



Nov 30, 2022

North Carolina Utilities Commission  
% Shonta Dunston, Chief Clerk  
Dobbs Building, Fifth Floor  
430 North Salisbury Street  
Raleigh, North Carolina 27602

Re: Docket E-100 Sub 179;  
CleanAIRE NC Written Comments on the inaugural NC Carbon Plan

Dear Chair Mitchell and Members of the North Carolina Utilities Commission:

CleanAIRE NC is a non-profit organization that advocates for the health of all North Carolinians by pursuing equitable and collaborative solutions that address climate change and air pollution. On behalf of our members and supporters, CleanAIRE NC submits these comments regarding shortfalls to Duke Energy's draft Plan, and offers considerations and suggestions for the Commission to incorporate in their final Plan.

Those of us in the environmental advocacy space have generally brought forward points relating to shortfalls in the draft Carbon Plan filed by Duke Energy Carolinas, LLC (DEC) and Duke Energy Progress, LLC (DEP) (Duke Energy, collectively; or the Companies). Our main objections to Duke Energy's draft Plan are: the unnecessary reliance on natural gas as an energy source; the risks associated with heavily relying on technologies such as advanced or modular nuclear reactors and hydrogen; the increased costs to ratepayers associated with investing in outdated fossil fuel energy sources; and missing the carbon reduction targets set by HB951. Given these shortfalls and the threat they pose to North Carolinians, we urge the Commission to reject Duke Energy's draft Plan and instead order their own Plan, as envisioned under HB951.

Climate change, and the fossil fuel pollution that drives it, seriously threatens public health, social equity, and economic strength in North Carolina. The legislative intent of HB951 was to reduce North Carolina's contribution to climate change by mitigating the most prolific greenhouse gas, carbon dioxide (CO<sub>2</sub>).

Adhering to HB951 would put us on a path to sustainably and affordably address climate change, especially when coupled with the ongoing rulemaking at the NC Department of

Environmental Quality to set a budget carbon emissions from the power sector and require power plants to buy CO<sub>2</sub> emission allowances (i.e. the Regional Greenhouse Gas Initiative, or RGGI), which will also create a significant revenue stream. By leveraging these opportunities along with several recent federal actions, we can position our state to sustainably and affordably address climate change.

## I. Setting North Carolina Up for Success

### A. Ensuring the State Meets Interim and Long-term Carbon Reduction Targets

Continuing to build new gas infrastructure as Duke Energy proposes would exponentially increase the risk of missing the 2030 and 2050 carbon reduction goals set by HB951. It would unnecessarily impose health risks to fenceline communities, and exacerbate the environmental injustices that North Carolina has grappled with for far too long.

Extending gas consumption forces North Carolina to stay reliant on out-of-state fuels, which exhibit significant price elasticity tied to both national demand and international geopolitical conflicts. This instability in fuel pricing creates unnecessary financial risk for North Carolina's ratepayers. Alternatively, investing in more affordable solar and wind energy would ensure that more of those resources stay in-state and benefit our local economies.

By meeting North Carolina's 2030 interim carbon reduction requirement, we are far more likely to meet the longer-term requirement of achieving net-zero carbon emission by 2050. This will help ensure that North Carolina does its part at reducing the root cause of climate change and hopefully mitigate the worst impacts that climate change may impose on physical environmental infrastructure.

Inevitably, the federal government will take additional actions to mitigate the emissions associated with climate change. Ensuring North Carolina meets HB951's reduction targets sets our state up to affordably address whatever may come next from Washington.

### B. No Regrets and No Excuses For Missing Reduction Targets

Utility companies in several other states have committed to rigorous pollution reduction targets earlier than or cheaper than Duke Energy in North Carolina. The Florida-based company NextEra has pledged to achieve "Real Zero"<sup>1</sup> carbon emissions by 2045. PG&E in

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<sup>1</sup> NextEra contends they will go further than Net-zero, and completely eliminate carbon emissions from their operations. URL:

[https://www.nexteraenergy.com/real-zero.html?gclid=Cj0KCOiA-JacBhCOARIsAIxybyOinLi3S4P\\_Oj-XDPjcsH5P8FpAiPj8vmz1YQWmi79Ap0lALIZN03AaAhDTEALw\\_wcB](https://www.nexteraenergy.com/real-zero.html?gclid=Cj0KCOiA-JacBhCOARIsAIxybyOinLi3S4P_Oj-XDPjcsH5P8FpAiPj8vmz1YQWmi79Ap0lALIZN03AaAhDTEALw_wcB)

California has a 2040 net-zero timeline while being climate positive (actively removing more greenhouse gasses than they emit) by 2050,<sup>2</sup> and NiSource in Michigan has a similar 2040 net-zero goal.<sup>3</sup>

While they share Duke Energy's 2050 timeline, DTE Energy also in Michigan estimates the Inflation Reduction Act will enable the company to reach their "ClearVision" plan while reducing revenue need by 2.18% a year while reaching their status quo power supply plan. While geographic, interconnection, and other important differences certainly exist, DTE plans to include 1.1 GW more solar production than Duke Energy's most solar-intensive Plan (i.e., Portfolio "P1").<sup>4</sup> However, if DTE, a company that primarily operates in a state that produces less than 4 kWh/m<sup>2</sup>/day annually, then North Carolina (which has a solar irradiance potential to generate between 4.25 and 5 kWh/m<sup>2</sup>/day<sup>5</sup>) can preserve reliability and affordability while installing significantly more solar than Duke proposes.

Due to the aforementioned differences in geographic location and solar irradiation, it is reasonable to assume that the cost and solar capacity projections Duke Energy laid out in their proposed Carbon Plan draft were inaccurate. In fact, intervening parties, consultants hired by Duke Energy (i.e. the National Renewable Energy Laboratory [NREL]),<sup>6</sup> and even Duke Energy itself have shown that there are multiple pathways to meet the 2030 requirement. We therefore see no justification to delay meeting the interim targets.

## II. Advanced Technologies and Climate Risk

### A. Hydrogen

The Commission should not rely on hydrogen as a key pillar for meeting our state's near-term climate mitigation goals. While hydrogen derived from clean energy sources provides some potentially promising benefits, it is currently unfeasible to generate

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<sup>2</sup> "PG&E Climate Strategy Report". June 2022

[https://www.pge.com/pge\\_global/common/pdfs/about-pge/environment/what-we-are-doing/pge-climate-goals/PGE-Climate-Strategy-Report.pdf](https://www.pge.com/pge_global/common/pdfs/about-pge/environment/what-we-are-doing/pge-climate-goals/PGE-Climate-Strategy-Report.pdf)

<sup>3</sup> "NiSource announces results of its business review, top-tier long-term growth plan and 2040 net zero goal". Nov. 07, 2022.

<https://www.nisource.com/news/article/nisource-announces-results-of-its-business-review-top-tier-long-term-growth-plan-and-2040-net-zero-goal-20221107#:~:text=Net%20zero%202040%20goal&text=The%20company%20intends%20to%20retire,replacement%20of%20aging%20gas%20infrastructure.>

<sup>4</sup> DTE Electric Company Integrated Resource Plan, MPSC Case No. U-21193:

<https://mi-psc.force.com/sfc/servlet.shepherd/version/download/0688y000004qW9sAAE>

<sup>5</sup> Roberts, Billy J., "Global Horizontal Solar Irradiance: National Solar Radiation Database Physical Solar Model". National Renewable Energy Laboratory. Feb. 22, 2018.

<https://www.nrel.gov/gis/assets/images/solar-annual-ghi-2018-usa-scale-01.jpg>

<sup>6</sup> Brinkman, G., Emmanuel, M., Guerra, O., Hodge, B., Sergi, B., Steinberg, D. "Duke Energy Carbon-Free Resource Integration Study" Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A40-82431. October, 2022.

<https://www.nrel.gov/docs/fy22osti/82431.pdf>

hydrogen at the scale Duke Energy ultimately proposes without creating environmental, financial, and public health risks.

While hydrogen will be subsidized by several federal programs, CleanAIRE NC is skeptical of Duke Energy's ability to fully integrate hydrogen into their gas business as envisioned in their draft Carbon Plan. On the other hand, the timeline Duke Energy has laid out to begin integrating the fuel into their gas stream may be unnecessarily long considering other utilities such as NextEra plan on integrating hydrogen and becoming fully net-zero by 2045. To put it another way, Duke should not assume hydrogen's availability or scalability on any particular timeline.

