

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-100, SUB 179

In the Matter of		
Duke Energy Progress, LLC, and)	Comments of North Carolina Electric
Duke Energy Carolinas, LLC, 2022)	Membership Corporation
Biennial Integrated Resource Plans)	
and Carbon Plan)	

NOW COMES the North Carolina Electric Membership Corporation (“NCEMC”) and, in accordance with the Commission’s November 19, 2021 *Order Requiring Filing of Carbon Plan and Establishing Procedural Deadlines*, as amended by the Commission’s November 29, 2021 *Order Granting Extension of Time* (jointly, the “Procedural Orders”), files the following comments on the draft carbon reduction plan (“Draft Carbon Plan”). The Draft Carbon Plan was filed on May 16, 2022, by Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) (DEC and DEP jointly “Duke”), consistent with Section 1 of North Carolina Session Law 2021-165, (commonly referred to as “House Bill 951” or “H951”).¹

I. Summary of Comments

As discussed further below, NCEMC urges the Commission to adopt the least cost and reliable carbon reduction plan. This plan must balance overall system costs, generation diversity, and the reliable integration of new generation and transmission facilities to accomplish the carbon reductions goals of H951. To accomplish this, NCEMC makes the following specific comments and recommendations for the Commission’s consideration in

¹ Pursuant to Section 1 of H951, the carbon reduction goals are applicable only to the emissions of carbon dioxide (CO₂) emitted in the State from Duke’s power supply portfolio.

its role developing and approving an initial plan to meet the required carbon reduction goals for North Carolina (“NCUC Carbon Plan”) on or before December 31, 2022:

1. The NCUC Carbon Plan should ensure that the least cost and reliability requirements of H951 are followed. To achieve these requirements, the Commission should utilize the discretion it was provided by H951 and extend the milestones for 70% emission reduction in order to create a diverse generation portfolio, make sure new facilities can be reliably integrated, and minimize rate shock to customers.
2. The Commission should address cost allocation issues between the DEP and DEC balancing areas in the NCUC Carbon Plan. Addressing cost allocation issues now will ensure that DEP customers will not pay a disproportionate share of costs to achieve system wide carbon reductions that benefit all of North Carolina.
3. The Commission should direct Duke to combine its two balancing areas, as proposed in the Draft Carbon Plan. The combination of the DEP and DEC balancing areas will reduce costs, improve reliability, and eliminate cost allocation issues between the balancing areas.
4. Duke’s transmission and distribution (“T&D”) investments must be reviewed fully through the current transmission planning process in North Carolina to determine the reliability and enhanced capacity values that the T&D investments provide, as well as the need for the T&D investments for compliance with the authorized carbon reduction goals.

5. Duke should be required to continue to work with NCEMC's Distribution Operator on the coordination and integration of distributed energy resources ("DER"). As the amount of DER in the state increases, it is vital that Duke works with distribution operators to reliably integrate DER located on the distribution system into Duke's operations and planning.

The Commission is in a critical position to develop and approve an initial NCUC Carbon Plan by December 31, 2022, but also has the authority and discretion to ensure that the timing and costs of compliance with the authorized reduction goals in both 2030 and 2050 are protective of costs, reliability, and the long-term interests of Duke's customers. The pace of change that is occurring in this proceeding, as well as complementary actions in related proceedings, makes it critical to coordinate a cost-effective transition in Duke's power supply portfolio and modernization of the T&D grid serving customers throughout the State and region.

II. NCEMC's Interest in this Matter

As stated in our December 14, 2021, petition to intervene, NCEMC is a generation and transmission cooperative organized pursuant to Chapter 117 of the North Carolina General Statutes and is responsible for the power supply of its 25 member distribution cooperatives throughout the State of North Carolina. Those 25 members, in turn, supply electricity to more than one million homes, farms, and businesses in which more than 2.5 million North Carolinians live and work. The distribution cooperatives have approximately 106,000 miles of distribution lines that provide electricity to almost 45 percent of North Carolina's land mass, with each distribution cooperative independently owning and operating the distribution system used to serve its membership.

