

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-100, SUB 179

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of:)	INITIAL COMMENTS OF
Duke Energy Progress, LLC, and)	ENVIRONMENTAL JUSTICE
Duke Energy Carolinas, LLC, 2022)	COMMUNITY ACTION NETWORK AND
Biennial Integrated Resource Plans)	DOWN EAST COAL ASH
and Carbon Plan)	ENVIRONMENTAL AND SOCIAL
)	JUSTICE COALITION ON DUKE
)	ENERGY CAROLINAS, LLC AND DUKE
)	ENERGY PROGRESS, LLC'S DRAFT
)	CARBON PLAN

Pursuant to the North Carolina Utilities Commission's ("Commission")

November 19, 2021 *Order Requiring Filing of Carbon Plan and Establishing Procedural Deadlines*, November 29, 2021 *Order Granting Extension of Time*, and January 28, 2022 *Order Clarifying Opportunities for Public Participation in the Development of the Carbon Plan Pursuant to House Bill 951*, Intervenor the Environmental Justice Community Action Network ("EJCAN") and Down East Coal Ashe Environmental and Social Justice Coalition ("DECAESJC") respectfully submit these initial comments on the draft Carbon Plan submitted by Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP") (collectively, "Duke Energy").

INTRODUCTION

House Bill 951 ("HB951") directs the Commission to "take all reasonable steps to achieve" its carbon reduction goals by 2030 and 2050.¹ In developing the Carbon Plan there are clearly many interested stakeholders, as exemplified by the scope of intervenors

¹ S.L. 2021-165, Part I, § 1.

within this docket, however the authority to determine both process and result lies with the Commission. Though the Commission chose in this instance to allow Duke Energy the opportunity to file an initial, proposed Carbon Plan,² that filing itself represents guideposts, equivalent in weight to any other intervening parties' comments, for the Commission to consider as it makes its ultimate determinations.

In developing the Carbon Plan, the Commission must:

[A]t a minimum, consider power generation, transmission and distribution, grid modernization, storage, energy efficiency measures, demand-side management, and the latest technological breakthroughs to achieve the least cost path...to achieve compliance.³

However, to truly determine the least cost path to compliance there are many more factors that the Commission should consider. For instance, there are determinations that will be made within other dockets before the Commission that are highly consequential to the success of the Carbon Plan. While ultimate judgments will not be made, these issues must at least be grappled with in order to truly determine the least cost Carbon Plan for North Carolina.

According to Duke Energy, “[c]oal is an increasingly risky fuel source.”⁴ Without some discussion on the use of securitization, the most economic path to the early retirement of coal assets, it is impossible to accurately analyze Duke Energy’s coal retirement timelines. Similarly, if Duke Energy decides to file a Performance-Based Regulation application, should the Commission approve it, it will have important implications for the Carbon Plan—particularly as to the design of the decoupling rate-

² NC Util. Comm’n, Order Requiring Filing of Carbon Plan and Establishing Procedural Deadlines, E-100 Sub-179 (2021).

³ S.L. 2021-165, Part I, § 1(1).

⁴ DUKE ENERGY, CAROLINAS CARBON PLAN, INTRODUCTION AND BACKGROUND (2022), 3.

making mechanisms and any performance incentive mechanisms. Lawmakers implicitly recognized the co-dependence of these new-to-North Carolina provisions when they chose to adopt them within the same piece of legislation. In order to adopt a Carbon Plan that does not become immediately obsolete, the Commission must not ignore important determinations being made just over the horizon.

EJCAN is a North Carolina based nonprofit organization with its focus in Sampson County, North Carolina. EJCAN has focused on providing technical support, research, and analysis to address environmental concerns of citizens in the county including concentrated animal feeding operations (“CAFOs”), access to clean and safe water, the state’s largest landfill, wood pellet processing and two locations for production of biogas, often referred to as “renewable natural gas.”

Over the last several months a lot of the organization’s work has focused on educating county citizens as well as non-residents about the problems that the production of biogas creates for the communities living near the factory farms where the digesters will be installed and methane captured. EJCAN has created fact sheets and brochures that provide information about all of the issues listed above—many of which are specific to exposure in Sampson County. The organization has also been collaborating with academic partners to provide free water testing that will assist low-income households to determine whether they should be concerned about what may be in the water that they are drinking. That is a major concern because the county is second in the nation in swine production and number one in the state for turkey production.

DECAESJC is a North Carolina nonprofit based in Wayne County. DECAESJC’s mission is to protect the environment and advocate for the most frequently Black,

Indigenous, and People of Color (“BIPOC”) and poor white communities in Wayne County and Eastern North Carolina that have been relocated to some form of toxic living situation. DECAESJC is committed to fighting for climate justice, ensuring community restoration, and community resilience, and has partnered with other organizations across the state to address the harms of coal ash, CAFOs, and wood pellet production and combustion.

