STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 179

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of Duke Energy Progress, LLC, and Duke Energy Carolinas, LLC, 2022 Biennial Integrated Resource Plans and Carbon Plan	)	POST-HEARING BRIEF OF CIGFUR II & III

NOW COME the Carolina Industrial Group for Fair Utility Rates II (CIGFUR II) and the Carolina Industrial Group for Fair Utility Rates III (CIGFUR III) (together with CIGFUR II, CIGFUR), by and through the undersigned counsel, and respectfully submit this Post-Hearing Brief in the above-captioned docket pursuant to the deadline set by Chair Charlotte A. Mitchell from the bench during the evidentiary hearing in this matter on Thursday, September 29, 2022. *See* Tr. Vol. 30, p. 127, ll. 16-21. CIGFUR appreciates the opportunity to have participated in such a consequential docket the outcome of which will impact all North Carolinians for decades to come.

BACKGROUND

This proceeding was held pursuant to G.S. 62-110.9, which directs the Commission to develop, by December 31, 2022, a Carbon Plan that takes reasonable steps to reduce carbon dioxide (CO_2) emissions in North Carolina from electric generating facilities owned or operated by Duke Energy Progress, LLC (DEP) and Duke Energy Carolinas, LLC (DEC) (together with DEP, Duke).

The Carbon Plan adopted by the Commission *must* be the least-cost path to achieve the authorized CO_2 emissions reductions goals set forth in House Bill 951 (S.L. 2021-165). *See* G.S. 62-110.9(1), (2), (2)b., and (4). In addition, the Carbon Plan developed and approved by the Commission must "[e]nsure any generation and resource changes maintain or improve upon the adequacy and reliability of the existing grid." G.S. 62-110.9(3).

The carbon reduction goals authorized by House Bill 951 (HB 951) are, by definition and based upon the plain meaning of the language in the statute, aspirational and permissive in nature. They include an interim goal of achieving a 70% reduction in CO_2 emissions from 2005 levels with flexibility for the time frame for such reductions, as well as a final goal of carbon neutrality by 2050.

SUMMARY OF CIGFUR'S RECOMMENDATIONS

Generally, CIGFUR recommends that the Commission utilize its discretion to adopt a flexible path forward that can in the future be "checked and adjusted" for the purpose of ensuring both that (1) the least-cost path for carbon emissions reductions is selected; and (2) the reliability of the electric grid is maintained or improved. More specifically, CIGFUR makes the following principal recommendations:

1. The Commission must approve a Carbon Plan that abides least-cost planning principles and maintains or improves the reliability of the existing grid.

2. The Commission should require Duke to provide a more complete and accurate "all-in" cost and bill impact projection, both for the initial Carbon Plan approved by the Commission and as part of each subsequent biennial Carbon Plan review proceeding.

3. The Commission should ensure that Duke's North Carolina ratepayers are protected from the regulatory risk and related cost exposure should South Carolina disallow recovery of its jurisdictional allocable share of Carbon Plan implementation costs. At a minimum, the Commission should require Duke to model a scenario in which South Carolina elects not to share in the costs of Carbon Plan implementation.

4. The Commission should require Duke to provide current reliability and power quality data as a baseline against which future reliability performance can be measured and evaluated in subsequent Carbon Plan review proceedings, in order to ensure compliance with the HB 951 mandate to maintain or improve grid reliability. In addition, the Commission should require Duke to track and report Momentary Average Interruption Frequency Index (MAIFI) = Total # of momentary customer interruptions per year / total number of customers. Finally, because large general service (LGS) customers are most susceptible to severe impacts resulting from power quality incidents, the Commission should require Duke to track and report, on at least a biannual basis, the number of power quality incidents that occur within the LGS class and the causes of such incidents.

5. The Commission should require Duke to pursue every avenue practicable to achieve cost savings or costs avoided that inure to the direct benefit of ratepayers, including but not limited to:

    a. Pursuit of maximum funding available under the Inflation Reduction Act (IRA) and/or the Infrastructure Investment and Jobs Act (IIJA), and ensuring such funding inures to the direct financial benefit of ratepayers, not shareholders;

    b. Securitization of at least 50% of the costs associated with the early retirement of Duke's coal-fired generating facilities;

    c. Exploring brownfield siting;[1]

    d. Evaluating the cost-effectiveness of converting Marshall and/or Roxboro to burn natural gas and/or re-evaluating existing co-firing expansions;[2]

[1] Duke witnesses testified extensively to the benefits to siting replacement generation at brownfield sites, both with respect to executability and costs savings for customers by way of reduced transmission costs, system costs, land costs, and other higher costs associated with greenfield siting. *See, e.g.*, Tr. Vol. 10, pp. 122-26; Tr. Vol. 11, pp. 35, 129; Tr. Vol. 17, p. 54.

[2] The Companies found certain such expansions to be "potentially feasible," but determined—before HB 951 was enacted—such expansions would not be economic. Duke witness Snider admitted, however, that the economics of such natural gas co-firing expansions have neither been reconsidered subsequent to the enactment of HB 951, nor evaluated in comparison to the costs for building a new combustion turbine or combined cycle natural gas plant. *See* Tr. Vol. 8, pp. 61-62.

e. Third-party power purchase agreements (PPAs);

f. Implementing not-to-exceed caps on near-term development costs;

g. Erring on the side of caution and moderation with respect to the Near-Term Action Plan; and

h. Approving a Carbon Plan that includes a solar procurement volume adjustment mechanism.

6. The Commission should deny Duke's request to begin near-term development activities for off-shore wind (OSW).

7. The Commission should clarify that selection of a resource in the Carbon Plan does not create a presumption of need, necessity, public convenience, or cost-effectiveness for purposes of a future Certificate of Public Convenience and Necessity (CPCN) proceeding. In other words, selection as a Carbon Plan resource is one factor to be considered in a CPCN proceeding, but it is not determinative and does not modify or lessen an applicant's burden of proof pursuant to G.S. 62-110.1 and Commission practice with respect to the interpretation and application of G.S. 62-110.1.

8. The Commission, in its discretion, should extend the time frame for achieving interim compliance with the authorized carbon emissions reductions goals in order to balance the competing objectives of affordability, reliability, and executability.

1. Least-Cost Planning Principles

HB 951 requires that the Commission shall "[c]omply with current law and practice with respect to the least cost planning for generation, pursuant to G.S. 62-2(a)(3a), in achieving the authorized carbon reduction goals and determining generation and resource mix for the future." G.S. 62-110.9(2). Unlike the discretion delegated to the Commission to determine the optimal timing and generation and resource-mix, the least-cost requirement is neither permissive, nor discretionary.

