

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-100, SUB 179

In the Matter of)
Duke Energy Progress, LLC, and)
Duke Energy Carolinas, LLC, 2022)
Biennial Integrated Resource Plans)
And Carbon Plan)

**THE POWER AGENCIES' FILING REGARDING SIGNIFICANT CARBON
PLAN ISSUES TO BE CONSIDERED AT EXPERT WITNESS HEARING**

Pursuant to the Commission's Orders in this docket, intervenors ElectriCities of North Carolina, Inc. ("ElectriCities"), North Carolina Eastern Municipal Power Agency ("NCEMPA"), and North Carolina Municipal Power Agency Number 1 ("NCMPA1," together with NCEMPA "the Power Agencies") identify substantive issues relating to the carbon reduction plan proposed by Duke Energy Progress, LLC ("DEP"), and Duke Energy Carolinas, LLC ("DEC," together with DEP, "Duke") pursuant to House Bill 951 ("HB 951")¹ that should be addressed if/when the Commission conducts an expert witness hearing in this docket.

1. ElectriCities and the Power Agencies

ElectriCities and the Power Agencies' member municipalities are electric power suppliers who operate distribution systems supplying their end-user residents and retail customers with electric power in various parts of North Carolina. The vast majority of the power that NCEMPA's municipal members provide to their customers is purchased from

¹ HB 951, enacted as Session Law 2021-165, directs the Commission to develop a Carbon Plan that takes reasonable steps to reduce the emissions of carbon dioxide in this State from electric generating facilities owned or operated by Duke by 70% from 2005 levels by 2030 and to achieve carbon neutrality by 2050.

DEP at wholesale pursuant to a Full Requirements Power Purchase Agreement (“FRPPA”). NCEMPA also contracts with DEP for delivery of power to its members’ delivery points and for various other services. The power that NCMPA1’s municipal members provide to their customers is supplied through NCMPA1’s ownership interest in the Catawba Nuclear Station and other owned and contracted resources. NCMPA1 contracts with DEC to manage the Catawba Nuclear Station, to deliver power to its members’ delivery points, and for various other services. In addition, some of the Power Agencies’ municipal members own and operate electric generation resources pursuant to authorizations previously issued by the Commission. Also, some of ElectriCities’ municipal utility members contract directly with DEP or DEC for wholesale power. ElectriCities is itself a retail customer of DEP.

HB 951 requires the Commission to develop a plan to achieve specific reductions in carbon dioxide emissions in this State from electric generating facilities owned or operated by Duke. HB 951 requires 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 consistent with this section to achieve compliance with the authorized carbon reduction goals (‘Carbon Plan’).”²

ElectriCities, the Power Agencies, and their members will be impacted by whatever Carbon Plan the Commission ultimately establishes to reduce Duke’s carbon dioxide emissions. The approved Carbon Plan will impact the rates, terms, and conditions applicable to wholesale electric service and transmission service supplied by DEP for

² Session Law 2021-165, Part I, Section 1(1).

NCEMPA's municipal members, the rates, terms, and conditions of transmission service supplied by DEC for NCMPA1, and retail electric service for ElectriCities. ElectriCities and the Power Agencies seek to mitigate such impacts to the extent reasonably possible, and the issues identified below arising from Duke's Carbon Plan filed on May 16, 2022 ("Proposed Plan"), should be addressed during an expert witness hearing.

2. Because the Proposed Plan makes no provision for implementation of cost-effective load reduction and management efforts and programs by wholesale customers, it cannot comply with HB 951's least cost mandate.

HB 951 requires, among other things, that the Commission consider "storage, energy efficiency measures, [and] demand-side management" in achieving "the least cost path" to compliance with the carbon emission reduction requirements it established.³ Duke's Proposed Plan recognizes that load management and reduction achieved by various energy efficiency and demand side management measures is the least cost method of reducing demand and thereby reducing carbon emissions associated with generation.

At the forefront of achieving the energy transition and developing comprehensive decarbonization plans to achieve the targets of North Carolina Session Law 2021-165 ("HB 951") in a least-cost manner is the need to impact load at the edge of the grid through programs, enabling investments and offers that allow for the reduction and management of load, such as energy efficiency ("EE"), demand-side management ("DSM"), customer self-generation, voltage management and other distributed energy resources ("DER"). Duke Energy . . . will ensure the prioritization of these valuable resources by considering them prior to evaluating the supply-side resources required to reliably meet the system loads in Duke Energy's resource evaluation in the Carolinas Carbon Plan....