Taken collectively, the passage of the Inflation Reduction Act (IRA), the Chips Act (CHIPS), the Bipartisan Infrastructure Act (BIA), and other federal spending measures will enable the development of hydrogen and other zero-emission technologies, changing the trajectory of emissions in the United States. North Carolina's Carbon Plan can capitalize on these available resources to reach our emission reduction goals far more easily, affordably, and equitably by coupling hydrogen with mature clean energy technologies such as wind and solar.

Studies have shown that hydrogen is incompatible with natural gas transmission and distribution infrastructure above a low percentile blend.<sup>7</sup> Since Duke Energy's draft does not lay out their plans for pipeline upgrades, we have to assume that in the short-term they plan to blend hydrogen at or below a low level; otherwise, they will be forced to request upgrades down the road. The potential for hydrogen infrastructure buildout will unavoidably increase the total cost of the Carbon Plan if Duke Energy proceeds with its plan to build new gas resources and relies on hydrogen to reduce emissions. And since hydrogen is less energy dense than methane, and studies have shown that blending the gasses at low levels will only produce a minimal reduction in carbon emissions<sup>8</sup>, one can easily come to the conclusion that a full buildout of hydrogen infrastructure is inevitable if gas units combusting a stream of 100% hydrogen is to be a key pillar of Duke Energy's longer term carbon reduction strategy.

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<sup>7</sup> NREL estimates that utilities can only safely blend up to 20% hydrogen with natural gas. Melania, M.W., Antonia, O., Penev, M., "Blending Hydrogen into Natural Gas Pipeline Networks: A Review of Key Issues". National Renewable Energy Laboratory, March 2013. URL: <https://www.nrel.gov/docs/fy13osti/51995.pdf>. However, the California Public Utility Commission (CPUC) tested blends of 5%, 10%, 20%, and 50% and found that concentrations higher than 5% caused greater chances for pipeline leaks. Via Miroslav Penchev, Taehoon Lim, Michael Todd, Oren Lever, Ernest Lever, Suveen Mathaudhu, Alfredo Martinez-Morales, and Arun S.K. Raju\*. 2022. Hydrogen Blending Impacts Study Final Report. Agreement Number: 19NS1662 URL: <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M493/K760/493760600.PDF>

<sup>8</sup> Esposito, D., "Gas Utilities Are Promoting Hydrogen, But It Could Be A Dead End For Consumers And The Climate". Forbes. March 29, 2022 URL: <https://www.forbes.com/sites/energyinnovation/2022/03/29/gas-utility-hydrogen-proposals-ignore-a-superior-decarbonization-pathway-electrification/?sh=63221ca976a1>

Should hydrogen be developed in North Carolina, the **only** hydrogen generation that CleanAIRE NC supports is green hydrogen derived from wind or solar assets. The NC Energy Policy Council, in their 2022 draft biennial report, offers a series of recommendations to study the potential for biogas and hydrogen, and they recommend new legislation to allow the NCUC to authorize cost recovery for biogas infrastructure:

Support should be provided in the form of legislation that allows the North Carolina Utilities Commission (NCUC) to authorize cost recovery for infrastructure investments associated with renewable natural gas and any capital or operating costs incurred by the local distribution companies related to processing, pipeline interconnection, storage, and distribution of renewable natural gas while balancing the protection of environment, public health, and the well-being of neighboring communities.<sup>9</sup>

Without the proper complementary regulatory framework, the IRA and any forthcoming policies encouraging hydrogen production from swine or chicken waste will only further entrench existing environmental injustices in communities overburdened by the adverse impacts of the industrial agricultural sector.

Additionally, hydrogen emits nitrogen oxides (NO<sub>x</sub>) when combusted. While recent data suggests good combustion practices can limit NO<sub>x</sub> emissions when used in conjunction with Selective Catalytic Reduction technologies,<sup>10</sup> this may detract from hydrogen's lack of carbon emissions should greenhouse gas abatement become a higher policy priority for the state or federal government. This issue must be addressed prior to widespread adoption and use of the fuel. Failure to do so may increase health risks to fence-line communities and communities already facing environmental injustices. It may also increase the economic risk of stranding gas and/or hydrogen combustion units and their corresponding transmission and distribution assets.

