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September 9, 2022

Ms. A. Shonta Dunston
Chief Clerk
North Carolina Utilities Commission
430 N. Salisbury Street, Room 5063
Raleigh, NC 27603

Via Electronic Submittal

RE: In the Matter of
Duke Energy Carolinas, LLC and Duke Energy Progress, LLC
2022 Procurement Pursuant to Session Law 2021-165, Section 2(c)
NCUC Docket E-2 Sub 1297 and E-7 Sub 1268
Clean Power Suppliers Association Comments on Carbon Plan Issues

Dear Ms. Dunston:

Attached hereto, for filing in the above referenced dockets, are Clean Power Suppliers Association Comments on Carbon Plan Issues.

If you should have any questions concerning this filing, please do not hesitate to contact me. Thank you for your assistance.

Yours truly,

/s/ Benjamin L. Snowden

Benjamin L. Snowden
Counsel for
Clean Power Suppliers Association

pbb

cc: Counsel and Parties of Record
NC Public Staff

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-2 SUB 1297
DOCKET NO. E-7 SUB 1268

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of Duke Energy Carolinas, LLC, and Duke Energy Progress, LLC 2022 Procurement Pursuant to Session Law 2021-165, Section 2(c)	)	**CLEAN POWER SUPPLIERS ASSOCIATION COMMENTS ON CARBON PLAN ISSUES**

Pursuant to the Commission's July 29, 2022 Order Scheduling Expert Witness Hearing, Requiring Filing of Testimony, and Establishing Discovery Guidelines ("Procedural Order") Intervenor Clean Power Suppliers Association ("CPSA"), by and through counsel, hereby files these responsive comments on the following issues identified in the Procedural Order and in the report filed on July 22, 2022, identifying topics that should be the subject of an expert witness hearing ("Issue Report"): (1) the Commission's authority to extend the 2030 interim 70% carbon emission reduction target pursuant to N.C.G.S. § 62-110.9(4); (2) the legality of purchasing third party-owned generation excluded from N.C.G.S. § 62-110.9(2); and (3) whether Duke Energy has adequately taken into account the social costs of carbon.[1]

[1] This issue was identified in the written Comments of the Environmental Working Group, but was also discussed in the Comments of the Public Staff and the Direct Testimony of Public Staff Witness Jeff Thomas.

1. The Commission does not have the authority at this time to adopt a Carbon Plan that extends compliance with the 70% Interim Requirement beyond 2032.

Duke's proposed Portfolios P3 and P4, as well as supplemental portfolio P6, all delay compliance with H.B. 951's requirement to achieve 70% carbon reduction by 2030 ("the Interim Requirement") until 2034. As discussed in the Comments filed by CPSA on July 15, 2022 ("CPSA Comments"), which are hereby incorporated by reference, H.B. 951 does not permit this Commission to adopt a Carbon Plan that delays compliance with the Interim Requirement past 2032 simply because such plan includes nuclear or wind resources that may not be available until after 2032.[2]

As CPSA discusses in its comments, H.B. 951 gives the Commission "discretion in achieving the authorized carbon reduction goals by the dates specified."[3] However, the Commission may not delay compliance past 2032 unless (1) it is necessary to maintain reliability of the grid, or (2) 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."[4]

As the Public Staff observed in its direct testimony, and as pointed out in CPSA's comments, the Commission has not authorized construction of a nuclear or wind resource and Duke has not demonstrated that 2034 is needed for reliability reasons. Indeed, the Commission is not, in this proceeding, authorizing the construction of anything. CIGFUR correctly points out in its comments that the Carbon Plan does not "supersede, supplant, or otherwise serve as a substitute for the regulatory processes necessary for Duke to obtain .

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[2] CPSA Comments at 34-37.

[3] G.S. 62-110.9(4).

[4] *Id.*

. . certificate of public convenience and necessity (CPCN) pursuant to G.S. 62-110.1 before constructing a new electric generating facility."[5] There is thus no basis, in the 2022 Carbon Plan, to preemptively authorize Duke to delay compliance past 2032.[6] Consequently any portfolio (including portfolios P3, P4, and P6) under which Duke plans to delay compliance past 2032 is inconsistent with the law.