Proposed Plan, Appendix G, p. 1 (Emphasis added).

³ Session Law 2021-165, Part I, Section 1(1).

Tables 2-2 and 2-4 set out in Chapter 2 of the Proposed Plan filing⁴ show that DEP's wholesale customers represent approximately 25-30% of DEP's system load. Given the extent of its wholesale load, DEP's wholesale customers present a significant opportunity for least cost "reduction and management of load" programs enabling investments and offers that facilitate such. The question to be considered by the Commission here is whether Duke's Proposed Plan can comply with HB 951's least cost mandate without taking advantage of the potential cost savings that would result from wholesale customers' load reduction and management efforts in DEP's service area. Because DEP's wholesale customers could play a material role in enabling Duke to achieve the emissions reduction targets in HB 951, while playing a significant role in reducing the cost of Duke's Proposed Plan, the answer to this question is "No."

While Duke recognizes that "enabling investments and offers that allow for the reduction and management of load" through EE, DSM, and DER measures is a primary path to least cost carbon reductions, the Proposed Plan makes no provision for peak load reduction or implementation of load management measures by wholesale customers. Duke's wholesale contracts, such as the FRPPA between NCEMPA and DEP, limit or disincentivize such measures.

For example, recent changes to the FRPPA filed by DEP with the Federal Energy Regulatory Commission (Docket No. ER22-682) effectively imposes a firm cap on the quantity of load management for which NCEMPA can receive any financial credit. That cap imposes a significant financial impediment to load management and reduction efforts by NCEMPA members, thereby preventing Duke from avoiding investments in the most

⁴ Proposed Plan, Chapter 2, pp. 11 and 14.

expensive capacity resources under its resource plan, and, therefore, Duke's ability to achieve its carbon emission reduction goals cost effectively. Contract terms of this sort are inconsistent with broad based efforts to satisfy the emissions reductions required by HB 951, and their continued presence forecloses the opportunity for DEP's wholesale customers to bring meaningful load management and reduction to the table through DSM, EE and DER measures – the very measures that Duke recognized in its Proposed Plan as being “[a]t the forefront of achieving the energy transition and developing comprehensive decarbonization plans to achieve the targets of [HB 951] in a least-cost manner.”⁵

This issue arises because the Proposed Plan effectively ignores the potential for demand reduction associated with as much as 30% of DEP's load – which is neither reasonable nor prudent, given the statutory mandate to “to achieve the least cost path” to compliance with HB 951's carbon reduction goals. Duke's failure to consider the benefit of load management efforts that wholesale customers could provide is a fatal omission from the Proposed Plan. For that reason, when the Commission issues a Carbon Plan this year, it should direct Duke to take full advantage of as much load side management as its wholesale customers can possibly provide.

As shown in its 2020 IRP, DEP plans to maintain a system reserve margin of 17% over forecasted coincident peak load.

As described in Chapter 9, DEP continues to plan to winter planning reserve margin criteria in the IRP process. To meet the future needs of DEP's customers, it is necessary for the Company to adequately understand the load and resource balance. For each year of the planning horizon, DEP develops a load forecast of cumulative energy sales and hourly peak demand. **To determine total resources needed, the Company considers the peak demand load obligation plus a 17% minimum planning winter reserve margin. The projected capability of existing resources, including generating**

⁵ Session Law 2021-165, Part I, Section 1(1).

units, EE and DSM, renewable resources and purchased power contracts is measured against the total resource need. Any deficit in future years will be met by a mix of additional resources that reliably and cost-effectively meet the load obligation and planning reserve margin while complying with all environmental and regulatory requirements.

Duke Energy Progress 2020 Integrated Resource Plan, p. 88 of 411 (Emphasis added).⁶

In the regulatory requirements context of HB 951, facilitating load reduction and management by DEP's wholesale customers is cheaper (and therefore consistent with HB 951's least cost mandate), to the extent such efforts can eliminate the need for some portion of the expensive offshore wind and small modular reactor nuclear resources Duke describes in the Proposed Plan. In fact, Duke acknowledged the potential for future cost reductions / investment avoidance to be achieved through demand management in its 2020 IRP filing:

The Company remains committed to the goal of implementing the basic elements of ISOP in the 2022 IRPs for the Carolinas. This timeline is based on the Company's perspective that declining costs of distributed resources, including energy storage and advanced demand response options will increasingly create opportunities late in this decade and beyond to defer or potentially even avoid some traditional "wires" upgrades and, in some cases, help to offset needs for building generation resources."