The transmission of hydrogen could also create or exacerbate problems for ratepayers. Hydrogen is a significantly less dense gas than either methane or natural gas. Transparency when planning and siting hydrogen generation and transmission must be a priority. Ratepayers and community members who may have this infrastructure in their backyards deserve to know the associated costs, along with any potential physical or environmental risks that hydrogen poses.

While the potential for hydrogen to serve as a fuel source that adds to the reliability of the grid, and the prospect for the gas to be able to decarbonize hard-to-abate sectors of the economy, moving ahead prematurely would risk stranding assets should we discover that

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<sup>9</sup> NC Energy Policy Council, "Energy Policy Council 2022 DRAFT Biennial Report". October 2022.

<https://deq.nc.gov/media/31550/open>

<sup>10</sup> USDOE Hydrogen and Fuel Cell Technologies Office. "H2IQ Hour: Addressing NO<sub>x</sub> Emission from Gas Turbines fueled with Hydrogen". 9/15/22 URL:

<https://www.energy.gov/eere/fuelcells/h2iq-hour-addressing-nox-emissions-gas-turbines-fueled-hydrogen>

the fuel type exacerbates the climate crisis. This is a concerning and potentially unnecessary risk to ask North Carolina's ratepayers to shoulder at this moment.

## B. Advanced Nuclear Technologies

Like hydrogen, the potential benefit of new nuclear technologies to make the grid more reliable and abate hard-to-decarbonize sectors is tempting.

While smaller and potentially easier to construct, significant permitting and cost risks exist. This generation type is yet to be proven at scale and the waste from these generation sources presents a risk to public health and security.

## II. Carbon Pricing

### A. Assigning a Value to Health Impact Savings by Utilizing the Social Cost of Carbon

Generating electricity from fossil fuels involves costs that are not paid directly by the utility, but which are borne by society at-large. These include costs associated with the health impacts from air and water pollutants, such as increased spending on healthcare. A vast body of research has shown beyond a doubt that pollution impacts the human body in a multitude of adverse ways.<sup>11</sup>

EO246 requires state agencies to begin using the Social Cost of Carbon (SCC) for project planning purposes. The EO states that state agencies shall incorporate the SCC "into agency decision-making processes that impact GHG emissions, even if guidance has not been issued for that decision-making context."<sup>12</sup>

The SCC and/or the Regional Greenhouse Gas Initiative (RGGI) will allow the Companies to internalize both the tangible and intangible costs and benefits to society when selecting a fuel source or generation type, such as the health impacts of fossil fuels or the benefits of integrating non-emitting resources. While the SCC actually incorporates the quantified health benefits, RGGI's price is determined by the market—and capping emissions and pricing allowances will help achieve the overall societal goal to reduce emission-heavy energy sources.

We urge the Commission to incorporate the SCC into planning for future infrastructure needs.

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<sup>11</sup> Minor, Kirsten. "The Future of Clean Air" and "Health Impacts of the Carbon Plan". July 20, 2022. <https://cleanairenc.org/blog/2022/07/20/the-future-of-clean-air/> and <https://cleanairenc.org/wp-content/uploads/2022/07/Health-Impacts-of-the-Carbon-Plan.pdf>

<sup>12</sup> Executive Order 246, Sec. 6 (Jan. 7, 2022)

## B. The Regional Greenhouse Gas Initiative

CleanAIRE NC was a petitioner to a proposed rulemaking that was ultimately passed by the NC Environmental Management Commission. The Department of Environmental Quality is currently developing a rule to allow our state to participate in the Regional Greenhouse Gas Initiative (RGGI). Doing so will set a declining cap on carbon emissions from power plants in the state and require emitters to purchase emission allowances. Joining RGGI can complement the Carbon Plan by offering a proven way to reduce emissions while ensuring equity among ratepayers.<sup>13</sup>

Joining RGGI will also provide another mechanism for the Carbon Plan to hold Duke Energy accountable for a downward emission trajectory. It will ensure that costs associated with carbon-intensive fossil fuels are factored into resource planning, and help the state meet its reduction targets. If DEQ develops the rule as Petitioners have laid out, we believe that in addition to the aforementioned benefits, RGGI could provide a means to address serious environmental justice concerns.