Without attempting to parse the actual words of H.B. 951, Duke maintains in its direct testimony that the Commission has the discretion to authorize a delay in compliance past 2032, "especially in the event the Commission authorizes the construction of a nuclear or wind energy facility."[7] Similarly, the Public Staff, notwithstanding the testimony of Witness Thomas cited above, asserts that "delaying interim compliance by two to four years" is "permitted by Section 110.9,"[8] without explaining why or under what circumstances this may be allowed.[9]

In a different vein, CIGFUR also characterizes the 2030 Interim Requirement as "aspirational,"[10] and maintains that the Commission has the authority to approve a plan delaying compliance past 2032 if it is "consistent with least-cost planning principles."[11] While H.B. 951 does require the Commission to adopt a "least cost" Carbon Plan, and a delay of compliance from 2030 to 2032 could in some circumstances be justified based on

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[5] CIGFUR comments at 32.

[6] The Attorney General, CCEBA, and the CLEAN intervenors all appear to share this view.

[7] Direct Testimony of Snider, McMurry, Quinto, and Kalemba, at 26.

[8] Public Staff Comments at 6 & n.3.

[9] The Public Staff appears to take a different (or more nuanced) view in its Direct Testimony, stating that "The Public Staff is not recommending that the Commission preemptively authorize a delay in meeting the interim compliance goals." Thomas Testimony at 12.

[10] Direct Testimony of Brad Muller on Behalf of CIGFUR, at 17.

[11] Id. at 16; Direct Testimony of Michael Gorman on Behalf of CIGFUR, at 10-11.

the cost of compliance, the law is very explicit about the reason that a delay of compliance beyond 2032 can be approved – and cost is not one of them. As noted in CPSA's comments, because of to the time value of money, delay will generally reduce the economic impacts of compliance, from a present-value perspective (though CPSA proposes 2030 and 2032 compliance portfolios that may be cheaper for ratepayers than Duke's 2034 portfolios because they call for greater adoption of lower-priced solar resources).[12] It is absurd to suggest that the General Assembly intended to give the Commission unlimited discretion to delay compliance with the Interim Requirement simply because such delay would reduce compliance costs.[13]

These interpretations are unsupported by the language of H.B. 951 and would create loopholes in implementation so wide as to eviscerate the requirements of the law. Under this view, the Commission would have unlimited discretion to indefinitely delay compliance not only with the Interim Requirement, but also with the requirement to achieve carbon neutrality, for the sole reason that it would reduce costs, so long as there is a wind or a nuclear facility (of any size or kind) in the portfolio – and, based on comments and testimony, it is not clear whether the Public Staff and CIGFUR would require even that.

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[12] CPSA Comments at 37. It should also be noted that due to the limited extensions of the Investment Tax Credit and Production Tax Credit by the Inflation Reduction Act, as well as the increasingly stringent requirements of the 10% domestic content adder (which escalate significantly between 2025 and 2028), solar and solar-plus-storage resources that are procured earlier may ultimately be less expensive than later-procured resources, even in NPV terms.

[13] The reduction in the Present Value Revenue Requirement achieved by delaying compliance also does nothing to reduce the per unit cost of carbon reduction. It also increases the total amount of carbon dioxide emitted by Duke's generating fleet over the planning period.

This construction of H.B. 951 also creates any number of ways to delay compliance with H.B. 951 for any length of time. For example, under this interpretation the Commission could (in 2022, with no CPCNs having been issued for any facility) approve a portfolio delaying compliance with the Interim Requirement until 2036, based on the inclusion in the portfolio of an Advanced Reactor that will not be commercially available until then. It could delay compliance to 2040 based on the inclusion of a single 20 MW microreactor (also not available until after that time) in the plan. Or if the North Carolina General Assembly were to pass another moratorium on the permitting of wind facilities, as it did under H.B. 589, the Commission could, even with full knowledge of that fact, approve a portfolio including a wind energy facility that could not be completed by 2032 ("due to technical, legal, logistical, or other factors beyond the control of the electric public utility"), and authorizing compliance to be delayed far beyond 2032.

CPSA does not, of course, expect that this Commission actually *would* approve such portfolios to evade compliance with H.B. 951. This parade of horribles is merely intended to show that the statutory construction advanced by Duke cannot be consistent with the intent of the General Assembly, which stated *in the very first sentence* of H.B. 951 that "The Utilities Commission shall take all reasonable steps to achieve a seventy percent (70%) reduction in emissions of carbon dioxide (CO2) emitted in the State from electric generating facilities owned or operated by electric public utilities from 2005 levels by the year 2030 and carbon neutrality by the year 2050." Although the Commission has discretion to alter those timelines under limited circumstances, the discretion to extend Interim Compliance beyond 2032 is narrowly bounded by the law.