Duke Energy Progress 2020 Integrated Resource Plan, Chapter 15 (ISOP), p. 125 of 411 (Emphasis added).⁷

Given the relatively low cost of demand reduction measures, as compared to Duke's projected future costs for resources such as offshore wind and small modular reactor nuclear generation, the Commission should require that any approved Carbon Plan make comparable DSM/DR programs available to NCEMPA and other wholesale requirements

⁶ <https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=425097c5-fe15-4925-b1b9-8712b8c5261b>

⁷ *Id.*

contract customers to encourage and “enable investment and offers that allow for the reduction and management of load” by wholesale customers.

If properly incentivized NCEMPA could add Battery Energy Storage Systems (“BESS”) and other DSM/DR programs designed to manage the NCEMPA/DEP system load, which would allow DEP to avoid having to add the highest cost capacity resources (e.g., offshore wind and/or small modular reactor nuclear generation). Lower cost investments in such programs in the near term will enable Duke to offset higher future costs in more expensive non-emitting generation resources in the long term. Because the Proposed Plan fails to take advantage of the potential cost savings that would result from wholesale customers’ load reduction and management efforts in DEP’s service area, the Proposed Plan fails to comply with HB 951’s least cost mandate.

3. The Proposed Plan includes significant transmission upgrades the need for which is unproven and is likely to be inconsistent with HB 951’s least cost mandate.

Duke proposes to proactively construct approximately \$560 million in transmission network upgrades (the “Red Zone Expansion Plan” or “RZEP” upgrades) across the DEC and DEP service areas to “enable” future interconnection of new solar generation.⁸ The issue here is that, while construction of network upgrades will inevitably attract generator interconnections to locations where such upgrades have been made, there can be no reasonable assurance that the attracted generation would be the least cost options, or even that the attracted generation would be of the type that will assist Duke in meeting its carbon reduction requirements. If the RZEP is not part of the “least cost path” to compliance, it cannot be part of the approved Carbon Plan.

⁸ Proposed Plan, Appendix P, Table P-3, p. 14.

Duke sought pre-approval of the RZEP in connection with its proposed 2022 procurement of solar energy resources in Dockets E-2, Sub 1297 and E-7, Sub 1268. The Public Staff's position in those dockets regarding the RZEP proposal was that it is "premature to include these upgrades in the 2022 DISIS baseline and [Public Staff] cannot support construction of these upgrades without completing further due diligence."⁹ In the Commission's Order Approving Request for Proposals and Pro Forma Power Purchase Agreement Subject to Amendments issued June 10, 2022, in those dockets ("RFP Order"), the Commission found as follows:

The Commission finds that no party has presented competent evidence that the RZEP projects are necessary to achieve the Carbon Plan, and the Commission therefore agrees with the Public Staff that it is premature to include these projects in the 2022 DISIS baseline.

* * *

The Commission declines to agree with Duke's assertion that these projects are necessary to support a plan that has yet to be fully litigated and adopted by the Commission. Duke, and any intervenor supporting the inclusion of these projects in proactive transmission planning, is encouraged to provide substantial evidence supporting the necessity of the RZEP projects to achieve the goals of the Carbon Plan in that proceeding. The Commission determines that Duke's mere assertion in this proceeding that the RZEP projects are necessary for the Carbon Plan is insufficient to support its proposal.

On preliminary analysis of Duke's Carbon Plan, the Commission is persuaded that a procurement of solar energy facilities in 2022 is reasonably supported. **However, the procurement process must evaluate bids in a manner that takes into account all costs for the proposed facilities, including Network Upgrades.**

⁹ Public Staff June 2, 2022 Comments p. 19.

RFP Order pp. 6-7 (Emphasis added). The Commission’s findings set forth in that Order identify legitimate issues as to the extent to which the proposed RZEP upgrades are necessary to achieve the emissions reductions required by HB 951, and whether they would be consistent with the statute’s least cost mandate. As the Commission recognized in the RFP Order, any supporter of the RZEP must produce substantial evidence establishing the necessity of the RZEP projects to achieve HB 951’s emission reduction goals.¹⁰

The Power Agencies are concerned about the following aspects of the RZEP and Duke’s proposed “proactive” approach, and considers them to present significant issues relating to that aspect of the Proposed Plan. First, Duke proposes to not require any up-front payment from any solar QF for the capital costs of the RZEP upgrades necessary to interconnect their facility. Likewise, Duke proposes that there would be no allocation of the cost of the RZEP upgrades to any solar QF (although there may be additional network upgrade and interconnection costs associated with individual solar QFs allocated to those QFs). Neither of those aspects of the proposed proactive approach comports with the current North Carolina Interconnection Procedures, Forms and Agreements (“NCIP”), which requires the interconnecting generator to bear the cost of interconnection and network upgrades necessary to facilitate its interconnection.¹¹