CIGFUR wishes to highlight and emphasize the testimony of Public Staff witness James McLawhorn regarding the concept of least-cost resource planning:

> I would urge the Commission to continue to keep [the whole concept of least cost] in mind as you deliberate what the ultimate plan is going to be. Public Staff's interpretation of least cost has never been least bottom line cost. It has always been least or lowest reasonable cost, which considers some of the other factors that our Panel 1 addressed, executability, reliability, and cost to ratepayers.
>
> We all know that the changeover to the electrical system is significant. We have a law. The Public Staff is committed to seeing that carried out, but no one should be deceived into thinking that there's not going to be cost impacts to customers, and that's all classes of customers. And we've always had competitive rates in North Carolina. I've been with the Public Staff for a long time, and I'd like to think that maybe I've had a small part to play with that. And I've always been proud of that, that we've had a robust economy and we've been able to attract good-paying jobs, and I want to see that continue for the entire state, both DEC and DEP, as well as Dominion and all areas. I want the State of North Carolina to be able to flourish into the future.

Tr. Vol. 23, pp. 142-43.

Of note, the phrase "least cost" appears six (6) times in Chapter 62 of the North Carolina General Statutes, four (4) of which are in G.S. 62-110.9. With this in mind, it is important for all parties, policymakers, regulators, and the general public to understand the magnitude, scope, and impact of the investments being proposed in Duke's Carbon Plan and what is at stake for the State of North Carolina. Tech Customers' witness Borgatti testified that the current range of potential investments in Duke's proposed Carbon Plan is in the $100 billion to $110 billion range. *See* Tr. Vol. 25, p. 120, ll. 14-18. As a frame of reference, witness Borgatti testified that Duke's current market cap is approximately $80 billion, meaning the proposed Carbon Plan—assuming total costs are not understated, which they most likely are—is approximately 1.2 times Duke's current market cap. "It's a significant investment. It's very, very large. I think the total assets for the Company is about $120 billion if you want to get some sense on a total assets basis. So it's comparable to the size of the entire firm today." *Id.*

The Commission has a critically important role to play in the implementation of the Carbon Plan, part of which is to ensure the least-cost path to carbon emissions reductions is achieved, as well as to protect ratepayers from catastrophic rate impacts. Indeed, Commission oversight into managing and minimizing costs, and ensuring costs are reasonably and prudently incurred, has arguably never been more important than it is right now given the sheer amount of capital spending anticipated by Duke in the coming decade and beyond. And the State of North Carolina should be proceeding down this path eyes wide open—Duke owes as much to the ratepayers who will be footing the bill for this massive and unprecedented investment in the electric grid, to the Commission who is charged with developing and overseeing the implementation of the Carbon Plan, and to the policymakers who enacted HB 951 into law.

Along these lines, the importance of the Commission's role in discerning and implementing every possible cost-savings and cost-cutting measures in a relentless pursuit of the least-cost path to achieving the CO_2 reduction goals cannot be overstated. To that end, CIGFUR strongly encourages the Commission to turn over every rock and hold the Companies accountable for maximizing ratepayer savings and costs avoided by utilizing or at least evaluating all of the strategies listed in Paragraph 5.a.-h. *supra*.

2. The Need for an "All-In" Cost and Rate Impact Estimate

CIGFUR witness Muller testified as a North Carolina industrial customer to the importance of an all-in cost and rate impact estimate, both from the perspective of his company and from the perspective of the other member companies of CIGFUR II and III, who represent some of Duke Energy's largest retail customers in North Carolina. CIGFUR witness Gorman likewise testified that the Carbon Plan "fails to provide an 'all-in' total cost and projected rate impact for all planned spending both related and unrelated to the Carbon Plan." Tr. Vol. 22, p. 43. Witness Gorman goes on to explain that by excluding the all-in costs, Duke has made it impossible for the Commission to "accurately gauge the affordability of each of the respective Carbon Plan portfolios on customers in North Carolina[.]" *Id.* at 43-44.

Public Staff witness McLawhorn agreed with CIGFUR's assessment that the present value revenue requirement (PVRR) and retail bill impacts as proposed in the Carbon Plan do not provide a clear picture of the actual costs ratepayers will bear. *See* Tr. Vol. 23, p. 106. In fact, witness McLawhorn testified that

> [t]here are many costs not included in the retail bill impacts that are common across all portfolios, such as costs associated with the Red Zone Transmission Expansion Plan, Grid Improvement Plan, storm securitization costs, fixed operations and maintenance of existing plants, and the costs of subsequent license renewals for existing nuclear plants. **Thus, the retail bill impacts are likely substantially understated, as recognized by other intervenors**.

Id. (emphasis added). Public Staff witness Thomas also clarified that to the extent Red Zone Expansion Projects (RZEP) were not triggered by the Transitional

Cluster Study, those would *not* have been included in the calculation of the Transmission Cost Adder used in the Carbon Plan. *See id.* at 58.

CIGFUR agrees with Duke witness Bowman's assessment that "all forecasts (particularly those forecasts of the scope, scale and timeframe required for the Carbon Plan) involve some amount of uncertainty." Tr. Vol. 7, p. 41, ll. 12-14. However, while some amount of uncertainty in forecasting is inherent and tolerable, the degree of uncertainty can and should still be minimized to the greatest possible extent by relying on the most complete and accurate data available at the time of forecasting. Duke witness Bowman acknowledged the need to rely on "the best information available at the time" in her support for the "check and adjust" iterative planning process recommended throughout the Carbon Plan proceeding. Tr. Vol. 7, p. 66, l. 13. And yet, the cost and rate impact estimates Duke included in the Carbon Plan do not rely on complete information and are, as a result, inaccurate and understated. Rather, Duke has selectively excluded from its Carbon Plan cost and rate impact forecasts certain known or predictable, quantifiable projected cost-drivers. Just like Duke makes business decisions every day based on the best, most complete information available to the Companies, so too do North Carolina families, businesses, and communities deserve access to the best, most complete and accurate Carbon Plan cost and rate impact forecasts currently available.

Duke witness Bowman testified that the Commission must balance four core objectives in adopting a Carbon Plan: CO_2 reductions, affordability, reliability, and executability. "In its consideration of the Carbon Plan, the Commission must weigh these factors and determine the least-cost path to compliance." Tr. Vol. 7., p. 55, ll. 3-5. Without the best available, most complete and accurate cost and rate impact projections, how can the Commission weigh and balance those four core—and often competing—objectives? Without the best available, most complete and accurate cost and rate impact projections, how can the Commission ascertain whether a resource or portfolio complies with least-cost planning principles? Without the best available, most complete and accurate cost and rate impact projections, how can the Commission assess whether one or more of the Carbon Plan portfolios proposed by Duke constitutes "reasonable steps" toward the authorized CO_2 reduction goals, as contemplated by HB 951?