2. Duke may not rely on new out-of-state resources not owned by the Utility in order to meet the requirements of H.B. 951.

Several intervenors either recommend that Duke Energy model the benefits of participation in competitive wholesale markets for energy or propose portfolios that rely on significant imports of generation from resources located outside of the North Carolina, and not owned by Duke Energy. While these recommendations may be good policy, they are not consistent with the requirements of H.B. 951.

G.S. § 62-110.9(2) provides that "Any new generation facilities or other resources selected by the Commission in order to achieve the authorized reduction goals for electric public utilities shall be owned and recovered on a cost-of-service basis by the applicable electric public utility," with the exception of solar and solar-plus-storage resources, of which Duke is to own 55%. The scope of this limitation is not limited to resources located in North Carolina. Nor does it apply only to new generation facilities; any "other resources," including purchases of power from existing facilities, are subject to the ownership limitation.[14]

To be clear, CPSA does not believe that this provision limits Duke's ability either to rely on existing reserve sharing arrangements for reserve sharing with other utilities (whose generating resources are not owned by Duke), nor would it limit Duke's ability to continue to receive energy or capacity via existing power purchase agreements with

[14] CPSA notes that the North Carolina General Assembly is not, in G.S. § 62-110.9(2), purporting to exercise regulatory power over any generating resource located outside of the state of North Carolina. It is simply placing limitations on what kind of resources Duke Energy (which is unquestionably subject to the jurisdiction of this Commission) may rely on in its plan for meeting the requirements of HB 951. This is not dissimilar from G.S. § 62-110.6, which establishes requirements for North Carolina utilities' rate recover for construction costs of out-of-state generating facilities.

facilities not owned by Duke, wherever they are located. It also would not limit Duke's ability, in the future, to purchase power from non-utility-owned generators if it were necessary for reliability or other purposes, or if doing so would reduce energy costs. What it *does* do is prohibit this Commission from approving a Carbon Plan that relies on new non-utility-owned generating resources, other than solar and solar-plus-storage, in order to meet the decarbonization mandates of H.B. 951.

3. It is inappropriate to use outdated estimates of the Social Cost of Carbon to judge the cost-effectiveness of Carbon Plan portfolios.

In its initial comments, the Environmental Working Group asserts that Duke has not appropriately considered the social cost of carbon (SCC) in its comparison of each portfolio. CPSA does not disagree that, with an appropriate evidentiary record, the SCC may serve as a useful tool to compare the relative costs of various proposed portfolios.

However, the Public Staff in its comments turns the concept of the SCC on its head, by using SCC as a metric to evaluate "the reasonableness of [the] cost of carbon abatement."[15] The Public Staff goes so far as to suggest that if the cost of carbon abatement under a particular portfolio exceeds the SCC, this provides a reason to reject a particular resource portfolio or delay compliance with the Interim Requirement.[16] Public Staff Witness Thomas reiterated this view in his testimony, stating that

> The Public Staff also found that the cost per ton of carbon abatement associated with implementing P1 relative to P2, P3, and P4 exceeded the per ton SCC, suggesting that the carbon reduction benefits encapsulated by the SCC would not exceed the incremental costs of 2030 interim compliance under Duke's initial assumptions.[17]

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[15] Public Staff Comments at 30-33.

[16] *Id.* at 31 ("While this estimate [the 2021 estimate of the SCC prepared by the Interagency Working Group on Social Cost of Carbon] is not binding on the Commission, Duke, or the Public Staff, it can serve as a useful reference point in evaluating whether a delay in interim compliance is warranted.").

[17] Jeff Thomas Direct Testimony at 14:3-7.

There are several problems with this. First, there is nothing in the language of H.B. 951 that authorizes the Commission to delay compliance or reject a proposed resource portfolio based on a comparison of its costs with some assumed Social Cost of Carbon value. To the contrary, the law says that the Commission may adjust the timeline for compliance "in order to allow for implementation of solutions that would have a **more significant** and material impact on carbon reduction."[18] In other words, the General Assembly contemplated extensions of time to allow for greater carbon reductions, not less.

