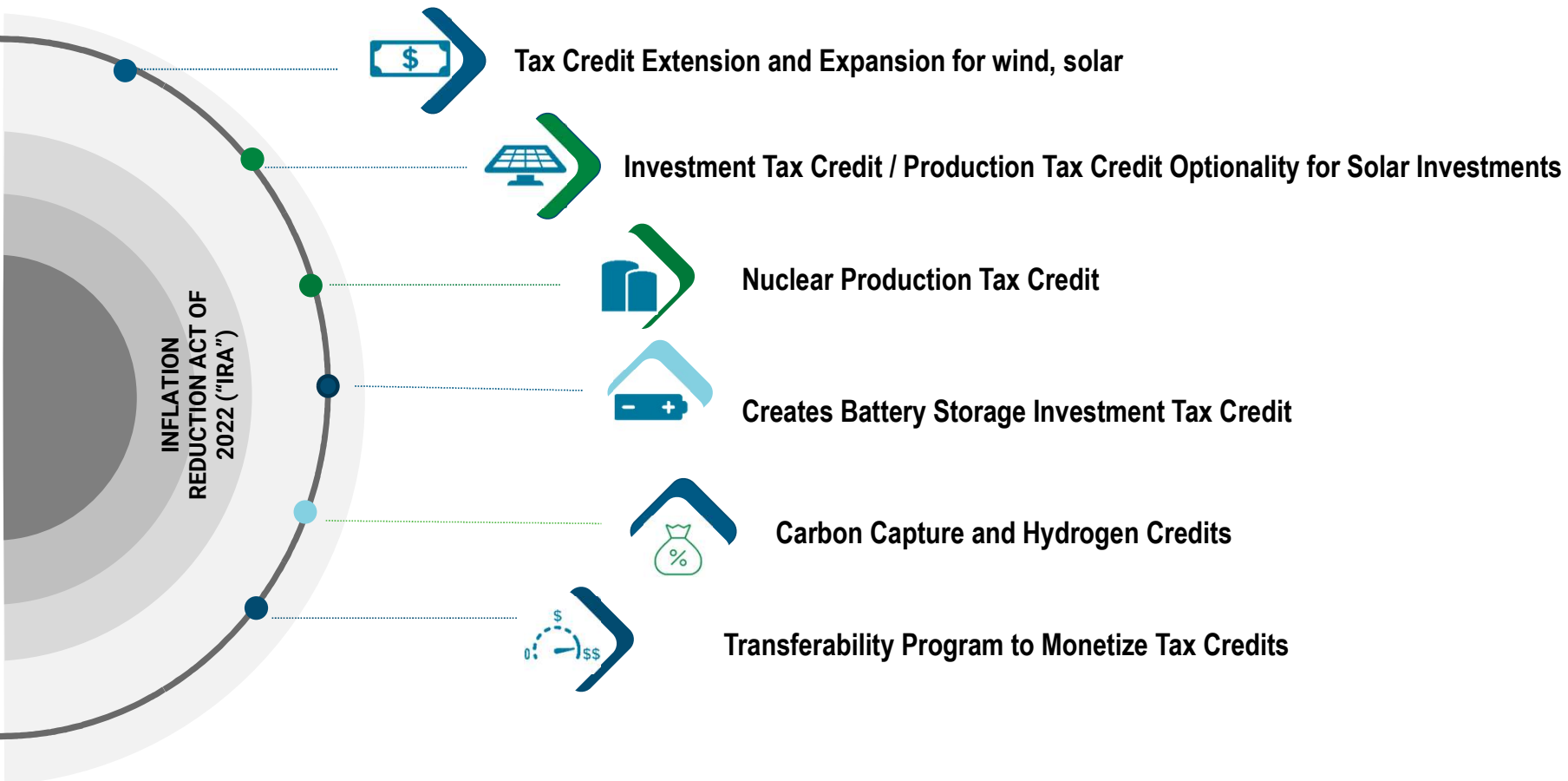


- Revenue raisers:
 - 15% corporate alternative minimum tax
 - 1% excise tax on stock buybacks of publicly traded US corporations
 - \$80 billion funding increase for IRS, projected to bring in \$204 billion over 10 years
- Extends existing and adds new zero carbon energy tax credits
- Excise taxes
 - Superfund excise tax on hazardous substances
 - Methane fee on owner/operators of certain facilities exceeding specified waste emissions thresholds for
 - petroleum/natural gas production,
 - natural gas transmission, and
 - nonproduction petroleum/natural gas systems
- Prescription drug pricing provisions
- Extension of Affordable Care Act health care insurance premium subsidies

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Inflation Reduction Act of 2022 – Applicable Provisions for Utilities