The Commission did not accept this approach in the RFP Order, where it stated:

[T]he procurement process must evaluate bids in a manner that takes into account all costs for the proposed facilities, including Network Upgrades. Duke has noted that including the RZEP projects in the 2022 DISIS baseline means facilities contingent on the RZEP projects would not be allocated the costs of Network Upgrades, and therefore those costs would not be used to evaluate the bids of those facilities. Duke is directed not to include the RZEP projects in the 2022 DISIS baseline.

¹⁰ RFP Order p. 7.

¹¹ See e.g., NCIP Sections 1.9.3.2, 1.10.1.a, 4.4.10.4.b, and 5.2.4.

RFP Order p. 8 (Emphasis added).

There would seem to be little reason for Duke to continue down a path with the RZEP that the Commission has already effectively cautioned it against. From the Power Agencies' perspective, the approach to cost recovery Duke proposes for the RZEP network upgrades also raises the question of under what circumstances Duke will pursue, and expect to obtain, full cost recovery in wholesale transmission rates and bundled retail rates for the capital costs of the proposed RZEP upgrades?

Second, Duke cannot know at this point which solar facilities may ultimately be built to eventually utilize the proposed RZEP upgrades, or if these facilities will be located in the areas Duke modeled in connection with planning the RZEP. The significant issue here is not whether generation will come to the proposed network upgrades (it likely will, eventually), but whether this is the path to achieving least cost compliance with HB 951. The Power Agencies challenge Duke's underlying assumption that the RZEP's field of dreams "Build It and They Will Come" approach is a path to complying with HB 951's lowest cost directive. Until the lowest cost resources are identified, it is not possible to know where they will be located – and therefore, to know where any necessary network upgrades must be constructed. The RZEP is simply a speculative high risk bet that the RZEP upgrades will attract the lowest cost generation. There is no assurance that this will be the case.

This is the same concern expressed by Public Staff in its initial comments in Dockets E-2, Sub 1297 and E-7, Sub 1268 that "given the likelihood and uncertainty of transmission upgrades and their respective costs necessary to interconnect large volumes of solar, individual competitive procurements may not result in the least cost compliance

with HB 951's carbon reduction goals."¹² The RZEP proposal does not follow established processes and procedures for the vetting of proposed transmission upgrade investment, and the core determinations as to reasonableness and prudence. Existing established processes for approval and recovery of such investment function properly and work to properly allocate costs. Those existing established processes should be followed in proceedings relating to HB 951.

4. Conclusion

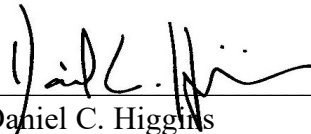
ElectriCities and the Power Agencies incorporate by reference the Comments of North Carolina Electric Membership Corporation ("NCEMC") identifying additional issues arising from the Proposed Plan. ElectriCities and the Power Agencies adopt and support the positions expressed by NCEMC in that filing as if fully set forth herein, except to the extent NCEMC endorses or recommends approval of any of the portfolios proposed by Duke. ElectriCities and the Power Agencies make no recommendation at this time as to any of the proposed portfolios.

The Proposed Plan presents a number of significant issues warranting an evidentiary hearing, including those identified by ElectriCities and the Power Agencies herein. That being the case, ElectriCities and the Power Agencies respectfully request that the Commission determine that an evidentiary hearing is necessary to address the significant issues arising from the Proposed Plan and that the scope of the issues to be considered at such hearing include the issues identified above, as well as those identified in the NCEMC filing.

¹² Initial Comments of Public Staff, ¶ 7, p.4.

Respectfully submitted, this the 15th day of July, 2022.

BURNS, DAY & PRESNELL, P.A.



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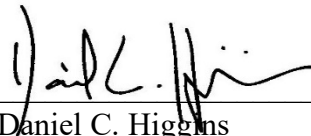
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CERTIFICATE OF SERVICE

I hereby certify that a true and exact copy of the foregoing document was duly served upon counsel of record for the Public Staff and all parties to these dockets by either depositing same in a depository of the United States Postal Service, first-class postage prepaid, addressed as shown below, or by electronic delivery.

This the 15th day of July, 2022.

BURNS, DAY & PRESNELL, P.A.



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