The Environmental Justice Community Action Network and Down East Coal Ashe Environmental and Social Justice Coalition thank the Commission for this opportunity to submit comments on an important process for all North Carolinians.

DISCUSSION

A. The lived experience of climate change

Climate change has a major impact on quality of life in Sampson and Wayne Counties. Many of the swine operations are in flood plains, so major storms disrupt life as lagoons overflow into nearby rivers and streams and then into the groundwater, eventually finding its way into many of the private residential wells in the area. There is no county-wide water system, so those who live within three miles of swine or poultry operations are the most likely to suffer extreme damage—from loss of electrical power to flooded roadways—that prevent their being able to remove themselves from the harm caused by extreme weather conditions.

Often these citizens are the last to be contacted to determine whether they need assistance. They are often less informed than other citizens either because they are low-income or minority or have little or no access to power structures in the areas where they live.

Flooding displaces residents,⁵ many of those homes are multigenerational, who can least afford to move and are more than likely faced with either higher rental costs or substandard housing due to the lack of better options. Communities are resilient but recent research has shown that these households are the least like to receive the services needed for home repairs or placement in temporary housing until better accommodations can be found.

B. Least cost application within the Carbon Plan

1. Least cost and risk

Risk can impact least cost in many ways, injecting uncertainty related to projected costs into an already complicated balancing process. The role risk plays in the Carbon Plan's ability to guide North Carolina to reaching the goals of HB951 is an important aspect of that balancing process. While there will always be some degree of uncertainty associated with decisions the Commission must make, this uncertainty must be carefully managed to ensure North Carolina's ability to meet future goals is not put in jeopardy.

There are many realistic and projected cost factors that need to be considered in NCUC's Carbon Plan. Some of these considerable cost factors are not well represented in Duke Energy's proposed Carbon Plan, including the significant potential of cost overruns. These costs and risk factors include but are not limited to: (1) pipeline construction and transportation infrastructure; (2) construction delays; (3) legal fees; (4) new technologies; and (5) potential stranded assets. Also, the social cost of carbon,

⁵ See Ryan E. Emanuel, *Climate Change in the Lumbee River Watershed and Potential Impacts on the Lumbee Tribe of North Carolina*, 163 JOURNAL OF CONTEMPORARY WATER RESEARCH & EDUCATION 79-93 (Apr. 2018), <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1936-704X.2018.03271.x>.

carbon pricing, nonmarket damages, and unmet timeline goals are all factors that impact costs and potential cost overruns.

Duke Energy's planned reliance on pipelines comes with considerable risk both as to cost and to communities. First is the risk of relying on a resource that may never become available. After years of costs and delays attempting to build the Atlantic Coast Pipeline,⁶ there is demonstrable risk in planning to rely on the completion of not just the Mountain Valley Pipeline, which has seen its own cost increases and delays,⁷ but the Southgate extension as well. By the time the Atlantic Coast Pipeline was cancelled, its cost overruns had reached \$2 billion.⁸

Second, even if the pipeline does get built, considering the significant cost overruns already seen, there is cost risk as to the ultimate price tag of such projects.⁹ And if the proposed Mountain Valley Pipeline is terminated, a brand-new pipeline and its needed infrastructure would need to be planned, permitted, constructed, and employed to meet the natural gas expansion goals in all four of Duke Energy's planned scenarios.

Third, there are considerable costs attendant to the construction of a transmission pipeline, including the substantial amount of support infrastructure needed to ensure safety and to allow for its efficient use—least cost should include everything necessary for a pipeline to become used and useful, from shovels and labor to compressor and metering and regulating stations to the cost of land, not just the primary costs. There are

⁶ See Ivan Penn, *Atlantic Coast Pipeline Canceled as Delays and Costs Mount*, N.Y. TIMES (July 5, 2020).

⁷ See *Mountain Valley Pipeline to Seek New Permits, Boosting Cost*, U.S. NEWS & WORLD REP. (May 3, 2022) ("Mountain Valley Pipeline will seek new permits that courts have been rejected twice, increasing the cost for proposed natural gas pipeline"); *The Mountain Valley Pipeline is far from inevitable*, APPALACHIAN VOICES: FRONT PORCH BLOG (Mar. 17, 2022), <https://appvoices.org/2022/03/17/mvp-completion/>.

⁸ Scott DiSavino and Taru Jain, *Dominion takes \$2.8 bln charge to exit Atlantic Coast natgas pipe*, REUTERS (July 31, 2020), <https://www.reuters.com/article/us-dominion-results-atlantic-coast/dominion-takes-2-8-bln-charge-to-exit-atlantic-coast-natgas-pipe-idUSKCN24W21Z>.

⁹ *Id.*

also costs borne by the ecosystems disturbed through construction and by communities, which are in many cases already overburdened with other heavy industry.¹⁰ The recognition and details associated with this need, estimated costs, and risks are noticeably absent from Duke Energy's proposed plan.