In its report for CLEAN Intervenors, Synapse modeled RGGI sensitivities and found that it would drive carbon emission reductions to the tune of “hundreds of thousands of tons per year in the 2020s and 2030s.”<sup>14</sup> We recommend that future revisions of the Carbon Plan include modeling that demonstrates the impacts of RGGI and the role it will play in reducing carbon emissions in North Carolina.

## C. Carbon Pricing and Environmental Justice

Multiple studies have shown that states within RGGI have seen carbon emissions decline at significantly higher rates than states not participating, indicating that the market-based policy is working as intended to reduce carbon emissions.<sup>15</sup> Additionally, we believe that

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<sup>13</sup> Konschnik, K., M. Ross, J. Monast, J. Weiss, and G. Wilson. “Power Sector Carbon Reduction: An Evaluation of Policies for North Carolina NI R 21-01. Durham, NC: Duke University. [https://nicholasinstitute.duke.edu/sites/default/files/publications/Power-Sector-Carbon-Reduction-An-Evaluation-of-Policies-for-North-Carolina-Revised\\_0.pdf](https://nicholasinstitute.duke.edu/sites/default/files/publications/Power-Sector-Carbon-Reduction-An-Evaluation-of-Policies-for-North-Carolina-Revised_0.pdf);

And, Environmental Defense Fund, Barber III, William. “Power Sector Decarbonization in North Carolina: An Evaluation of the Interplay between HB 951 and RGGI”. July 2022, [https://www.edf.org/sites/default/files/documents/EDF%20%2B%20RBI\\_Power%20Sector%20Decarbonization%20in%20North%20Carolina\\_Evaluation%20of%20the%20interplay%20between%20HB951%20and%20RGGI\\_FINAL\\_0.pdf](https://www.edf.org/sites/default/files/documents/EDF%20%2B%20RBI_Power%20Sector%20Decarbonization%20in%20North%20Carolina_Evaluation%20of%20the%20interplay%20between%20HB951%20and%20RGGI_FINAL_0.pdf)

<sup>14</sup> Fitch, T., Tabernero, J., Bhandari, D. “Carbon Free by 2050: Pathways to Achieving North Carolina’s Power Sector Carbon Requirements at Least Cost to Ratepayers”. Synapse Energy Economics, Inc. Cambridge, MA. July 20, 2022. <https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=5815f0fe-8690-4aac-86f7-f2d752c73c9b>

<sup>15</sup> In Hibbard, Paul J., Tierney, Susan F., Darling, Pavel G., Cullinan, Sarah. “An expanding carbon cap-and-trade regime? A decade of experience with RGGI charts a path forward” The Electricity Journal, 2018. Pgs 5-7, [https://www.analysisgroup.com/uploadedfiles/content/insights/publishing/2018\\_hibbard\\_tierney\\_darling\\_cullinan\\_an\\_expanding\\_carbon\\_cap\\_and\\_trade\\_regime.pdf](https://www.analysisgroup.com/uploadedfiles/content/insights/publishing/2018_hibbard_tierney_darling_cullinan_an_expanding_carbon_cap_and_trade_regime.pdf) authors note that the price of carbon *has* affected the

Chapter 62 of the NC Code (broadly) gives the Commission the authority to regulate rate-making and rate-adjustments, thereby allowing the NCUC to determine the best course of action with regard to allowance revenue use.

Additionally, the petition for rulemaking was written to include several provisions intended to mitigate any impacts to communities that have long endured environmental injustice. Those include:

1. The RGGI Rule applies to all power plants that generate >25 MW of electricity, not just regulated utilities.
2. Ensuring compliance with RGGI cannot be met by using “offsets.”
3. The RGGI rule does not treat Biomass, such as wood pellets, or “swine gas” derived from animal waste as carbon neutral.
4. The rule requires the regulated utility to submit a Plan to the NCUC for how to use allowance revenue for the purposes of public benefit.
5. The aggregate cap set on emissions is based on the 2030 goal of a 70% emissions reduction, as envisioned under the NC Clean Energy Plan.