NCEMC was actively involved in the development of H951 and has a direct interest in seeing the policies and goals of the law implemented in a manner consistent with legislative requirements of least cost and reliable planning. The cooperatives were identified, along with municipalities, as key stakeholders to be involved in the implementation of H951 before the Commission by its legislative sponsors.² NCEMC participated as a stakeholder in the meetings held by Duke and participated as panelists in the technical subgroup meetings held by Duke in February 2022.

In 2019, NCEMC developed the “Brighter Future” program, which focuses on affordable, reliable, and safe, but also increasingly low carbon generation portfolio. In particular, NCEMC has set a goal of reducing carbon emissions by 50%, from its 2005 baseline, by 2030, and to achieve a target of net zero carbon emissions by 2050.³ These carbon reduction targets are similar to the authorized carbon reduction goals established in H951 and require long-term planning and investments by NCEMC to effectively manage that transition. As Duke’s largest wholesale customer, NCEMC’s ability to comply with its Brighter Future initiative will be impacted by the actions taken by Duke to comply with H951.

In addition to purchasing power and energy from Duke, NCEMC owns fleet of generating resources, and operates multiple units jointly with DEC and DEP. The NCUC Carbon Plan could result in operational changes to Duke’s generating fleet, and more

² See statement by Sen. Paul Newton on October 5, 2021, before the Senate Committee on Agriculture, Energy, and Environment, in which Sen. Newton responded to the question “Are co-ops and munis [municipal power agencies] qualifying stakeholders under the bill?” by stating affirmatively that “Yes. So if this plan is being considered, and they want a voice, and they want to address the Utilities Commission about the proposed plan going forward, they are absolutely stakeholders. I don’t want there to be any confusion about that.” Audio no longer available online, but copies are available upon request.

³ More information also available online at: <https://www.ncelectriccooperatives.com/brighter-future/>.

specifically to the units that are owned and/or operated in a joint capacity between NCEMC and DEC or DEP. These changes in operations could have direct financial implications to NCEMC and its members, as well as impacts to the long-term overall investments and operations in these generation facilities.

As a load-serving entity (LSE) in North Carolina, NCEMC, along with DEC, DEP, and ElectriCities of NC, is a member of the North Carolina Transmission Planning Collaborative ("NCTPC"). The NCTPC was formed to enhance transmission planning and provide stakeholder input into an integrated long-term transmission expansion plan that will result in a reliable (i.e., meets all applicable reliability criteria) and cost effective (i.e., lowest overall cost to consumers) transmission system in the areas of North Carolina and South Carolina served by the LSEs. The NCTPC process satisfies the Federal Energy Regulatory Commission's Order Nos. 890 and 1000 compliance requirements for "local" transmission planning.⁴ The NCTPC is currently evaluating the inclusion of 18 Red Zone Transmission Expansion Plan ("RZEP") projects in the mid-year update to the 2021 NCTPC Plan.⁵ The justification for these projects is, in part, based on the need to reduce transmission system constraints impacting Duke's ability to connect renewable generation, ensure system reliability, and achieve public policy goals, including compliance with the authorized carbon reduction goals in H951.

NCEMC also participated in stakeholder discussions related to revisions to the Large Generator Interconnection Procedures ("LGIP") included in Duke's Open Access

⁴ See NCTPC website at: <http://www.nctpc.org/nctpc/>.

⁵ Duke Carbon Plan, Appendix P: Transmission System Planning and Grid Transformation, at pp. 12-14.

Transmission Tariff (“OATT”)⁶ for replacement generation that is currently pending before FERC. The determination of the interconnection process applicable to those generation resources being retired or replaced, will have significant implications for both the resource type and location of generation resources and associated transmission resources included in the Duke Carbon Plan.

H951 is just the latest example of the extensive transformation taking place across the landscape of electric utility service throughout the country, and in many cases the lines that once separated retail and wholesale service providers, as well as T&D operators, have become increasingly blurred. At the same time, opportunities to collaborate and reduce costs for customers have increased.⁷ The Commission highlighted the importance of this growing relationship between resource and distribution planning in its April 6, 2020, *Order Accepting Filing of 2019 IRP Update Reports and Accepting 2019 REPS Compliance Plans*, in which it stated that:

[T]he Commission recognizes that there could be significant benefits to involving North Carolina’s electric membership cooperatives and municipally owned and operated electric utilities in this effort. One stated goal of the [Integrated Systems and Operations Planning, or ISOP] process is to improve coordination of load forecasting, project and systems planning, and operational effectiveness between the transmission system operator and the distribution system operator. In North Carolina the transmission system operator is, in the main, either DEC and DEP, but in many parts of the State the distribution system operator will be an EMC or a municipally owned utility. The Commission views the ISOP program and stakeholder involvement in that program as an important opportunity to strengthen effective communication and interaction both in planning and in

⁶ Joint Open Access Transmission Tariff of DEC, Duke Energy Florida, LLC and DEP (available at http://www.ferc.duke-energy.com/Tariffs/Joint_OATT.pdf).

⁷ See, e.g., discussion on webpage of Task Force on Comprehensive Electricity Planning established by National Association of Regulatory Utility Commissioners (“NARUC”) and the National Association of State Energy Officials (“NASEO”), online at: <https://www.naruc.org/taskforce/>.

operations between the Companies and the non-regulated distribution system operators that serve a significant portion of the State.⁸

In its April 18, 2021 *Order Scheduling Technical Conference and Requiring Filing of Report* in Docket No. E-100, Sub 165, the Commission further emphasized the importance of this collaboration between the T&D operators as necessary “in order to promote greater alignment of resources and distribution system planning across the entire grid network in North Carolina.”⁹ The Duke Carbon Plan will result in significant T&D infrastructure investments by Duke, and such investments will also likely have direct operational and financial impacts on the distribution facilities operated by NCEMC and its members.

III. H951’s Carbon Reduction Plan Framework

H951 requires carbon dioxide (CO₂) emissions reductions from applicable electric generating facilities meet two primary milestones: (1) a 70% CO₂ reduction, from 2005 levels, by 2030; and (2) to achieve carbon neutrality by 2050. H951 includes several key “guardrails” to ensure that authorized reduction goals do not negatively impact customers. Those include the following:

1. **Least Cost:** The General Assembly in Section 1 of H951 included four references to the Commission’s continued reliance on least cost principles in developing the NCUC Carbon Plan. Following this requirement, the Commission must select the overall least cost plan that considers timing as well as generation and transmission costs.

⁸ April 6, 2020, *Order Accepting Filing of 2019 Update Reports and Accepting 2019 REPS Compliance Plans*, in Docket No. E-100, Sub 157, at p. 13.

⁹ April 18, 2021, *Order Scheduling Technical Conference and Requiring Filing of Report* in Docket No. E-100, Sub 165, at p. 2.

2. **Maintaining and enhancing system reliability:** The General Assembly further stressed the requirement that any generation and resource changes resulting from the NCUC Carbon Plan must at a minimum maintain the adequacy and reliability of the existing grid. As such, the Commission must ensure that not only is the generation mix selected in the NCUC Carbon Plan capable of providing reliable operations but also that the carbon plan implementation timeline allows for the reliable integration of new resources.
3. **Diversification of grid and generations resources:** Recognizing the many values that a diversified portfolio of generation and grid resources provides, including increased reliability, reduced risk of fuel price volatility, and promoting economic development, among others, the General Assembly directed the Commission to “at a minimum, consider power generation, transmission and distribution, grid modernization, storage, energy efficiency measures, demand-side management, and the latest technological breakthroughs” to achieve the least cost path to reach the authorized carbon reduction goals.
4. **Flexibility:** Finally, H951 provides the Commission with discretion to determine the optimal timing and generation and resource-mix to achieve the least cost path to compliance with the authorized carbon reduction goals. This includes discretion to adjust the compliance timelines where needed for new nuclear and wind generation facilities, for ensuring continued reliability of the grid, and to achieve a more material and significant impact on carbon reduction. The Commission should utilize that discretion to ensure that the

NCUC Carbon Plan has a diverse mix of resources that can be integrated into the grid in a reliable manner.

Inclusion of these guardrails were key to NCEMC's support for passage of H951, and in its Draft Carbon Plan Duke gives due consideration to these concerns. Ultimately, however, it is the Commission that must develop and approve the final carbon plan, and NCEMC reiterates the importance that each element of the carbon plan be evaluated in the context of these guardrails.