Duke witness Quinto acknowledged that "[i]mportantly, the bill impact estimate, like PVRR, is a metric for comparing the cost of alternate Carbon Plan portfolios and was *not* developed for the purpose of estimating the future total cost of serving customers in the Carolinas." Tr. Vol. 7, pp. 97-98 (emphasis added). Witness Quinto also conceded certain cost-adders were excluded from the bill impact and PVRR estimates in the Carbon Plan portfolios, including: "additional costs common to all portfolios, like subsequent license renewals (SLR) for existing nuclear units or red zone transmission upgrades, or costs unrelated to Carbon Plan projects[.]" Tr. Vol. 7, p. 290, ll. 9-15; *see also* Tr. Vol. 17, p. 204, ll. 1-6.

With respect to CIGFUR witness Gorman's testimony that Duke's Carbon Plan portfolios do not include the projected costs for obtaining SLRs, this testimony was corroborated by Public Staff witness Metz. Witness Metz testified that he agrees with CIGFUR that "Duke failed to include expected SLR costs in its

Proposed Carbon Plan. In review of Duke responses to CIGFUR discovery and PS DR 13-2, I confirmed that SLR costs were omitted from the present value of revenue requirement (PVRR) and bill impact calculations presented in the Proposed Carbon Plan." Tr. Vol. 21, p. 138, ll. 6-10. Witness Metz further testified that he disagrees with Duke's decision to exclude SLR costs from its projected bill impacts. **Witness Metz also reiterated that the bill impacts shown in the Carbon Plan "do not represent the entire cost impact to ratepayers."** Tr. Vol. 21, p. 138 (emphasis added).

Importantly, CIGFUR witness Gorman opined that the costs of pursuing such SLRs are likely to be "significant and material." Tr. Vol. 22, p. 38, l. 4. Duke "will have 11 facilities to seek relicensing for, and a total winter operating capacity of around 11,113 MW. Until shown otherwise, we should assume the cost of these SLRs is material, and should therefore be analyzed and considered in the [Carbon Plan.]" *Id.* at 38, ll. 6-9.

Duke's testimony on the SLR cost estimates varied. Duke witness Snider, for example, testified that the costs of obtaining SLRs "could be in the range of 50 to 100 [million dollars]." Tr. Vol. 11, p. 16, ll. 17-18. Duke witness Nolan, on the other hand, testified that the Companies expect the SLRs to cost "between 45 and $50 million per site." Tr. Vol. 17, p. 204, l. 11. Witness Nolan clarified that when referring to the estimated aggregated cost of obtaining all SLRs for Duke's nuclear fleet, the range could be between $240 million and $300 million. *See* Tr. Vol. 18, p. 18, ll. 9-19. When asked to provide the basis for the $240 million - $300 million estimated range, witness Nolan testified that "[t]he basis for the cost estimate is really what we saw during the initial license renewal phase. Our process is similar, and so therefore we think those estimates are pretty reasonable." Tr. Vol. 17, p. 204, ll. 13-16. This even though Dominion Energy Virginia (Dominion) just pursued SLRs for its North Anna Units 1 and 2 and Surry Units 1 and 2, and recently reported to the Virginia Corporation Commission (VCC) that the current cost projection for those SLRs is projected to be $3.9 billion. *See id.* at 206-07; Ex. Vol. 18, pp. 16-38 (CIGFUR II & III Long Lead Time Panel Direct Cross Examination Exhibit 1). When asked whether Duke has determined if capital upgrades will be needed to obtain SLRs for its nuclear fleet like the 33 capital upgrade component projects that Dominion told the VCC "must be undertaken" as part of its SLR process, witness Nolan conceded that Duke has not specifically evaluated such potential additive costs. Tr. Vol. 17, pp. 209-10.

Importantly, regardless of what the actual costs are and how those actual costs compare to these inconsistent estimates provided by Duke's witnesses, witness Nolan testified that the SLRs will be needed no matter which portfolio is ultimately selected for the Carbon Plan. *See id.* at 18, ll. 21-24. He went so far as to concede that a 70% CO_2 emissions reduction—regardless of whether that occurs by 2030 or 2032 or 2034—would be technically and economically infeasible without the Companies obtaining SLRs for their existing nuclear fleet. *See id.* at 19, ll. 1-7. If these investments are going to be needed *at any cost*, all the more reason why the Commission and ratepayers should have more visibility and transparency into what those costs are projected to be, sooner rather than later. While CIGFUR supports Duke's pursuit of SLRs for its nuclear fleet, CIGFUR also believes the

Commission should require more transparent, complete, and accurate projected cost information.

3. Affordability Considerations for Non-Residential Customers

Although Duke included conclusory statements declaring that implementing the Carbon Plan will benefit the economy and increase economic development in North Carolina, Duke witness Bateman conceded that Duke did not perform any analysis regarding the economic impact that increased costs and rates associated with Carbon Plan implementation will have on industrial customers and industrial load in North Carolina. Moreover, witness Bateman testified that the economic impact of rate increases on industrial customers has not been studied in almost 10 years. *See* Tr. Vol. 15, pp. 43-44; *see also* Ex. Vol. 16, p. 17 (CIGFUR II & III Carolinas Utilities Operations Panel Direct Cross-Examination Ex. 1).

In the most recent such study, again—conducted by Duke 10 years ago, the author found that "[i]ntuitively, if electricity is a major cost to a large electric load customer, the price of electricity can play a role in a firm's decision about a facility's location, expansion, or closing." *Id.* Much like how the economic multiplier effect benefits the local and State economies when new business or industry comes to the State, so too can it negatively affect the local and State economies when existing business or industry leaves the State. Moreover, when large load non-residential customers do relocate or shift significant load out of state, "'the remaining customers will theoretically have to pay the fixed cost non-energy related portion of revenues no longer being recovered from the lost customer.'" Tr. Vol. 15, pp. 46-47 (reading from CIGFUR II & III Carolinas Utilities Operations

Panel Direct Cross-Examination Ex. 1). Witness Bateman also conceded that "cost impacts industrial customers and that can overflow into communities." Tr. Vol. 15, p. 48, ll. 22-24.

CIGFUR witness Muller testified to industrial customers' sensitivity to energy prices. "Manufacturers look at costs. I mean, it's just simple economics. And whenever we've sited a plant around the country, costs – energy costs are one of the top priorities. In fact, we're looking at siting a plant in Midwest right now, and we've done cost studies on of the power." Tr. Vol. 25, p. 379. Witness Muller further testified that his company actively considers whether to shift load/production to other plant locations in response to energy prices increasing in one location relative to another. *See id.* at 384. "[A]s we look at future production, where to site plants, where to hire people, costs, energy, reliability and cost is a key driver." *Id.* at 389, ll. 19-22. Witness Muller explained in response to questions from Commissioner McKissick that raw materials are his company's biggest cost, followed by electricity, transportation, and labor. *See id.* at 397.