To be clear, CleanAIRE NC encourages the NCUC to utilize any resources available to minimize rate increases to low- and middle-income ratepayers and ensure the final Carbon Plan is least-cost, including the direct rebate of revenue from allowance auctions to ratepayers. We also encourage the NCUC to incorporate feedback from environmental justice communities in future iterations of the Carbon Plan, and to take any steps available to the Commission to ensure environmental justice communities bear no harm from implementation of either RGGI or the Carbon Plan. Specifically, we support the Environmental Justice Intervenors’ request that, “in consideration of the requirements of FPIC, Title VI, and EO246, the Commission should consider consulting directly with at-risk communities, or hiring a third party to do so.”<sup>16</sup>

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dispatch order of power plants in the region; this builds on Murray, Brian C., Maniloff, Peter T., “Why have greenhouse emissions in RGGI states declined? An econometric, energy market, and policy factors” Energy Economics, Volume 51, Sept., 2015, Pgs. 58-589, <https://www.sciencedirect.com/science/article/pii/S0140988315002273#!>, in which authors find that emissions in RGGI states would be ~50% higher had it not been for RGGI policy, gas markets, and other macroeconomic factors. In Chan, Nathan W., and Morrow, John W.’s paper, “Unintended consequences of cap-and-trade? Evidence from the Regional Greenhouse Gas Initiative”. Energy Economics, Vol. 80, May 2019, pgs 411-422. <https://www.sciencedirect.com/science/article/pii/S0140988319300222>, authors find that absent market factors/gas prices, ~20% of emissions reduction can be attributed to RGGI.

<sup>16</sup> Blumenthal, Ethan. “Partial Proposed Order of Redtailed Hawk Collective, Robeson Cty Cooperative for Sustainable Development, Environmental Justice Community Action Network, and Down East Coal Ash Environmental and Social Justice Coalition” 10/24/22, pg. 10, <https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=3b23c94e-bb9e-4443-9b35-d0fa74ffebff>

### III. Transmission/Interconnection

Similar to the aforementioned issue with hydrogen infrastructure, there needs to be a much higher level of transparency in transmission planning. As climate change intensifies, there will be unequal adverse impacts to our state's energy system. Climate-related events such as fluctuations in air temperature or increased storm variability heighten the risk of downed lines, and other events put the electric grid's reliability at increased risk.<sup>17</sup> Climate-related events aside, grid expansion and improvement costs are also likely to be underestimated.

Throughout the course of the Carbon Plan hearings, there was ample discussion of the interconnection of renewable resources to the grid. We agree with the intervenors that the total costs and benefits may not be presented accurately in Duke Energy's draft Plan.<sup>18</sup>

The long lead time in the transmission planning process, coupled with the potential for significant cost savings through utilization of increased solar and wind resources, presents both challenges and opportunities for the state. By prioritizing renewable energy interconnection we have the opportunity to invest in North Carolina companies while setting our state up to meet emission reduction targets. We echo other commenters and intervenors calling for the initiation of a stakeholder process on transmission to begin at the Commission's earliest practicable timeline.

### IV. Cost Minimization

#### A. Securitization

HB951 expressly requires the Carbon Plan to be least-cost. The slow pace of coal plant retirement that Duke Energy proposed in their draft Plan will inflate the overall cost of the final Plan.<sup>19</sup> Ratepayers have borne the risk of coal plants becoming stranded assets for long

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<sup>17</sup> Various Authors/NC Department of Environmental Quality. "North Carolina Climate Risk Assessment and Resilience Plan" June 2020, Pg. 5L-6  
<https://files.nc.gov/ncdeq/climate-change/resilience-plan/2020-Climate-Risk-Assessment-and-Resilience-Plan.pdf>