IV. Specific Areas of Focus and Concern

1. Realizing the Benefits of a Combined Balancing Area for Operational Purposes

H951 is designed to move North Carolina towards a lower emissions energy future, but this process is made more complex and, in some cases, less efficient, by the fact that DEC and DEP each currently operate as separate NERC Balancing Authorities ("BA"), Transmission Operators, Transmission Service Providers, and plan as separate NERC registered Transmission Planners. As part of its Draft Carbon Plan implementation, Duke proposes to consolidate these functions and consolidate DEC and DEP's Carolinas' system operations through the appropriate regulatory filings over the next three years.¹⁰ Duke identifies multiple benefits associated with the consolidated system operations, including "enhancing portfolio flexibility, improving reliability, capturing production cost savings, and simplifying NERC compliance and transmission service provisions." (Draft Carbon Plan at Chapter 4, p. 27). These combined BA benefits and efficiencies would accrue across the entire Duke service areas in both North and South Carolina. NCEMC supports

¹⁰ See Draft Carbon Plan, Chapter 4: Execution Plan at pp. 27-29 and Appendix R: Consolidated System Operations.

Duke's efforts to create a single BA and encourages the Commission to approve this consolidation as quickly as possible in order to achieve the efficiencies and reliability improvements identified by Duke.

In the meantime, achieving the goals of the Draft Carbon Plan will also require investments by each of the Duke operating companies to improve coordination and transfer capacity between the systems. Some of this work will begin as part of its near-term action plan. The costs associated with these investments will be allocated to DEC's and DEP's retail and wholesale customers under traditional cost allocation principles. However, the benefits of such investments may not coincide with where the costs are incurred.

As such, the Commission must ensure that costs incurred to achieve the goals of the NCUC Carbon Plan are allocated to customers who the investments benefit, not just customers within the existing balancing area. The Commission should include adjustments to cost allocation principles (whether through changes in general rate cases, through changes to Duke's OATT at FERC, or in other contractual or regulatory agreements) to assign the costs to each respective utility in a proportional manner to the benefits being received by the utility's customers resulting from the consolidated operations.

2. Systemwide Investments, Cost Allocation, and Rate Disparities

Similarly, the carbon reduction goals established in H951 are intended to benefit the entire state of North Carolina. Duke proposes to meet this statewide carbon reduction goal on systemwide basis, not for each operating company. However, this goal on a systemwide basis results in disproportionate levels of spending across the DEP and DEC systems. On the transmission planning side, Duke's estimated transmission network upgrade cost in DEP, for each of the Draft Carbon Plan portfolio through 2030, was more

than double the amount than the costs anticipated for DEC.¹¹ In particular, a disproportionate amount of new solar resources is anticipated to be added in the DEP system to assist with Duke's carbon plan compliance in the 2022-2035 timeframe. This generation will be sited in the Dep area primarily due to land availability, lower development costs, increased solar insolation, and other factors.¹² This unequal dispersion of assets and costs may provide lower carbon plan compliance costs for Duke on a system-wide basis and help achieve an overall least-cost outcome consistent with H951. However, it may also result in disproportionate transmission and grid investments in the DEP system to manage these additional resources. Duke indicates its Draft Carbon Plan compliance under all its modeled scenarios on a consolidated system basis is anticipated to result in larger impacts to DEP's customer rates than DEC's, for both retail and wholesale customers of DEP and DEC.¹³ Acknowledging the rate differentials that are already in place between DEC and DEP customers,¹⁴ the addition of higher costs for DEP customers resulting from the NCUC Carbon Plan compliance can further exacerbate these rate differential issues and inequitably impact customers across the combined Duke footprint. As such, carbon plan compliance must be fully evaluated in a least cost context for each

¹¹ Draft Duke Carbon Plan, Appendix P: Transmission Planning and Grid Transformation, at 19-21. These estimates are based in some cases on existing generator system impact studies and proxy values where those values do not exist, but as Duke notes, the identification of required transmission network upgrades is highly dependent upon assumptions about location, capacity of the facility, resource/load characteristics, and other similarly situated projects, both individually and in aggregate.

¹² See draft Duke Carbon Plan, Appendix I: Solar at p. 7. See also Solar Viability Map presented on June 27, 2022, NCTPC Transmission Advisory Group meeting. Online at: http://www.nctpc.org/nctpc/document/TAG/2022-06-27/M_Mat/TAG_Meeting_Presentation_for_06-27_2022_FINAL.pdf.