Fourth, there is the risk that the pipeline could become a stranded asset as North Carolina seeks to achieve carbon neutrality by 2050. Though Duke Energy believes that "natural gas pipeline infrastructure may eventually be repurposed to support hydrogen fuel," it also concedes that "[m]ost of the natural gas pipelines today have limited ability to transport hydrogen."¹¹ This limited ability to convert from a carbon-based fuel source to a carbon-free one represents a risk of stranding assets while still leaving ratepayers required to pay the costs.

From Moore's Law to fundamental business tenets like economies of scale and improvement through repetition—the proposition that the cost of new technology tends to decrease over time, in many cases rapidly, has held more often than it has not. Further, while there are some benefits to being a "first-mover" or early adopter of new technologies, "over the long haul, early movers are considerably less profitable than later entrants. Although pioneers do enjoy sustained revenue advantages, they also suffer from persistently high costs...."¹² Of the new technologies being considered, nuclear in

¹⁰ There are 858 sources of air pollution in Robeson County, as measured using NC DEQ's Community Mapping Tool, and the county experiences over twice the percentage of days exceeding air quality standards for particulate matter as the rest of the state. Robeson County also ranks last in North Carolina in health factors, health outcomes, and quality of life, as measured by the University of Wisconsin Population Health Institute. Juhi Modi et al, *Environmental Health and Cumulative Impact in Robeson County, NC*, ROBESON CO. COOP FOR SUST. DEV. (July 8, 2020), <https://robcoalition.org/wp-content/uploads/2020/07/Environmental-Health-and-Cumulative-Impact-in-Robeson-County-NC.pdf>; see also *supra* EO246.

¹¹ DUKE ENERGY, CAROLINAS CARBON PLAN, APPENDIX O: LOW-CARBON FUELS AND HYDROGEN (2022), 3, 7.

¹² William Boulding and Markus Christen, *First-Mover Disadvantage*, HARV. BUS. REV. (Oct. 2001).

particular poses a risk as to cost due to the sector-wide cost overruns across recent projects.¹³ With North Carolina ratepayers on the hook, the cost risk of new technologies is an important consideration to include in least cost determinations.

Based on these considerations, the full cost of certain elements needed to implement Duke Energy’s proposed Carbon Plan—such as gas and nuclear infrastructure—may far exceed the costs of a rapid transition to clean, renewable energy sources with mechanisms that deliver energy reliably. The EJCAN and DECAESJC believe that when all costs and risks are considered in developing the Carbon Plan, that the direct transition to clean renewable energy sources will be more cost effective and practical than developing new, extensive, and expensive gas infrastructure. Finally, a massive expense of billions of dollars on such a project and scenario carries a very high-risk factor of being cancelled during its developmental, implementational, or its proposed transitional phases due to a multiplicity of potential reasons discussed above. In this scenario, it is likely that the utility would seek relief from this financial burden by placing at least part of the liability onto ratepayers.

2. Executive Order 246 and the social cost of carbon

Governor Cooper signed Executive Order No. 246 (“EO246”) on January 7, 2022, which specifically encourages the Commission to incorporate the social cost of greenhouse gas emissions (“SC-GHG”), as determined by the federal Interagency Working Group on the Social Cost of Greenhouse Gases, into its decision-making

¹³ See *Energy security gives climate-friendly nuclear-power plants a new appeal*, THE ECONOMIST (Jun. 23, 2022) (detailing that though the Hinkley Point project in the U.K. is 2 years behind schedule and £10 billion over budget, it is still in a better position than projects in Finland, France, and the Vogtle plant in Georgia).

processes.¹⁴ Though the Governor’s executive orders are not binding on the Commission, this encouragement is based upon the recognition that the SC-GHG is comprised of many factors, including some that are likely to significantly impact the energy sector in the years to come.

In order to truly determine the least cost pathway to decarbonization that also “foster[s] the continued service of public utilities on a well-planned and coordinated basis that is consistent with the level of energy *needed for the protection of public health and safety...*,”¹⁵ certain facets of the SC-GHG should be considered. These include valuing the risks posed to communities and critical infrastructure by a changing climate, the energy sector’s role in both precipitating and planning for this crisis, as well as the potential for future investments to either mitigate or exacerbate the harm to come.

3. 2030 versus 2050

HB951 requires that least cost considerations be applied to both the 2030 goal and the 2050 goal within the carbon plan. When considering the many potential pathways to achieving the 2030 goal, the ability to also achieve the 2050 goal in a least cost manner must be given equal weight. This may mean that certain investments that look prudent for reaching the 2030 goal would in fact be unreasonable once the 2050 goal is also considered. For instance, future investments in large, fossil-fuel based generation facilities that are expected to be used for decades with limited ability to convert to carbon-less fuel sources will fundamentally risk the ability to reach the goal of carbon neutrality by 2050.

¹⁴ EXEC. ORDER NO. 246 (Jan. 7, 2022).