Second, to the extent that the SCC provides a useful metric for comparing portfolios, the Public Staff is relying on estimates of the SCC that are outdated and likely far too low. The Public Staff relies on an estimate of the SCC ($61 / short ton in 2035) that was released in January 2021 by the Interagency Working Group on Social Cost of Greenhouse Gases ("IWG"). The Public Staff also states that on January 7, 2022, Governor Cooper issued Executive Order 246, which encourages non-cabinet agencies such as the Commission to incorporate the SCC published by the IWG into their decision-making processes.[19] This citation is misleading, as the Governor's Executive Order does not encourage agencies to rely on the IWG's 2021 estimate of the SCC.[20] Rather, it references a forthcoming update to the IWG's estimates of the SCC, which was expected in January 2022. The order goes on to state that "Within ninety (90) days of the publication of the IWG's updated SC-GHG estimates, the Governor's Office shall begin releasing guidelines

[18] G.S. § 62-110.9(4).

[19] Public Staff Comments at 31 n.12.

[20] Executive Order No. 246 (Jan. 7, 2022) Sec. 6, available at https://governor.nc.gov/media/2907/open.

for including and considering these estimates in specifically identified Cabinet agency decisions and actions[.]"

The 2021 estimates of the SCC published by the IWG were in fact estimates that had been prepared during the Obama administration, were abandoned by the Trump Administration (which also disbanded the IWG), and were revived on an "interim" basis by President Biden in an executive order issued on his first day in office.[21] Understanding that the Obama-era estimates likely understated the actual costs of climate change to the U.S. economy,[22] President Biden directed the IWG to adopt the Obama-era estimate on an interim basis, and to publish a final SCC estimate by January 2022.[23]

Due to ongoing litigation over the SCC, the IWG has yet to publish updated SCC estimates (although it appears to have resumed work on revised estimates).[24] However, there is a great deal of controversy over the calculation of the SCC, and many commentators assert that IWG's interim SCC figure significantly understates the social cost of carbon. For example, a September 2022 study published in *Nature* concludes that

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[21] Inside Energy and Environment, Continued Litigation Over Social Cost of Carbon Emphasizes Its Importance to the Biden Administration's Climate Agenda (Mar. 29, 2022), at https://www.insideenergyandenvironment.com/2022/03/continued-litigation-over-social-cost-of-carbon-emphasizes-its-importance-to-the-biden-administrations-climate-agenda/; Executive Order 13990, *Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis* (January 20, 2021), at https://www.govinfo.gov/content/pkg/FR-2021-01-25/pdf/2021-01765.pdf.

[22] E.O. 13990 Sec. 6(c) ("Climate change has had a growing effect on the U.S. economy, with climate-related costs increasing over the last 4 years. Extreme weather events and other climate-related effects have harmed the health, safety, and security of the American people and have increased the urgency for combatting climate change and accelerating the transition toward a clean energy economy. The world must be put on a sustainable climate pathway to protect Americans and the domestic economy from harmful climate impacts, and to create well-paying union jobs as part of the climate solution.")

[23] *Id.* Sec. 5(b)(ii)(D).

[24] US EPA, "Peer Review of 'Technical Support Document: Social Cost of Greenhouse Gas Estimates,'" at https://www.epa.gov/environmental-economics/scghg-tsd-peer-review.

the actual SCC is about $185 per ton, roughly 3.6 times as much as the current estimate.[25] In light of these developments, it is very likely that the estimates of the SCC relied on by the Public Staff are far too low, and drastically understate the economic benefits of achieving additional carbon reductions.

It is also important to note that there is no evidentiary record before this Commission in this proceeding regarding an appropriate SCC value, and for the Commission to require the parties to litigate that issue at this late date would likely preclude compliance with the statutory deadline for Carbon Plan adoption by the Commission.

CPSA does not argue that the Social Cost of Carbon is irrelevant to evaluation of the Carbon Plan – only that, given the complexity of the issue and the lack of a factual record in this case, it is inappropriate to use the SCC, on its own, as a cost-effectiveness metric for Carbon Plan portfolios. And there is certainly no basis in the law to delay compliance with the Interim Requirement based on a comparison of the SCC to the incremental cost of any proposed portfolio.

[25] "Comprehensive Evidence Implies a Higher Social Cost of CO2," Nature (Sept. 1, 2022), at https://www.nature.com/articles/s41586-022-05224-9.

Respectfully submitted, this the 9th day of September 2022.

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing Comments of Clean Power Suppliers Association on Carbon Plan Issues has been served on all parties and counsel of record and on NC Public Staff by electronic mail, or depositing the same in the United States mail, postage prepaid.

This the 9th day of September, 2022.

/s/ Benjamin L. Snowden

Benjamin L. Snowden