¹³ Draft Carbon Plan, Chapter 3: Portfolios at 21-22.

¹⁴ See Fn. 5 on page 7 in Public Staff's initial comments in Docket Nos. E-2, Sub 1297 ad E-7, Sub 1268 (Duke 2022 Solar Procurement Proceeding), online at: <https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=030de259-6eb1-4f2b-963a-3383bb970cc3>

utility's service territory, and in the context of applicable cost allocation requirements, to reduce the potential for further rate disparity to result from carbon plan compliance costs.

Further, to the extent the NCUC Carbon Plan demonstrates that a disproportionate investment between utility service areas will provide the least cost outcome on a combined system basis, the Commission should consider not only a new cost allocation methodology for these disproportionate costs but also require Duke to revise its cost allocation procedures to allow Duke's customers to receive an equitable share of the cost savings that result from the transmission and grid investments that provide greater carbon plan compliance and savings overall. This approach could be similar to other mechanisms in which Duke has allocated savings between the two utilities, including the sharing of savings from joint dispatch of each utility's power supply resources under the Joint Dispatch Agreement,¹⁵ or the proportional sharing of savings associated with Joint Local Reliability Projects under the "avoided cost" cost allocation methodology utilized by the NCTPC for local reliability projects.¹⁶

Looking specifically on T&D investments, Duke stated that pursuing proactive transmission investments is a common critical path component to all portfolios in order to integrate renewables and allow for the accelerated retirement of coal necessary to achieve the public policy goals established in H951. As previously discussed, Duke is also moving forward with a proposal for 18 RZEP public policy projects across the DEP and DEC service areas, with the larger number of projects and costs being proposed in the DEP

¹⁵ Joint Dispatch Agreement between DEC and DEP as filed with the Commission in Docket Nos. E-7, Sub 986, and E-2, Sub 998, on June 22, 2011, and as amended and refiled on June 12, 2012

¹⁶ See Duke OATT, Attachment N-1, Transmission Planning Process (Progress and Duke Zone), Sec. 7, Transmission Cost Allocation for Local Projects. See also NCTPC Transmission Cost Allocation guidance document dated November 13, 2014, Online at: http://www.nctpc.org/nctpc/document/REF/2014-11-13/NCTPC_Transmission_Cost_Allocation_-_11-13-14.pdf.

service area (14 projects totaling \$321 million, as compared to 4 projects totaling \$241 million).

FERC Order 1000 and 1000-A required public utility transmission providers to amend their OATTs to provide for the consideration of transmission needs driven by public policy requirements similar to how they would consider transmission needs driven by reliability or economic concerns.¹⁷ However, Order 1000 did not require transmission providers to use the same cost allocation method for public policy transmission upgrades, and instead permitted different regional and interregional cost allocation methods for public policy driven transmission projects than those driven by reliability or economic concerns.

As an example, the Public Service Commission of New York (“PSCNY”) recently addressed a similar cost allocation issue related to the transmission costs associated with public policy planning process specified under the New York Independent System Operator’s OATT.¹⁸ In that proceeding, the PSCNY initially applied a “beneficiaries pay principle,” in which it took into account the economic benefits associated with congestion relief and assigned a 75% portion of the project costs to the beneficiaries. The remaining portion of the costs were proposed to be allocated on a load-ratio share statewide “given that increased access to renewables will reduce emissions and thus provide benefits

¹⁷ Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, Order No. 1000, 76 FR 49842 (Aug. 11, 2011), FERC Stats. & Regs. ¶ 31,323 (2011), order on reh’g, Order No. 1000-A, 139 FERC ¶ 61,132 (2012)

¹⁸ Section 31.5.5.4.1 of the NYISO OATT provides that: “If the Public Policy Requirement that results in the identification by the NYPSC of a Public Policy Transmission Need prescribes the use of a particular cost allocation and recovery methodology, then the ISO shall file that methodology with the FERC within 60 days of the issuance by the NYPSC of its identification of a Public Policy Transmission Need.”

statewide, consistent with [NY legislative] objectives.”¹⁹ On further review, however, the PSCNY found that the cost allocation formula should instead be based entirely on a statewide volumetric load-ratio, share, consistent with the public policy objectives that the transmission project benefited the entire state.²⁰ Duke’s RZEP public policy transmission projects are similarly designed to provide systemwide benefits for both DEC and DEP from a carbon plan compliance perspective, so an approach similar to that taken in New York may be appropriate for further consideration by Duke, including modifications to the cost allocation provisions related to public policy projects in its OATT, to better align the allocation of costs with those receiving the benefits of the investments.