¹⁵ N.C. GEN. STAT. § 62-2(a)(6) (*emphasis added*).

As is widely noted, this is an era of unprecedented change within the energy industry in both scale and pace. When applying least cost considerations to the 2050 goal, flexibility itself must also be valued in order for North Carolina to be able to capture the maximum amount of economic benefit, and mitigate as much wasted spending, as it can from these changes. Real Options Analysis represents one such approach to economic assessment that includes uncertainty and flexibility.¹⁶ Without valuing flexibility, there is a risk of becoming over-reliant on large-scale, long-term investments that, while perhaps achieving certain cost-of-scale benefits in the near term, may ultimately become anchors for North Carolina utilities and ratepayers alike as newer, cheaper technologies are adopted elsewhere.

While flexibility will ultimately be one factor among the many competing considerations within least cost its inclusion is essential in order to mitigate the risk of making large investments in outdated technologies that ratepayers will be stuck with for decades.

C. Greater outreach and consultation are needed for certain communities of interest

“[M]eaningful, fair, and equitable public engagement in state agency decision-making is necessary to avoid and remedy harmful impacts on communities most severely and frequently impacted...”¹⁷ There are many communities in North Carolina that have

¹⁶ See generally Marta Biancardi et al, *R&D investment decision on smart cities: Energy sustainability and opportunity*, 153 CHAOS, SOLITON & FRACTALS 111554 (Dec. 2021), <https://www.sciencedirect.com/science/article/abs/pii/S0960077921009085>; F. Penizzotto et al, *Real options valuation of photovoltaic power investments in existing buildings*, 114 RENEWABLE AND SUSTAINABLE ENERGY REVIEWS 109308 (Oct. 2019), <https://www.sciencedirect.com/science/article/abs/pii/S1364032119305167#!>; Liyun Liu et al, *The Application of Real Option to Renewable Energy Investment: A Review*, 158 ENERGY PROCEDIA 3494-3499 (Feb. 2019), <https://www.sciencedirect.com/science/article/pii/S1876610219309658>.

¹⁷ EXEC. ORDER NO. 246 (Jan. 7, 2022).

never meaningfully engaged with the Commission despite its decisions having impacts on their daily lives. As Governor Cooper recognized in EO246, it is often necessary for state agencies to take intentional steps for the voices of those most impacted to be brought into the room while decisions are still being made.

With the role the Carbon Plan will play in guiding future infrastructure siting and investment, economic development opportunities, and the affordability of electricity for North Carolina households, it is very important that environmental justice and Indigenous communities' voices be included in the development process. Duke Energy "convened a small group of environmental justice-focused stakeholders on May 3, 2022, to begin discussing how to engage North Carolina communities and understand what issues are important to low-income and communities of color."¹⁸ Though Duke Energy claims this effort will be ongoing, this was their only effort to substantively engage with justice and equity perspectives before the release of their draft plan and it occurred less than two weeks before that date. Further, Duke Energy's choice to design the general stakeholder engagement meetings over the course of entire business days made the substantive participation of low-income, Indigenous, and working-class parties all but impossible. Duke Energy's at best feeble attempts to engage with the environmental justice community around the Carbon Plan should be considered as the Commission contemplates future steps it might deem necessary during the continued development of this Carbon Plan.

Title VI of the Civil Rights Act of 1964 provides that "No person in the United States shall, on the ground of race, color, or national origin, be excluded from

¹⁸ DUKE ENERGY, CAROLINAS CARBON PLAN, APPENDIX B: STAKEHOLDER ENGAGEMENT (2022) 22.

participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”¹⁹ Both the U.S.

Environmental Protection Agency and the U.S. Department of Energy have regulations implementing this provision—civil rights laws function separately from energy or environmental laws.²⁰

There are two types of discrimination that must be considered, intentional discrimination and disparate impact. Disparate impact discrimination occurs when a recipient of federal financial assistance uses a facially neutral policy or practice that has a harmful and disproportionate effect based on race, color, or national origin—intent does not matter. Disparate impact includes many types of harms, including environmental harms like air and water quality; adverse health effects like asthma, other respiratory illness, cardiac disease, and cancer; and non-health harms like nuisance orders and noise, traffic congestion, and social and recreational harms.²¹

Disparate impact also includes cumulative impacts. Cumulative impacts are:

The exposures, public health or environmental effects from the combined emissions and discharges in a geographic area, including environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts will take into account sensitive populations and socio-economic factors, where applicable and to the extent data are available.²²

Cumulative impacts are often the result of many different sources of exposure to environmental stressors within communities, which means that most often “multiple decision-making entities [are implicated] in addressing the causes that compromise

¹⁹ 42 U.S.C. § 2000d.

²⁰ 40 C.F.R. § 7.30, 7.35; 10 C.F.R. § 1040.13.