4. The State Alignment / Jurisdictional Cost Allocation Problem

The Carbon Plan is an inter-regional, multi-jurisdictional, dual-state plan spanning Duke's service territories in North Carolina and South Carolina. *See, e.g.*, Tr. Vol. 7, pp. 53, 68, 70, 196, 200-01, 205, 209 (Duke witnesses testifying to the "dual-state system" or the "Carolinas"—plural—Carbon Plan; describing the Carbon Plan as facilitating a "Carolinas"—plural—energy transition; and/or discussing the fact that the resources selected in the Carbon Plan would be system resources for the benefit and use of Duke's customers in both North Carolina and

South Carolina). For this reason, the question of "what is South Carolina going to do?" is a critically important one that remains somewhat unanswered as we sit here today. Unfortunately, every branch of South Carolina's State government has given an indication that this question will be answered by rejecting the Carbon Plan and disallowing cost recovery for costs associated with Carbon Plan implementation.[3] Despite such substantial and compelling evidence, this Commission is being asked to approve a dual-state resource plan and energy transition plan without any indication whatsoever that our neighbors to the south are willing to participate and share in the costs of implementing the Carbon Plan.

Duke witness Bateman succinctly summarized the North Carolina / South Carolina state alignment problem as follows:

> [W]e have assumed consistency or alignment between North and South Carolina in terms of this Carbon Plan. We are still **hopeful** that that will happen. …
>
> We do plan to file an IRP next year that is – in South Carolina that is informed by the Commission's ultimate decision in this docket. So that is – that is our plan and our **hope**. However, I understand there is a possibility that that won't happen, that South Carolina will opt for different policy than North Carolina.
>
> And so that is something that we are aware of, that we have been thinking about. But we believe – so while we're **hopeful** for that, we are also starting to look at a framework that could allow for the dual-state system to continue, but that would also allow for differences in state policy.

Tr. Vol. 15, pp. 61-62 (emphasis added).

And despite numerous Duke witnesses testifying in different contexts during this proceeding that "hope is not a plan," witness Snider likewise testified about the

[3] *See, e.g.*, Ex. Vol. 16 (CIGFUR II & III Carolinas Utilities Operations Panel Direct Cross Examination Ex. 8); Ex. Vol. 28 (CIGFUR II & III Bateman Rebuttal Cross-Examination Ex. 1).

South Carolina problem that "it's our, you know, **hope** that we do gain alignment. That's our primary **hope** right now, is that we're gonna have an opportunity next year to present a compelling case in South Carolina and try and gain alignment." Tr. Vol. 8, pp. 58-59 (emphasis added).

Witness Snider confirmed during cross-examination that the Carbon Plan was modeled to be a dual-state plan that assumes total costs will be system costs recoverable from Duke's North Carolina and South Carolina customers. *See* Tr. Vol. 8, p. 57, ll. 3-10. Witness Bateman likewise testified that the bill impact estimates provided to the Legislature by Duke during the HB 951 legislative stakeholder process assumed that costs of implementing the Carbon Plan would be shared across Duke's North Carolina and South Carolina customers. *See* Tr. Vol. 15, pp. 52-56; *see also* Ex. Vol. 16 (CIGFUR II & III Carolinas Utilities Operations Panel Direct Cross Examination Exs. 3, 4).

Witness Snider described Duke's contingency plan if South Carolina rejects the Carbon Plan as, essentially, assigning 100% of certain resource costs and benefits to North Carolina ratepayers. *See* Tr. Vol. 8, p. 59. In terms of resource selection and cost impact under such a contingency scenario, witness Snider offered, in relevant part, that "**we believe that there would not be a big material impact on the resource selection in this. But it's yet to be determined.**" *Id.* (emphasis added). Interestingly, witness Bateman testified that the resources in the Near-Term Action Plan "will be required whether or not South Carolina participates in [the Carbon Plan]. And I'll say there's one exception to that, I believe it's the CTs." Tr. Vol. 15, p. 68, ll. 5-8.

In other contexts, the Companies acknowledged the importance of "significant sensitivity analysis on many input variables to test the robustness of the [Carbon] Plan under various changes or sensitivities to inputs." Tr. Vol. 7, p. 208, ll. 6-8. In response to cross-examination by counsel for the Public Staff, Duke's Modeling Panel conceded that changes in jurisdictional siting assumptions could have a significant impact on both the timing of new resources to be placed in service as well as costs, among other outputs. *See* Tr. Vol. 11, pp. 50-52. Duke's Carolinas Utility Operations Panel also testified that siting of new Carbon Plan resources is going to be an important consideration as to cost allocation and other implications. *See* Tr. Vol. 15, p. 99, ll. 5-9. Duke witness Quinto also elaborated in depth on some of the downstream impacts that tweaking certain assumptions or model inputs can have. *See* Tr. Vol. 11, p. 53, l. 22 – p. 54, l. 10.

Despite the Companies' Modeling Panel testifying repeatedly about the importance of testing "the robustness" of certain assumptions underlying the Carbon Plan, the robustness of an assumption as fundamental, consequential, and material as this being a *dual-state* Carbon Plan was not subjected to a sensitivity analysis. Witness Snider admitted that Duke has performed no modeling of an alternative scenario under which the Public Service Commission of South Carolina (PSCSC) denies cost recovery for costs to implement Duke's proposed Near-Term Action Plan.

> Q. Did Duke model an alternative portfolio for a scenario in which South Carolina denies cost recovery for near-term actions identified in Duke's execution plan in this docket?
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> A. We did not model a scenario, no.

Tr. Vol. 8, p. 58, ll. 12-16; *see also* Ex. Vol. 16 (CIGFUR II & III Carolinas Utilities Operations Panel Direct Cross Examination Ex. 5).

The Carbon Plan is devoid of an actual, fully formulated plan for addressing this very likely contingency. For example, Commissioner Clodfelter asked Duke witness Roberts what would happen if South Carolina denies regulatory approval of the RZEP Projects to be located in South Carolina and witness Roberts' response was that "we would continue to pursue that approval to try to persuade the South Carolina Public Service Commission of the need for that upgrade in order to locate more solar[.]" Tr. Vol. 18, p. 132, ll. 21-24. Witness Roberts conceded, however, that the RZEP projects were not included in the modified IRP that Duke submitted to the PSCSC in 2021. *See id.* at 133, ll. 3-10. Duke's proposed solution fails to resolve the legal, regulatory, and practical quagmires this situation poses and fails to resolve what, exactly, such an alternative scenario would look like and, most importantly, what the impact would be to North Carolina ratepayers.