3. Evaluation of Portfolio Alternatives

Duke states that it utilized least-cost planning to develop an “all-of-the-above” energy transition strategy to help meet the targets established in H951.²¹ Duke identified two pathways for achieving the interim 70% reduction target, with both pathways resulting in carbon neutrality by 2050. The first pathway achieves the 70% target by 2030 and the second pathway achieves the 70% target by 2034, through reliance on offshore wind and/or nuclear small modular reactor (“SMR”) generation technologies, as contemplated by H951. Based on differences in the expected availability (timing and quantity) of the selected resource types under each pathway from both a timing and quantity perspective, Duke developed four portfolios, all of which incorporate solar and battery storage, onshore wind,

¹⁹ In the Matter of New York Independent System Operator, Inc.’s Proposed Public Policy Transmission Needs for Consideration for 2020. Case 2-E-0497. March 19, 2021, *Order Addressing Public Policy Requirements for Transmission Planning Purposes*,” at p. 20.

²⁰ In the Matter of New York Independent System Operator, Inc.’s Proposed Public Policy Transmission Needs for Consideration for 2020. Case 2-E-0497. May 16, 2022, *Order on Petition for Rehearing*, at p. 28

²¹ Draft Carbon Plan, Chapter 3: Portfolios, at 1.

offshore wind, new nuclear resources, new pumped storage hydro, and hydrogen-capable natural gas-fired combustion turbine (“CT”) and combined cycle (“CC”) resources in differing capacities, while also calling for variable coal retirements over time to ensure system reliability.

NCEMC did not conduct its own separate modeling or system optimization to seek to achieve the authorized carbon reduction goals, and notes that many of the assumptions incorporated into the development of the initial Draft Carbon Plan will continue to change and be updated over time as part of the biennial review of the NCUC Carbon Plan called for in H951. However, based on the assumptions used by Duke in its Draft Carbon Plan, Portfolio 4 appears to satisfy the least cost and reliability requirements of H951. This portfolio has lower costs, provides the most diversity, and also has the greatest flexibility. The longer time horizon is consistent with the least cost planning and flexibility guardrails provided in H951, particularly for those portfolios contemplating emerging resources such as offshore wind and SMR. Furthermore, the generation diversity and longer implementation time will ensure that resources can be reliably integrated into the grid.

Our general recognition of Portfolio 4 should not, however, be viewed as an indication of support for any approval of specific generation resources or T&D investments included in the portfolios. Those would still need to be evaluated through normal State regulatory review process, including the certificate of public convenience and necessity process by the Commission pursuant to N.C.G.S. §§ 62-101 and 62-110.1, the certificate of environmental compatibility and public convenience and necessity under the Utility Facility Siting and Environmental Protection Act, S.C. Code Ann. §§ 58-33-10, et seq.,

and the applicable interconnection and transmission planning processes in each jurisdiction or region.

NCEMC agrees with Duke that generation resource diversity provides flexibility and mitigates the risk of implementation failure that could otherwise result from over-reliance on any one technology to meet reliability and resilience requirements as the energy transition evolves. NCEMC agrees that Duke has appropriately considered storage, wind, SMR, pumped hydro, uprates, and fuel flexibility (hydrogen enabled) at its natural gas generating facilities, and included those resources where appropriate in its portfolios.

NCEMC notes that the Draft Carbon Plan assumes that DEC could procure up to 300 MW/year of onshore wind energy, as a low-cost, carbon-free resource starting in 2028 and up to a total volume of 600 MW through the planning period, and that the procured wind was assumed to be sourced from PJM, but also could be sourced from Midcontinent Independent System Operator, Electric Reliability Council of Texas, or other jurisdictions with strong wind profiles.²² The model includes a wheeling charge, which would be required to provide firm supply into the Carolinas.