²¹ Secretary’s ENVTL JUSTICE AND EQUITY BOARD, N.C. DEP’T OF ENVTL. QUALITY, PRESENTATIONS ON CUMULATIVE AND DISPARATE HEALTH IMPACTS IN N.C. (2022), <https://deq.nc.gov/media/29156/open>.

²² *Id.* at 6.

environmental health and quality of life in these communities, requir[ing] an interagency response.”²³

Though not binding on the Commission, EO246 also has directives regarding outreach and consultation on issues concerning environmental justice. These require cabinet agencies to identify a lead person for environmental justice and equity concerns, develop an agency public participation plan, and participate in ongoing discussions concerning further actions “to advance environmental justice, equity, and affordability priorities of North Carolinians that live in, work in, or represent low- and moderate-income communities, Indigenous communities, and communities of color.”²⁴

After Duke Energy’s lacking attempt at stakeholder engagement with environmental justice communities, the Commission should act to ensure that these communities’ voices are included—both in the development of the Carbon Plan as well as in future dockets. In consideration of the requirements of Title VI and EO246, the NCUC should consider consulting directly with at-risk communities, including the eight recognized tribes of North Carolina. This is particularly important as future decisions are made subsequent to the implementation of the Carbon Plan, such as around building new pipelines, transmission infrastructure, and generating facilities.

In conducting future stakeholder engagement and consultation, the Commission should take into account that in many of these communities’ access to broadband services is limited at best. Conducting meetings in areas that are predominantly urban necessarily excludes communities that are rural and may be served by both electric cooperatives and Duke Energy. Every effort should be made to expand the locations of in person meetings

²³ *Supra* EO246.

²⁴ *Id.*

as there is no guarantee that the in-person or virtual meetings will provide for fair treatment and meaningful engagement as defined in the universally accepted definition of environmental justice.

D. North Carolina communities should have more access to demand side management programs and opportunities for community-ownership of generating assets

1. Duke Energy's Grid Edge programs do not go far enough to improve access to clean energy for low- and moderate-income households

Affordability and energy insecurity—commonly defined as “an inability to adequately meet household basic energy needs including heating, cooling, and lighting”—are major issues in the Southeast, with one in four households facing access or affordability challenges.²⁵ This issue is particularly acute in areas with high rates of poverty. While rates and charges must be just and reasonable and “without discrimination, undue preferences or advantages, or unfair or destructive competitive practices,”²⁶ there are many policies and programs that may be adopted to address energy insecurity issues in North Carolina that do not pertain to rates.

Duke Energy's proposed Carbon Plan does make some improvements within their Grid Edge programs, though they can and should be expanded upon. Proposals that Duke Energy identified through its work with the Energy Efficiency/Demand Side Management Collaborative provide an entry point, including refining eligibility criteria to expand access to income-qualified programs, expanding weatherization offerings across service territories, pursuing an Energy Burden Reduction Pilot program, and expanding

²⁵ DUKE UNIVERSITY NICHOLAS INST. ET AL, STAKEHOLDER RECOMMENDATIONS FOR REDUCING ENERGY INSECURITY IN THE SOUTHEAST UNITED STATES (2022), <https://nicholasinstitute.duke.edu/sites/default/files/publications/Stakeholder-Recommendations-for-Reducing-Energy-Insecurity-in-the-Southeast-United-States.pdf>.

²⁶ N.C. GEN. STAT § 62-2(a)(4).

the Neighborhood Energy Saver program. The development of an on-tariff financing pilot is likewise encouraging.²⁷ With the development of these programs, the Commission should also require clear implementation timelines and metrics to use to analyze projects, ensure their efficient implementation, and determine their potential to be scaled up.

North Carolina can go further than what Duke Energy proposes, Duke University's Nicholas Institute, with partners, recently published recommendations, developed through extensive stakeholder engagement, that address energy insecurity in the Southeast.²⁸ Helping renting households is a common theme, with recommendations to create programming specifically for renters and to expand weatherization and clean energy programs to rental properties. Another is for an expansion of inclusive energy efficiency financing, with robust consumer protections, such as a Pay as You Save (PAYS) program.²⁹ When conducting cost effectiveness tests for energy efficiency, the inclusion of non-energy benefits should be implemented and expanded.

Requiring data collection is essential to measuring the scale of the issue as well as monitoring the efficacy of programs that target energy insecurity. This data should be publicly accessible to allow as much research and analysis as possible, hopefully rendering new and impactful solutions. Finally, as the Covid pandemic made clear, utility shutoffs are system-wide issue that have very real impacts on many people's lives. There need to be "strong procedural protections, seasonal shutoff moratoria, protections for the

²⁷ DUKE ENERGY, CAROLINAS CARBON PLAN, APPENDIX G: GRID EDGE AND CUSTOMER PROGRAMS (2022).

²⁸ See *supra* STAKEHOLDER RECOMMENDATIONS FOR REDUCING ENERGY INSECURITY IN THE SOUTHEAST UNITED STATES.