In the interim, North Carolina ratepayers will be shouldering all of that added uncertainty, all of that added risk, all of that added cost exposure. What happens if a new solar project sited in South Carolina is denied for cost recovery by the PSCSC? Would a South Carolina-sited solar facility still be considered a least-cost resource under a scenario in which Carbon Plan implementation costs are contained solely to Duke's North Carolina customers? Would as much new nuclear, which Duke witness Nolan testified is planned to be sited in both North and South Carolina, still be needed if it wasn't being used to serve South Carolina load? Beyond the issue of need, would it still be least-cost if it was being sited in South Carolina to serve exclusively North Carolina load? Would the economics of an off-shore wind facility be even more questionable if those costs were contained solely to Duke's North Carolina customers? Short of locating all Carbon Plan assets in North Carolina and physically cutting the wires that connect Duke's grid across state lines, how would Duke ensure that South Carolina ratepayers do not receive any of the "benefits" of Carbon Plan investments? How would Duke ensure that South Carolina does not receive any economic multiplier benefits of Carbon Plan investments and assets sited in South Carolina as part of the Near-Term Action Plan? The economic multiplier effect by itself would provide South Carolina some of the benefits (even though they would ostensibly be paying none of the costs). These are just some of the questions regarding which North Carolina ratepayers are being asked to bear the risk of incredible regulatory uncertainty.

Notably, and quite rightly, every retail ratepayer/customer advocate involved in this proceeding expressed concern about a potential disallowance of Carbon Plan costs by the Public Service Commission of South Carolina (PSCSC). *See* Tr. Vol. 21, pp. 87-88 (direct testimony of Public Staff witness Thomas); Initial Comments of CIGFUR at 13; CUCA at 3; CEBA at 7; Tech Customers at 7; Walmart at 10.

CIGFUR witness Muller, for example, testified that "as a North Carolina ratepayer, we don't think it's fair to pay for a two-state plan if one of those states is not gonna participate. That spreads greater costs across a smaller ratepayer footprint." Tr. Vol. 25, p. 288, ll. 12-16. CIGFUR witness Muller further testified that the South Carolina problem needs to be addressed on the front-end lest Duke's North Carolina ratepayers be saddled with all the risk and cost exposure.

Beliefs. Hope. Optimism. These are not words of comfort to the very real North Carolina ratepayers—North Carolina families, businesses, communities—hanging in the balance here. Duke is going to ensure it recovers its costs one way or another; it is the North Carolina ratepayers who are, if Duke has its way, going to shoulder 100% of the substantial regulatory risk that South Carolina rejects the Carbon Plan. The Companies reiterated that they are "optimistic" they will be able to continue pursuing dual-state planning, and yet this optimism rings hollow in light of every indication to the contrary from South Carolina public officials and even the PSCSC itself.

CIGFUR witness Gorman recommends pursuit of a number of mutual agreements between the NCUC and PSCSC "[t]o ensure the best and lowest risk estimate of the potential impact on customers," including mutually aligned approval of IRPs, agreement to maintain common production and transmission cost allocations, agreement on continuation of existing inter-jurisdictional cost allocation methods, and a commitment "to ensure the financial integrity and ability of the Companies to continue to make necessary infrastructure investments to maintain reliable and high-quality electric service, at competitive and affordable electric rates." Tr. Vol. 22, p. 42. CIGFUR witness Gorman further recommends that

> [t]o the extent a resource plan moves forward that is not approved by both the NCUC and the PSCSC, and/or to the extent otherwise

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

Id. at 22-23.

Tech Customers witness Borgatti also testified to the South Carolina jurisdictional problem as well. "And this tension between who pays for these public policy enabling upgrades is very real and is material. I will say that, under any scenario that you're looking at, that conversation is going to happen here in North Carolina, because all of the Carbon Plans in front of you are inter-regional Carbon Plans. The red zone transmission upgrades are split between North Carolina and South Carolina. … So this question about cost allocation, you're gonna face this. Does North Carolina have to site that infrastructure in their territories? If the utilities consolidate, do they have to have their ratepayers pay for lines that are ostensibly required for North Carolina's public policies?" Tr. Vol. 25, pp. 167-68. He later testified that "at the end of the day, [the red zone upgrades are] interregional. By definition, those upgrades span two states. South Carolina certainly has siting jurisdiction there. And so this is gonna be an interregional plan." *Id.* at 174.

Because of this untenable risk being shouldered by ratepayers amidst this regulatory uncertainty, particularly in the near-term between 2022-2024 while there remains substantial regulatory risk pertaining to the South Carolina situation, CIGFUR recommends caution. The Commission should mitigate this risk to the greatest possible extent by erring on the side of minimizing ratepayer exposure and maximizing ratepayer protection. For example, the Commission should minimize the risk of over-procuring certain resources in the near-term. Public Staff witness Thomas testified about the risks of over-procuring; namely, that "procuring more of a resource in a competitive procurement will raise the weighted cost of the – that resource that's been procured through the RFP. That's just simple math." Tr. Vol. 21, p. 316, ll. 21-24. "At a certain point, you're selecting projects that are the most expensive in that RFP and you're signing PPAs with them. And then if they're delayed coming online and you end up missing your interim target anyway, you're still paying the higher price that you procured because of the way the RFPs go from most cost-effective to least cost-effective[.]" *Id.* at 297, ll. 18-24. Moreover, "you may build transmission upgrades or even potentially interconnection facilities in advance of that facility achieving COD, and those costs would be incurred whether or not the PPA was – you know, began delivering power." *Id.* at 321, ll. 19-24.

And then, in 2024 when the Carbon Plan is once again reviewed, we should have more clarity regarding whether South Carolina will or will not take part of Duke's intended dual-state Carbon Plan. At that time, the Commission can check and adjust the volume of near-term resources upwards if, in fact, it turns out that the costs and benefits of Carbon Plan resources are going to be shared across state lines. For the protection of ratepayers, we should be judicious in approving near-term procurement and development activities.

5. The Need for Reliability Metrics to Measure Compliance with HB951

CIGFUR witness Gorman testified that "many customers that are highly dependent on power quality may experience outages and/or equipment failure even without a total power outage in the event of voltage or phase/wave intolerances." Tr. Vol. 22, p. 44. Witness Gorman goes on to testify that the Carbon Plan "outlines a need for capacity needed to maintain service on peak days but provides little to no assessments of the need to manage 'operating' power quality: voltage stability, phasing/wave stability, energy adequacy, and other factors that impact power quality. . . . [A]ll of Duke's coal-fired capacity that is planned to be retired will be in the North Carolina jurisdiction. For this reason, North Carolina is particularly at risk for the Companies' continued ability to operate facilities within load/control areas in a manner that ensures adequate stability of voltage, phase/wave tolerance, and other power quality factors." *Id.* at 44-45.