NCEMC recommends that the Commission require Duke to fully evaluate additional off-system low-carbon or carbon-free resources, including any applicable transmission and wheeling charges to ensure the reliability and availability of those resources, where they provide a cost-effective option for helping to meet the authorized reduction goals in H951.²³

²² Draft Carbon Plan, Appendix J: Wind, at p. 13.

²³ NCEMC is not advocating for importing off-system or out-of-state resources for the purpose of avoiding the emissions associated with the generation, if any, being assigned to Duke's North Carolina generation portfolio, and agrees with Duke's concerns raised by Duke in Appendix A on p. 6 entitled

4. Role of Distributed Energy Resources (“DER”)

H951 created new and expanded opportunities for DER across the Carolinas to help achieve the authorized carbon reduction goals, including energy efficiency (“EE”) programs, clean energy customer programs, net metering programs, system voltage optimization programs, and the modernization of telecommunications infrastructure, which are required to support large-scale DER deployment.²⁴ These resources can be consistent with least-cost planning, provide additional flexibility, and enhance the reliability of the grid when utilized in a coordinated and efficient manner.

NCEMC and its member distribution cooperatives have developed and implemented the NCEMC Distribution Operator (“DO”), a single entity that monitors and coordinates distributed energy and demand response resources, bringing operational benefits to the distribution system, and positive system reliability impacts on the transmission systems upstream, including DEC, DEP, and Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (“Dominion”).²⁵ The DO currently monitors and coordinates over a half a gigawatt of distributed energy and demand resources, including solar, storage, microgrids, consumer devices, and behind-the-meter generation. This amount will continue to grow as additional resources are integrated into the DO system and processes become more automated. NCEMC continues to discuss with

“Consideration of Geographic Boundaries” regarding the uncertainty in how to account for the emissions associated with energy imported from outside North Carolina. NCEMC instead wishes to ensure that off-system resources, to the extent their procurement is consistent with least cost and can help maintain or enhance reliability, are fully considered in the carbon plan development process.

²⁴ Duke’s Draft Carbon Plan describes these measures in greater detail in Chapter 4: Execution at pp. 28-36, and in Appendix G: Grid Edge and Customer Programs.

²⁵ French Broad EMC is not one of the 25 distribution cooperative members of NCEMC, but is a participating member in the DO platform.

DEC and DEP how the DO platform will interact with their ISOP process, which the Commission in its last rate case proceedings for DEC and DEP directed the utilities to use to inform and justify decisions on additional grid modernization investments in future years.²⁶ Because of the amount of DER that will be built in North Carolina, mainly on the distribution system, NCEMC recommends that the Commission direct Duke to continue to coordinate with NCEMC in the ISOP process and as part of the NCUC Carbon Plan. This coordination between the transmission operator and the distribution operator will help to maintain or enhance grid reliability in a high DER future.

5. Carbon Accounting and Metrics.

Duke in its Appendix A describes the foundational principles that H951 established with regard to CO₂ emissions reductions accounting that will be utilized to establish the appropriate baseline and determine compliance with the authorized carbon reduction goals. These four primary principles include: (1) the scope of the carbon reduction goal is CO₂ emissions only, and does not include a broader definition of GHG emissions, which would include nitrous oxide, methane, and others; (2) the CO₂ emissions are from electric generation facilities owned, operated by, or operated on behalf of Duke; (3) The CO₂ emissions are from facilities located within the State of North Carolina; and (4) the focus of H951 is on direct emissions from electric generation, and not upstream emissions associated with fuel supply. NCEMC agrees with these principles and believes that the initial framework Duke has proposed for accounting and tracking compliance with the

²⁶ See Finding of Fact No. 38 in the Commission's April 16, 2021, *Order Accepting Stipulations, Granting Partial Rate Increase and Requiring Customer Notice*, Docket No. E-2, Subs 1219 et al, and Finding of Fact No. 41 in the Commission's March 31, 2021, *Order Accepting Stipulations, Granting Partial Rate Increase and Requiring Customer Notice*, Docket No. E-7, Sub 1214 et al.

carbon reduction goals are consistent with the requirements of H951. NCEMC recognizes that Duke Energy Corporation, the parent company for DEC and DEP, has made broader corporate sustainability commitments that may differ from these principles, but for purposes of demonstrating compliance with H951, the principles described above provide the appropriate framework.²⁷ NCEMC recommends, however, that the Commission direct Duke to provide a separate tracking of its corporate and H951 carbon compliance to ensure that each goal or target is being independently accounted for as it pertains to both compliance and cost allocation purposes.