Anticipated IRA Milestones



Inflation Reduction Act of 2022 – ITCs & PTCs

- Investment tax credits (“ITC”)
 - Credit that’s fixed based on a percentage of qualified installed capital costs
 - For example, 30% of eligible costs for installed solar generation
- Production tax credits (“PTC”)
 - Credit that’s variable based on an amount per unit of actual production (\$/kwh)
 - For example, 2.75 cents per kilowatt hour of electricity produced from solar generation
- Prior to the Inflation Reduction Act
 - ITCs and PTCs were phasing out or down to very low levels
- After the Inflation Reduction Act
 - Existing credits extended and reinstated
 - Allows flexibility for either an ITC or PTC tax credit for solar generation (**EXTENDED**)
 - Nuclear production tax credit for existing nuclear plants added (**NEW**)
 - Battery storage investment tax credit added (**NEW**)
 - Transition to a “technology neutral” approach for credits after 2024 instead of picking certain technologies
 - Tech neutral credits start phasing out when national greenhouse gas emissions are reduced by 75% compared to 2022

Inflation Reduction Act of 2022 – Nuclear Production Tax Credit

- IRA includes a new production tax credit for existing nuclear power plants
 - From 2024 to 2032, utilities using existing nuclear plants will be eligible for a credit of up to \$15 per megawatt-hour sold
 - The credit is subject to a decrease as revenues attributable to nuclear plants are above \$25 per megawatt-hour with total phase out at around \$44 per megawatt hour
- Credit amount above assumes a bonus for prevailing wages is met



Inflation Reduction Act of 2022 – Two-tier Structure for Credits

- Base credit
 - Facilities may receive a relatively small base credit rate with an increased credit for certain “bonus” attributes
 - For example, a base 6% investment tax credit becomes a 30% credit if the prevailing wage requirement is met
- Bonuses
 - Prevailing wage requirement
 - The base credit is multiplied by 5 if prevailing wage requirements are met
 - Taxpayers must satisfy the prevailing wage requirements for the duration of the construction of the project and for 5 years after the project is placed into service
 - Apprenticeship requirement
 - Must maintain a qualified apprenticeship program during construction
 - Usually coupled with prevailing wage requirement
 - Domestic content requirement
 - Must meet US produced steel, iron, and manufactured product requirements
 - Energy community locations

Inflation Reduction Act of 2022 – 15% Corporate Book Minimum Tax



- The IRA includes a 15% corporate alternative minimum tax on adjusted financial statement income (AFSI) for corporations with profits over \$1 billion
 - Can be offset with renewable energy credits
 - Tax depreciation substituted for book depreciation, lowering the tax base
- In addition to allowing for the use of net operating losses and foreign tax credits, it also provide for exemptions for items like general business credits and defined pension benefits
- Guidance from US Treasury will be needed

Inflation Reduction Act of 2022 – Transferability

- Before the IRA
 - Could only use tax credits against income tax liability
 - Capital intensive businesses were constrained in realizing cash benefits from credits
- After the IRA
 - The IRA contains provisions that allow most credits to be transferred to another taxpayer for cash
 - A taxpayer can elect to transfer all (or any portion specified in the election) of an eligible credit to an unrelated transferee taxpayer
 - Further, the transfer must be a one-time transfer (i.e., the transferee cannot make a subsequent election to further transfer any portion of the transferred credit)
- Why this matters
 - Transferability will allow more rapid realization of cash benefits for our customers
 - Expect transfers at a discounted rate
 - Guidance from US Treasury will be needed

IRA impact upon solar costs

- Inflation Reduction Act (IRA) provides much more in potential tax credits for Solar than under prior law
- Investment Tax Credit (ITC) increases from 10 to 30 percent of the capital cost in most cases
- Introduces a new Production Tax Credit (PTC) of roughly 2.75 cents per kilowatt hour in 2022 with annual escalation
- Duke Energy can choose whichever credit provides the greatest savings for customers