²⁹ This may be similar to what Duke Energy's proposed on-tariff financing proposal will be, though lessons for the pilot should be taken from the Nicholas Institute report.

socially vulnerable, and payment assistance programs to prevent disconnection from essential utility service”³⁰ whenever possible.

2. There need to be more opportunities for community participation and ownership of future clean energy assets

Impacted community engagement is an essential aspect of a just clean energy transition. These communities need to have the opportunity to not only participate in critical decision-making processes, but to also have some ownership in the projects being placed there. To bring these voices into the room the Commission must help to expand community engagement opportunities, such as by exploring alternative methods of engagement like consultations, and to reduce barriers to representation within the Commission’s processes.

The Nicholas School report also includes some recommendations relevant to expanding community access, including developing “regional coordinating committee[s] to facilitate cross sector collaboration among stakeholders....”³¹ These could be implemented within certain communities-of-interest and provide an ongoing forum for dialogue as subsequent decisions get made. With the complexity and number of different programs offered, implementing a public one-stop shop that outlines eligibility across programs, includes a centralized aid application, and allows for collaborative program implementation could go a long way to increasing public adoption. Similarly, an awareness campaign targeted to educate at-risk individuals on program options would increase participation rates.

³⁰ *Id* at 5.

³¹ *Id*.

For many reasons, renting households are often locked out from clean energy access. Community solar and solar for multifamily housing are two important options that can help expand these opportunities. Over recent years there have been significant developments around program design for community solar, achieving subscriber savings and energy burden reduction while building significant capacities, with Minnesota, Massachusetts, Florida, and New York leading the way on adoption.³² Including solar (and energy efficiency) programs for multifamily housing specifically has the potential to achieve carbon reduction while also realizing savings for households. As many cities across North Carolina seek to implement their own carbon neutrality goals, multifamily housing represents one of the most daunting sectors to address—systemic guidance at the state level is imperative to helping develop and scale such programs.

E. Biofuels are not “clean energy”

As detailed on the Commission’s website, the Renewable Energy and Energy Efficiency Portfolio Standard (REPS) became law in 2007 with the passage of Senate Bill

3. Of relevance to the Carbon Plan, NCUC’s description of REPS includes the following:

Under this new law, investor-owned utilities in North Carolina will be required to meet up to 12.5% of their energy needs through renewable energy resources or energy efficiency measures. Rural electric cooperatives and municipal electric suppliers are subject to a 10% REPS requirement.... Renewable energy facilities include facilities that generate electric power by the use of a renewable energy resource, combined heat and power systems, and solar thermal energy facilities. Renewable energy resource includes...a biomass resource, including agricultural waste, animal waste, wood waste, spent pulping liquors, combustible residues, combustible liquids, combustible gases, energy crops, or landfill methane; waste heat derived from a renewable energy resource and used to produce electricity or useful, measurable thermal energy at a retail electric

³² NATIONAL RENEWABLE ENERGY LAB, SHARING THE SUN: COMMUNITY SOLAR DEPLOYMENT, SUBSCRIPTION SAVINGS, AND ENERGY BURDEN REDUCTION (2021), <https://www.nrel.gov/docs/fy21osti/80246.pdf>.

customer's facility; or hydrogen derived from a renewable energy resource.³³

The 2007 law codified biofuels, including biogas and biomass, as “renewable resources” although, from a purely scientific perspective, they are technically not “renewable” at all. Validity of renewability includes the definition that when a renewable resource is used, the particular renewable resource being used is not depleted. When any resource is burned and incinerated, it is completely depleted and there is nothing left of it but its byproducts, many of which are highly polluting.

In spite of the dispute regarding the renewability of biofuels, there is no dispute regarding the fact that the biofuels are not a clean source of energy production—it is a false solution and will further exacerbate the conditions in already overburdened communities.

In some portions of our state, particularly in Eastern NC, agricultural and waste systems are turning to technological additions, such as anaerobic digestion systems over agricultural (hog) waste lagoons, to attempt to manage greenhouse gas emissions. Duke Energy has invested in several of these biogas projects, they note four of which (totaling 28MW of electric generation) in their Draft Plan.³⁴ These projects may comply with Federal and State laws, and they may benefit from subsidy programs that have the stated intent of improving the environment, however, they are not carbon free sources of electricity and should not be treated as such. In addition, the installation of pipeline to transport the methane or the tucking of waste to a facility, as proposed, further exposes

³³ *Renewable Energy and Energy Efficiency Portfolio Standard (REPS)*, N.C. UTILITIES COMMISSION (last visited July 15, 2022), <https://www.ncuc.net/Reps/rebs.html#:~:text=Under%20this%20new%20law%2C%20investor,to%20a%2010%25%20REPS%20requirement>.