As discussed previously, NCEMC shares ownership and has operational agreements in place with Duke for Catawba Nuclear Unit 1 and the W.S. Lee CC in South Carolina, and also has operating agreements in place with DEP for the Anson and Hamlet CTs owned by NCEMC in North Carolina. Duke's proposed methodology recognizes these ownership and operational arrangements, and includes the CO₂ emissions, if any, in Duke's baseline as Scope 1 and Scope 3 emissions, as appropriate. Those emissions are then incorporated in Duke's eGrid database to determine the emissions rates applicable to Duke's retail and wholesale sales. NCEMC agrees with Duke's methodology and will continue to work with Duke to seek to refine and strengthen the carbon accounting methodologies associated with its shared resources, as well as the emissions attributes associated with its wholesale purchases from DEC and DEP.

Duke states that although H951 allows for the use of offsets to address up to five percent of emissions to achieve carbon neutrality in the year 2050, it has no plans to utilize

²⁷ See Duke Energy website, "Our Company". Duke has established a net-zero methane emissions goal from its natural gas business and its 2050 net-zero goals also includes Scope 2 and certain Scope 3 emissions. Online at: <https://www.duke-energy.com/our-company/about-us>.

offsets in the achievement of the H951 long-term target and did not recommend a specific offset strategy at this time. Duke did acknowledge, however, the increasing use of carbon offsets by companies to meet carbon reduction standards and indicated that “[a]s this Plan progresses and offset usage and calculation methodologies evolve, the Companies will revisit this topic.”²⁸ NCEMC notes that the General Assembly’s determination that a small portion of the authorized carbon reduction goals in H951 could be met using verifiable offsets, provided such use is consistent with least cost principles. As such, NCEMC recommends that the Commission direct Duke to continue to evaluate the use of offsets as a least cost compliance mechanism up to the 5% limit allowed under H951, provided that the offsets are verifiable and permanent.

V. Conclusion

The Draft Carbon Plan prepared by Duke is the subject of a significant stakeholder process and presents several different pathways that represent an acceleration in the pace of change for the energy transition taking place across the Carolinas. Duke’s efforts provide a framework and analysis for the Commission’s further consideration in its development of the NCUC Carbon Plan. As a plan, however, it will be reviewed and revised, as appropriate, every two years. Nonetheless, the near-term actions Duke has laid out in the Plan raise significant cost recovery and cost allocation issues that merit further action by the Commission and Duke, in other regulatory forums, at this time to ensure that the costs associated with implementation of the Plan are adequately assigned to the customers receiving the benefits of those investments.

²⁸ Draft Carbon Plan, Appendix A: Carbon Baseline and Accounting, at p. 9.

WHEREFORE, NCEMC respectfully requests that the Commission accept these initial comments

Respectfully submitted this the 15th day of July 2022.

**NORTH CAROLINA ELECTRIC
MEMBERSHIP CORPORATION**

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STATE OF NORTH CAROLINA

COUNTY OF WAKE

Amadou Fall says under penalty of perjury:

1. He is Senior Vice President of Power Supply & Chief Operating Office for North Carolina Electric Membership Corporation.
2. He has read the foregoing *Comments* and knows its contents.
3. The matters stated in this instrument are true of his knowledge, or, where he has relied upon his NCEMC colleagues for matters stated in this instrument, he believes them to be true.



Amadou Fall
SVP, Power Supply & COO NCEMC
North Carolina Electric Membership Corporation

Sworn to and subscribed before me
this the 15th day of July 2022.



Notary Public
Sharon A. Craft

My Commission Expires: 03/24/2025



CERTIFICATE OF SERVICE

It is hereby certified that the foregoing document has been served upon all parties of record by electronic mail, or depositing the same in the United States mail, postage prepaid.

This the 15th day of July 2022.

/s/ Timothy R. Dodge

Timothy R. Dodge