Importantly, Public Staff witness Thomas testified that the Public Staff "appreciates [CIGFUR's] perspective on power quality and notes that Duke's reliability analysis considered reserve margins and LOLE but did not consider power quality." Tr. Vol. 21, p. 60, ll. 12-15. Moreover, witness Thomas testified that "[t]o the extent that Duke has the models and capabilities to estimate power quality in various future years based upon the Commission's Carbon Plan, the Public Staff agrees with CIGFUR that this information would provide meaningful insights to stakeholders and the Commission." *Id.* at ll. 15-19.

AGO witness Burgess testified that one of his recommendations to the Commission is for the Commission to develop and monitor reliability metrics as it implements the Carbon Plan. *See* Tr. Vol. 25, p. 332. The importance of reliability and favorably priced electricity to economic development was also confirmed by the study commissioned by Duke in 2012. *See* Tr. Vol. 15, p. 46, ll. 7-12.

Witness Roberts testified that he refers to “power quality” and “reliability” interchangeably. Duke conceded that it did not analyze or otherwise consider power quality in the Carbon Plan. *See* Tr. Vol. 19, p. 225, ll. 1-6. However, witness Roberts admitted that Duke Energy currently tracks at least some data with respect to power quality incidents. *See id.* at ll. 7-13. Witness Roberts could not provide any reasons why such data could not be aggregated and then reported to the Commission in the 2024 Carbon Plan update proceeding.

Duke witness Roberts testified that intermittency of solar can create power quality issues, particularly for industrial customers. He referenced one situation where intermittency of solar, “because of the magnitude of the solar connected to that T to D sub was creating an issue where it was interfering with the customer’s processes.” Tr. Vol. 19, p. 223, ll. 20-23.

In response to questioning by Chair Mitchell, Duke witness Snider forecasted some potential resource adequacy and reliability concerns. More specifically, he testified in detail that “as you have a lot of solar on the system, you start to move away from your reserve margin being a summer-oriented constraint to now how do I serve hours when it’s dark.” Tr. Vol. 11, p. 155, ll. 10-13. “And again, you have short days in the winter, so both your evening peak and your morning peak are in nighttime hours or non-daylight hours. And that just puts more pressure on those winter reserves.” *Id.* at 156, ll. 16-20. Witness Snider even went so far as to flag this issue as "one of the things we're gonna want to look really hard at in '24 is are we [relying too much on our neighbors]?" Witness Snider reiterated that as the Carolinas and surrounding neighbors become more homogenous in terms of a gas and renewables resource mix, our "interdependence" on neighbors is "something that we're gonna have to keep an eye on as we move through these planning cycles, and one that we're – you know, as I answered earlier, likely to need to redo in '24." *Id.* at 158, ll. 20-24.

Duke has not attempted to establish a present-day reliability baseline against which future reliability performance can be measured. *See id.* at 229-30. When asked whether Duke currently tracks the Momentary Average Interruption Frequency Index (MAIFI), witness Roberts testified that he is not familiar with MAIFI. *See id.* at 10-23. Witness Holeman testified that while the Companies track SAIDI and SAIFI, he "can't confirm that or deny" whether the Companies track MAIFI because he's "not aware." *Id.* at 230, ll. 12-20. Witness Roberts conceded, however, that the Companies "would probably have to quantify and track [MAIFI]" if directed to do so by the Commission. *Id.* at 230-31. Witness Roberts also conceded that Duke could consider the number of power quality incidents that occur between one point in time and another point in time in order to determine whether any trends are occurring. *Id.* at 232, ll. 16-22.

Duke witness Quinto testified in great detail about the precision with which the Companies calculated their CO_2 emissions baseline. *See* Tr. Vol. 7, pp. 272-77. He further testified about the importance of establishing the baseline in order to track compliance with HB 951's CO_2 emissions reductions targets.

See id. at 275, ll. 6-7. For the same reasons that the Companies believed it to be important to use "publicly available, reliable, and auditable data" to establish a CO_2 emissions baseline, including "necessary parameters for calculating the baseline and tracking future emissions,"[4] the Companies should similarly be required to establish a reliability baseline and metrics against which future reliability and power quality performance may be tracked. Without these data points, it is not possible to ensure compliance with the HB 951 mandate that implementation of the Carbon Plan must ensure the reliability of the existing grid is maintained or improved. In the interest of transparency and ensuring the reliability mandate of HB 951 is satisfied, CIGFUR encourages the Commission to adopt specific reliability and power quality metrics and to require Duke to track such data and report it to the Commission on a biannual basis.

6. Natural Gas

Natural gas can and should play a key role as a bridge fuel to help achieve the carbon reduction goals of HB 951, but Duke should be required to satisfy its burden of proof to justify the Commission granting a CPCN for any new natural gas plant in a separate CPCN proceeding. Such a proceeding would be the appropriate regulatory process to enable sufficient scrutiny to ensure that the Companies have adequately explored all viable, potentially more cost-effective alternatives to warrant being granted a CPCN, including but not necessarily limited to: brownfield siting, retrofitting coal plants to burn natural gas,[5] expanding existing

[4] Tr. Vol. 7, p. 275, ll. 11-14.

[5] *See* Tr. Vol. 25, p. 341.

gas co-firing capability,[6] reciprocating engines,[7] carbon capture and sequestration, and other potential more cost-effective alternatives.

Public Staff witness Thomas testified to some of the ancillary services that new natural gas CCs and CTs will provide, including having sufficient capacity to meet demand, as well as being "able to respond quickly and to provide the spinning reserves, the black starts, it's all those ancillary services that are required to maintain system reliability such as power quality and voltage support that are not necessarily reflected in the EnCompass model outputs." Tr. Vol. 22, p. 277, ll. 16-20. In response to questions from Chair Mitchell, Witness Thomas also testified that natural gas does have an important role to play as a transitional bridge generation resource that is "non-energy limited, firm dispatchable" and available now. Tr. Vol. 23, p. 46, ll. 15-16. Witness Thomas even went so far as to say that if for some reason – policy or market constraints, for example – new natural gas resources were not an option, the alternative outcome would likely be to delay coal retirements to maintain the voltage support and ancillary services required. *See* Tr. Vol. 23, p. 48.

7. Off-Shore Wind

The substantial weight of the evidence demonstrates that at this time, off-shore wind (OSW) cannot compete as a least-cost resource. *See* Tr. Vol. 23, p. 89, l. 2; p. 190, l. 8. Moreover, the position that OSW is not a least-cost resource for interim emissions reduction purposes is further buttressed by the fact that SP5

[6] *See* Conf. Tr. Vol. 27, pp. 149, 155, 164-66.