³⁴ DUKE ENERGY, CAROLINAS CARBON PLAN, APPENDIX O: LOW-CARBON FUELS AND HYDROGEN (2022) 1.

communities to disruption during the laying pipeline, any accidents after the pipeline is laid, or to the excess diesel fuel emissions as tanker trucks move in and out to pick up and transport the hog waste to a process facility.

The State has gone to great lengths to streamline development of biogas projects in North Carolina. The General Assembly's passage of the 2021 Farm Bill, and the subsequent issuance of a general permit, will undoubtedly increase the number of bio-digestion systems across the state. These facts are contradictory to Duke's assessment that there are numerous barriers to this fuel source, and unfortunately because these fuels are becoming more readily available to market, these so called "low-carbon fuels" may actually increase overall carbon emissions in the state.

Biofuels from waste must be inherently dirty sources of energy, as such they first must go through an upgrading process to meet utility grade fuel standards; this is because these fuels are often tainted with impurities and contain excessive amounts of Nitrous and/or Sulphur oxides. Frequently, gas that cannot be upgraded is scrubbed, flared off, or in the worst-case scenario, vented. In at least one instance, a biogas project used multiple times as much utility grade natural gas in their flare to inflate the heat content of combusted gas and burn off impure tail-gas that contained excessive sulfur dioxide from their own project³⁵. This amplified the amount of carbon dioxide emitted at the project site itself, additional carbon was emitted once the biogas was burned for electric generation. This further amplifies the quantity of carbon dioxide that is emitted into the atmosphere.

³⁵ In re Request for Declaratory Ruling by Optima TH, LLC, Response of the Department of Environmental Quality Division of Ari Quality, Environmental Management Commission (Nov. 8, 2021), <https://deq.nc.gov/media/25587/open>.

Research has shown that the production of methane from anaerobic digesters increases the levels of ammonia, hydrogen sulfide and sulfur dioxide in the air. Ammonia is an irritant and can burn the skin, mouth, throat, lungs, and eyes. It is a precursor to particulate matter which can further exacerbate pre-existing respiratory conditions. The process can also increase the level of nitrates that may find its way into groundwater and ultimately into the residential wells that most of these residents depend as a water resource.³⁶

There is a history of industrial animal operation waste management harming environmentally impacted communities.³⁷ In a report published by the National Association of Local Boards of Health, they state that, “Researchers in North Carolina found that the closer children live to a CAFO, the greater risk of asthma symptoms.”³⁸ Additionally, a paper by the CDC recently found that an estimated 17,900 U.S. deaths per year are attributable to pollution from farms.³⁹

Since the scope of this docket is limited to sources of carbon that Duke Energy directly controls, EJCAN and DECAESJC acknowledge that these emissions are likely not under the reduction targets established by HB951. However, Duke Energy does

³⁶ Recent studies suggest that when a lagoon is capped, potentially harmful ammonia accumulates in quantities about 3.5 times higher than in an uncapped lagoon. S.G. Lupis et al, *Best Management Practices for Reducing Ammonia Emissions: Lagoon Covers*, CO. ST. UNIV. EXT. (2012), <https://extension.colostate.edu/topic-areas/agriculture/best-management-practices-for-reducing-ammonia-emissions-lagoon-covers-1-631b/>; see also Carrie Hribar, *Understanding concentrated animal feeding operation and their impact on communities*, ENVIRONMENTAL HEALTH (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf.

³⁷ For instance, note the 2017 settlement in NCEJN, Waterkeeper Alliance, Inc., and Cape Fear River Watch v. NC DEQ and the subsequent report on efforts by the Department to address equity in the Swine General Permit. N.C. DEP’T OF ENVTL. QUALITY, TITLE VI: INCREASING EQUITY, TRANSPARENCY, AND ENVIRONMENTAL PROTECTION IN THE PERMITTING OF SWINE OPERATIONS IN NORTH CAROLINA (2020), <https://deq.nc.gov/media/15659/download>.

³⁸ *Supra* Carrie Hribar.

³⁹ Nina G.G. Domingo et al, *Air quality-related health damages of food*, PNAS (May 2021), <https://www.pnas.org/doi/full/10.1073/pnas.2013637118>.

purchase this gas feedstock and incorporates it into its fuel stream for generation purposes.⁴⁰ As such, the carbon burned downstream at the point of generation should be accounted for in Duke’s carbon accounting methodology. EJCAN and DECAESJC urge the Commission to give additional scrutiny to this fuel type, and the carbon accounting methodology should be updated to include the flaring of biogas upstream since this is fuel generated in state and for the regulated utilities that have been mandated to reduce emissions.