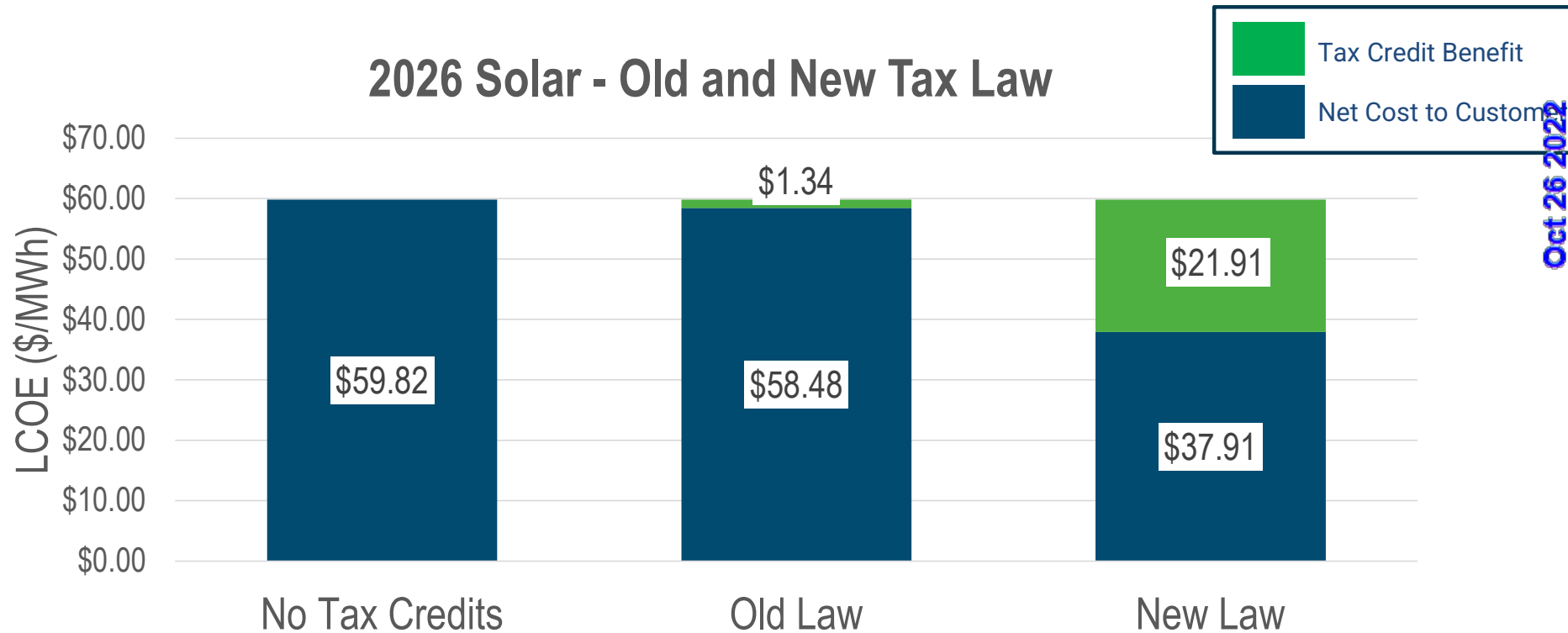
Example Solar Project Assumptions

- 75MW-ac solar project using bi-facial panels placed in Service in 2026
- Project capital cost of \$115MM, excludes network upgrade costs
- 28% Net Annual Capacity Factor project output, degradation of 0.5% per year
- Qualifies for prevailing wage and apprenticeship bonus for either ITC or PTC
- 30-year asset life and cost recovery
- 6.49% After-tax Weighted Average Cost of Capital
- Property taxes based on project location in North Carolina, where property taxes are lower
- Transfer the PTC/ITC for Cash at 90% of Value

IRA dramatically lowers the cost of solar for Duke Energy customers



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Levelized Cost of Energy (“LCOE”) for Example Solar Project

Total Tax Credit Value in \$MMs	
Old Law	\$ 11.5
New Law	\$ 61.1

Faster Flow Through of Tax Credits to Customers

- Tax Credits will be utilized by Duke Energy to reduce customer rates more quickly than under prior law
 - Because of accumulated tax credits from prior years, Duke Energy faces a delay in getting the cash tax benefit from future tax credits
 - IRA allows tax credits to be sold (transferred) to other taxpayers who can utilize them sooner than Duke Energy can
 - Selling the credits at a reasonable discount will result in earlier cost savings for customers vs waiting to use them on the tax return
- Production Tax Credits can be flowed back to Customers more quickly than Investment Tax Credits

Customer Savings Associated with Transfer

30% ITC	\$ 0.95/MWh
PTC	\$ 4.56/MWh

Inflation Reduction Act of 2022 – In Conclusion



IRA will provide our customers a wide range of benefits over time, including reducing the cost impact of the energy transition from what it otherwise would be.



We are currently evaluating areas in the law that will need clarification and guidance, and we anticipate an active upcoming year of engagement with the US Department of Treasury.



As we learn more, we will keep the Commission apprised of further developments.

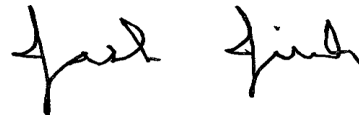
Thank you for your time!

Questions?

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's Informational Update on PSCSC IIA and IRA Allowable *Ex Parte* Briefing, filed in Docket No. M-100, Sub 164, has been served by electronic mail, hand delivery or by depositing a copy in the United States mail, postage prepaid to parties of record.

This the 26th day of October, 2022.



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