[7] *See* Tr. Vol. 11, pp. 104-05.

and SP6 do not select OSW as an economic resource until after 2040. *See* Tr. Vol. 21, p. 221, ll. 12-16. For these reasons, CIGFUR supports the Public Staff's position that Duke's request to begin near-term development activities for OSW should be denied. Public Staff witness Thomas testified, however, that OSW can and should be re-evaluated in 2024 or any of the subsequent biennial Carbon Plan review proceedings thereafter. Public Staff witness Thomas testified that

> the 2024 Carbon Plan . . . could benefit from a more detailed analysis specifically of the three separate lease areas and how they compare and what is the best option for ratepayers. . . . [W]hat Mr. Metz is really recommending against is we don't think the Commission should approve Duke Energy Progress to spend $155 million to acquire a lease and spend another $156 million in developing some of these resources for a resource that may not be needed until 2040, particularly considering that a lot of the development work, particularly with relation to the lease itself, can be done by entities that are not Duke Energy Progress, and that risk can be put on entities that are not, you know, cannot receive recovered – rates recovered through ratepayers. I think that would be less risk for the ratepayers in general, and I think it supports the check and adjust plan, and I think it helps ratepayers – it helps this Commission give an opportunity to evaluate all three lease areas in future Carbon Plan proceedings and determine which is in the best interest of ratepayers.

Tr. Vol. 22, pp. 334-35.

8. Selection of Resources in Carbon Plan is Not a Presumption of Need or Cost-Effectiveness in Future CPCN Proceedings

CIGFUR supports Public Staff witness Thomas' interpretation regarding the significance of a generation resource type being included in the Carbon Plan approved by the Commission. "[A]ny generation resource that Duke comes in for to build should require a CPCN. And the normal process of review for necessity and need should be followed in that CPCN. And the selection of that resource in the Carbon Plan is certainly one factor in that, but we would also need to look at updated modeling[.]" Tr. Vol. 21, p. 273, ll. 5-11.

CIGFUR also believes that from a legal perspective, the Companies cannot be prohibited from seeking a CPCN for a new natural gas facility (or a CPCN for any other type of generating facility) between now and 2024. As witness Thomas testified during cross-examination by counsel for Walmart:

> Q. And would you also agree with me that regardless of the Commission's decision in this carbon plan, if the Company truly believed that it needed new natural gas, that nothing would prohibit it from proceeding to file a CPCN prior to the 2024 Carbon Plan?
>
> A. Yes. That's my understanding, that nothing would prohibit the Company from making such a filing, but we would review that, you know, vigorously, as any CPCN application.

Tr. Vol. 22, p. 285, ll. 11-19.

CIGFUR continues to strongly oppose any presumption of "need" or any of the other criteria that the applicant would bear the burden of proving in a subsequent CPCN proceeding. In response to cross-examination regarding whether natural gas should be selected as a Carbon Plan resource in the initial Carbon Plan, Duke witness Snider discussed some of the specific project details able to be analyzed in a CPCN proceeding that, unfortunately, a proceeding as broad in scope as the Carbon Plan does not lend itself to exploring.

> [W]e would adhere to normal CPCN as we move to the execution phase and we would do updated analysis that would include new gas prices, the actual cost of the project, the impact on fuel supply. All of that you get into a lot more detail than you do at the planning phase, you get into a lot of detailed project specific analytics . . . in a CPCN proceeding, and that would be one of the factors that would be discussed in that latter half of '23 that would influence – you would have that full information, along with much more detailed cost

> information and modeling. And so we're saying that subject to the CPCN, they could – they can make that decision at the CPCN phase.

Tr. Vol. 10, p. 112, l. 14 – p. 113, l. 4. Certain Duke witnesses also testified that more detailed cost-benefit analyses will be needed to ascertain, in part, whether future generation and transmission investments meet the requirement for cost-effectiveness for such investments. *See, e.g.*, Tr. Vol. 16, p. 193, ll. 1-22.

9. Time Frame for Achieving Authorized CO2 Emissions Reduction Goals

In HB 951, the Legislature delegated authority to the Commission to develop and implement the Carbon Plan. More specifically, the General Assembly directed that the Utilities Commission shall:

> (4) Retain discretion to determine optimal timing and generation and resource-mix to achieve the least cost path to compliance with the authorized carbon reduction goals by the dates specified in order to allow for implementation of solutions that would have a more significant or material impact on carbon reduction; provided, however, the Commission shall not exceed the dates specified to achieve the authorized carbon reduction goals by more than two years, except in the event the Commission authorizes construction of a nuclear facility or wind energy facility that would require additional time for completion due to technical, legal, logistical, or other factors beyond the control of the electric public utility, or in the event necessary to maintain the adequacy and reliability of the existing grid. In making such determinations, the Utilities Commission shall receive and consider stakeholder input.

G.S. 62-110.9(4). In other words, the Commission has the discretion to extend the time frame for compliance with the authorized CO_2 emissions reduction goals by two years, until 2032, for any reason. *See id.* Separate and apart from this broad general discretion, the Commission also has the specific discretion to further extend the time frame for compliance with the interim authorized CO_2 emissions reduction goals by more than two years—beyond 2032—if (1) the Commission authorizes construction of a nuclear facility or wind energy facility; or (2) as necessary to maintain the adequacy and reliability of the existing grid. *See id.*

Importantly, carbon emissions reductions are not the only consideration in determining the "optimal timing and generation and resource-mix" contemplated by HB 951. Duke witness Snider testified that the trade-offs to accelerated carbon reduction in Portfolio 1 are affordability, reliability, and executability. *See* Tr. Vol. 11, p. 124, ll. 11-17; Tr. Vol. 12, pp. 50-51. The Public Staff further emphasized the need to balance carbon emissions reductions with affordability, reliability, and executability. Public Staff witness Thomas, for example, noted that HB 951 gives the Commission the discretion and flexibility to "balance cost, execution risk, reliability" against carbon reduction. *See* Tr. Vol. 21, p. 272, ll. 6-7.

> And 951, much like Senate Bill 3 which enacted the REPS mandates, provided the Commission flexibility to determine, you know, when these targets are met and to protect ratepayers from, you know, undue risk, unreliable grid, or excessive cost. And I think the Commission has to consider all of those, part of that three-legged stool, to make its decision on when – what portfolio should be adopted, and, you know, what interim compliance year should be met.