<sup>18</sup> Numerous intervenors used different transmission cost assumptions than Duke. The Corrected Comments of Clean Power Suppliers Association in NCUC Docket No. E-100, Sub 179, for example, noted (pg. 31) that Brattle - in a study for the Southeast Wind Coalition - was able to assume a cost that was half of what Duke was anticipating. Joint comments of SELC on behalf of CLEAN Intervenors pg 6 in NCUC docket E-100 SUB 179 noted that the actual value of transmission expansion typically is much larger than shown by economic planning assessments that rely on production cost modeling, resulting in a significantly higher benefit-to-cost ratio (pg 7) for solar transmission interconnection. URL: [here](#). Finally, in a report commissioned by NC WARN and Charlotte Mecklenburg NAACP, Mr. Bill Powers notes that by adding solar plus battery power, some transmission build-out can be completely eliminated ([Joint Comments](#) of NC WARN and the Char/Meck NAACP in NCUC Docket No. E-100 Sub 179, pg 45), thus reducing what was assumed by Duke's modeling.

<sup>19</sup> Joint comments of SELC on behalf of CLEAN Intervenors pg 6 in NCUC docket E-100 SUB 179  
<https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=c6afa7f2-ac61-439c-b406-98b42e4ca04e>

enough. Securitization will help ensure that the cost of decarbonizing is equitable and expeditious.

Moreover, CleanAIRE NC agrees with CIGFUR's recommendation that the Commission expressly direct Duke Energy to utilize securitization in retiring coal.<sup>20</sup> Of all of the various decarbonization pathways that have been presented to the commission, we would hope that the final Plan utilizes a pathway that retires coal plants at their earliest practicable timeline.

## B. Energy Efficiency

By accepting the 1% of total retail sales target of Energy Efficiency/Demand Side Management (EE/DSM) proposed in Duke Energy's draft Carbon Plan, the Commission would be missing an opportunity to equitably reduce emissions.

Residential energy efficiency programs have the potential to lift up segments of society that are frequently left behind. Federal resources from the Inflation Reduction Act, such as funding for a state "green bank," will make EE more accessible to low-and middle-income households. By potentially increasing those funds with resources from the state, North Carolina has an opportunity to not only make homes more energy efficient and comfortable to live in, but to increase employment opportunities in the state.

We urge the Commission to set a more ambitious EE/DSM target closer to 1.5% of total retail sales.

## V. Conclusion

The risks to our state's environment and to our economy are too great to continue to rely on antiquated fossil fuels like natural gas. We urge the Commission to reject Duke Energy's near-term Plan and their proposed pathways for carbon reduction as reasonable for planning purposes. In its place, we hope that the Commission will use its judgment to issue a bold Carbon Plan that incorporates the best options and ideas from both the intervenors we have cited herein and from Duke Energy to ensure we equitably meet reduction goals while preserving both grid reliability and affordability.

In summary, we hope the commission will consider the following recommendations:

- Reject Duke Energy's initial draft Carbon Plan and emission reduction scenarios, and instead issue its own version of the North Carolina Carbon Plan.

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<sup>20</sup> Sic CIGFUR at pg 39

- Reject or at a minimum delay the buildout of new natural gas generation units and ensure the final Plan meets both the 2030 and 2050 carbon reduction goals set by HB951.
- Incorporate modeling that demonstrates how joining RGGI would impact carbon emissions in North Carolina into future updates of the Carbon Plan.
- Ensure that RGGI auction proceeds are used in an equitable manner.
- Utilize the SCC for infrastructure planning decisions.
- Ensure that infrastructure planning is transparent.
- Prioritize solar and wind buildout and interconnection, and initiate a stakeholder process on transmission planning as soon as practicable.
- Direct Duke Energy to utilize securitization in coal plant retirements to ensure the Carbon Plan is least-cost.
- Set a EE/DSM target of closer to 1.5% of total retail load.

We hope that following the first iteration of the NC Carbon Plan, the Commission will quickly embark on a more robust stakeholder engagement process that focuses on the needs and desires of impacted communities.

There is additional opportunity to reevaluate the impact of federal investment measures on the Carbon Plan which can expedite our ability to reduce emissions. Taken collectively, if we act swiftly and allow ample time for collaboration between stakeholders, we can build on the first iteration of the Carbon Plan, strengthen our state's clean energy transition, and meet all of our goals as envisioned by HB951.

Thank you for your consideration of these comments.

Sincerely,

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