Tr. Vol. 22, pp. 363-64. "I think that the risk of extraordinary cost increases to North Carolina ratepayers associated with … 2030 compliance has to be a factor in our transition." Tr. Vol. 21, p. 295, ll. 9-12. Public Staff witness Thomas further testified that he has "serious concerns about [the] incremental costs" to North Carolina ratepayers "of 2030 compliance relative to 2032 compliance" with respect to the 70% interim carbon reduction goal. Tr. Vol. 21, p. 268, ll. 18-19.

Notably, supplemental portfolio SP5 modeled by Duke in consultation with the Public Staff would achieve interim compliance by 2032, while SP6 would achieve interim compliance by 2034. Tr. Vol. 21, p. 267-69. In addition, witness Thomas further testified about analysis the Public Staff conducted to compare incremental costs versus incremental benefits of an earlier relative to a later time frame for compliance with the interim carbon reduction goals set forth in HB 951. *See* Tr. Vol. 21, p. 270-72; Ex. Vol. 23, p. 18 (CIGFUR II & III Public Staff Panel I Direct Cross Examination Ex. 1). Witness Thomas explained the calculations underpinning the Public Staff's cost-benefit analysis and the rationale for using the social cost of carbon published by the White House Technical Panel as a reference point, as well as Governor Cooper's encouragement to consider the social cost of carbon in agency decision-making. *See id*. According to witness Thomas, for every ton of carbon removed, North Carolina residents would be "paying $76 to achieve compliance in 2030, but the benefits associated with that removal of carbon are only $61 per ton." Tr. Vol. 21, p. 272, ll. 1-3. Witness Thomas also testified that Duke's four proposed Carbon Plan portfolios follow a similar trajectory to carbon neutrality in 2050 and that "[t]he only difference really is the interim compliance date and how that's achieved." Tr. Vol. 21, p. 272, ll. 16-24; Ex. Vol. 23, p. 19 (CIGFUR II & III Public Staff Panel I Direct Cross Examination Exhibit 2). On cross-examination by counsel for the Clean Power Suppliers Association (CPSA), witness Thomas testified that P1 achieving greater CO2 emissions reductions in almost every year of the planning period is "partially . . . kind of a modeling artifact" resulting from the way Duke modeled the interim compliance. Tr.

Vol. 21, p. 280, ll. 2-8. Finally, witness Thomas confirmed that “a primary driver” of the significantly higher cost of P1 “is the earlier compliance” relative to the P2-P4 and SP5 and SP6. Tr. Vol. 21, p. 282, ll. 16-17. Witness Thomas noted this analysis was not the only factor the Public Staff evaluated when making a recommendation regarding interim compliance date, but it was one such factor. *See* Tr. Vol. 21, p. 272, ll. 9-12.

AGO witness Burgess likewise testified to the additional execution risks associated with P1 and the 2030 interim compliance time frame. *See* Tr. Vol. 25, p. 334. Duke witness Pompee also testified to the impacts of a more compressed implementation time frame: more procurement risks; more financial risks; increased costs by way of greater development expenditures; and increased costs by way of greater capital expenditures. *See* Tr. Vol. 18, p. 113, ll. 1-22.

For all of these reasons, the Commission should, in its discretion, extend the time frame for compliance with the HB 951 carbon emissions reductions goals.

CONCLUSION

CIGFUR appreciates the opportunity to submit this post-hearing brief for the Commission’s review and consideration. For the reasons set forth herein, CIGFUR once again makes the following recommendations to the Commission:

1. The Commission must approve a Carbon Plan that abides least-cost planning principles and maintains or improves the reliability of the existing grid.

2. The Commission should require Duke to provide a more complete and accurate “all-in” cost and bill impact analysis, both for the initial Carbon Plan approved by the Commission and as part of each subsequent biennial Carbon Plan review proceeding.

3. The Commission should ensure that Duke's North Carolina ratepayers are protected from the regulatory risk and related cost exposure should South Carolina disallow recovery of its jurisdictional allocable share of Carbon Plan implementation costs. At a minimum, the Commission should require Duke to model a scenario in which South Carolina elects not to share in the costs of Carbon Plan implementation.

4. The Commission should require Duke to provide current reliability and power quality data as a baseline against which future reliability performance can be measured and evaluated in subsequent Carbon Plan review proceedings, in order to ensure compliance with the HB 951 mandate to maintain or improve grid reliability. In addition, the Commission should require Duke to track and report Momentary Average Interruption Frequency Index (MAIFI) = Total # of momentary customer interruptions per year / total number of customers. Finally, because large general service (LGS) customers are most susceptible to severe impacts resulting from power quality incidents, the Commission should require Duke to track and report, on at least a biannual basis, the number of power quality incidents that occur within the LGS class and the causes of such incidents.

5. The Commission should require Duke to pursue every avenue practicable to achieve cost savings or costs avoided that inure to the direct benefit of ratepayers, including but not limited to:

    a. Pursuit of maximum funding available under the Inflation Reduction Act (IRA) and/or the Infrastructure Investment and Jobs Act (IIJA), and ensuring such funding inures to the direct financial benefit of ratepayers, not shareholders;

    b. Securitization of at least 50% of the costs associated with the early retirement of Duke's coal-fired generating facilities;

    c. Exploring brownfield siting;

    d. Evaluating the cost-effectiveness of converting Marshall and/or Roxboro to burn natural gas and/or re-evaluating existing co-firing expansions;

    e. Third-party power purchase agreements (PPAs);

    f. Implementing not-to-exceed caps on near-term development costs;

    g. Erring on the side of caution and moderation with respect to the Near-Term Action Plan; and

h. Approving a Carbon Plan that includes a solar procurement volume adjustment mechanism.

6. The Commission should deny Duke's request to begin near-term development activities for off-shore wind (OSW).

7. The Commission should clarify that selection of a resource in the Carbon Plan does not create a presumption of need, necessity, public convenience, or cost-effectiveness for purposes of a future Certificate of Public Convenience and Necessity (CPCN) proceeding. In other words, selection as a Carbon Plan resource is one factor to be considered in a CPCN proceeding, but it is not determinative and does not modify or lessen an applicant's burden of proof pursuant to G.S. 62-110.1 and Commission practice with respect to the interpretation and application of G.S. 62-110.1.

8. The Commission, in its discretion, should extend the time frame for achieving interim compliance with the authorized carbon emissions reductions goals in order to balance the competing objectives of affordability, reliability, and executability.

Respectfully submitted, this the 24th day of October, 2022.

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CERTIFICATE OF SERVICE

I certify that I have served a copy of the foregoing Post-Hearing Brief of CIGFUR II & III on all parties of record in accordance with Commission Rule R1-39, by United States mail, postage prepaid, first class; by hand delivery; or by means of facsimile or electronic delivery upon agreement of the receiving party.

This the 24th day of October, 2022.

Electronically submitted
/s/ Christina D. Cress