F. Time requirements within House Bill 951

1. House Bill 951 only authorizes time extensions under certain, explicit circumstances.

With the enactment of HB951 on October 13, 2021, the North Carolina Legislature and Governor Cooper committed to decarbonizing North Carolina’s electricity sector by mandating that “[t]he Utilities Commission shall take all reasonable steps to achieve a seventy percent (70%) reduction in emissions of carbon dioxide (CO₂) emitted in the State...by the year 2030 and carbon neutrality by the year 2050.”⁴¹ The choice of these dates was intentional—timing matters when it comes to reducing carbon emissions and mitigating the impacts of climate change. These dates are also commonly used around the world as benchmarks for measuring carbon reductions within a geographic area as well as the future impacts of climate change.⁴² For instance, taking urgent action to combat the drivers of climate change is one of the United Nations’ 2030

⁴⁰ *The Next Evolution in Agricultural Biogas – The OPTIMA-KV Pipeline Renewable Natural Gas Project*, CAVANAUGH (last visited July 15, 2022), <http://www.cavanaugholutions.com/bioenergy/projects/optima-kv/>.

⁴¹ S.L. 2021-165, Part I, § 1.

⁴² See e.g., UNITED NATIONS, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2022: MITIGATION OF CLIMATE CHANGE (2022).

Sustainable Development Goals.⁴³ Missing these deadlines could harm North Carolina’s reputation in the global community. Lawmakers’ concern for timing is further demonstrated by the accelerated timeline for the adoption of an initial carbon plan, despite acknowledging the technological complexities of the task and requiring stakeholder input during the process.

When HB951 does contemplate an extension of time beyond the benchmarks of 2030 and 2050, it does so by applying explicit restrictions to what may be taken into consideration and how long that extension may be granted. While the Commission “[r]etain[s] discretion to determine optimal timing and generation and resource-mix to achieve the least cost path to compliance with the authorized carbon reduction goals...,” without a further showing that it is need, as discussed further below, this is statutorily limited to a maximum extension of 2 years.⁴⁴

i. “in the event”

HB951 provides two, specific options that allow the Commission to “exceed the dates specified to achieve the authorized carbon reduction goals by more than two years:”

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.⁴⁵

Both provisions are prefaced by the clause, “in the event.” According to Merriam-Webster,⁴⁶ there are a number of ways to interpret this phrase. The first and most

⁴³ UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, SUSTAINABLE DEVELOPMENT GOALS (2020).

⁴⁴ S.L. 2021-165, Part I, § 1(4).

⁴⁵ *Id.*

⁴⁶ *In the event*, MERRIAM-WEBSTER DICTIONARY, <https://www.merriam-webster.com/dictionary/in%20the%20event>.

straightforward definition is “something that happens” or “a noteworthy happening.” Applying this to the language within HB951 would require an “event” to happen prior to the Commission approving an extension of time beyond 2 years—without such an “event,” such a determination cannot be proscriptively made. In the context of HB951, such an “event” must be tied directly either to the Commission’s authorization of a nuclear or wind energy facility or be something that makes an extension “necessary to maintain the adequacy and reliability of the existing grid.” While such an “event” may be used to justify an extension in the future, as this is the *initial* development of the North Carolina Carbon Plan no “event” can have happened yet; therefore, there can be no basis at this point for a time extension beyond 2 years.

Another potential way to interpret “in the event” is as “a postulated outcome, condition, or eventuality.”⁴⁷ To postulate is “to assume or claim as true, existent, or necessary,”⁴⁸ so a postulated outcome would be one assumed or claimed to be true, existent, and/or necessary. In the context of HB951, this understanding could be read to apply to the clause “in the event necessary to maintain the adequacy and reliability of the existing grid.” However, the very nature of a postulated outcome as “assumed” shows this reading as improper—the Commission’s determinations, particularly those as to least cost, must have a basis in evidence and fact. Further, this reading would provide a catch-all that would allow time extensions solely subject a declaration that it is necessary for the reliability of the grid. It is a general principle that lawmakers do not usually design laws to intentionally allow an exception to swallow the rule, HB951 should not be read that way either.

⁴⁷ *Id.*

⁴⁸ *Postulate* MERRIAM-WEBSTER DICTIONARY, <https://www.merriam-webster.com/dictionary/postulated>.

- ii. *“authorizes construction of a nuclear facility or wind energy facility”*

The Carbon Plan, much like an Integrated Resource Plan,⁴⁹ provides a framework that the Commission will then use to guide future decisions and to “achieve maximum efficiencies for the benefit of the people of North Carolina.”⁵⁰ It does not, however, “authorize construction” of any generating facility by itself.⁵¹ While at some future point the Commission may find it necessary to “exceed the dates specified...by more than two years” based upon the needs of a generating facility — such as after the Commission has approved a Certificate of Public Convenience and Necessity for “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 [Duke Energy]” — but because this is the *initial* Carbon Plan, such a finding would be improper at this time.

CONCLUSION

When Duke Energy and Dominion Energy cancelled the Atlantic Coast Pipeline, Governor Roy Cooper issued the following statement:

This decision and the changing energy landscape should lead to cleaner and more reliable energy generation in North Carolina. Our Clean Energy Plan provides an excellent framework and stakeholder process for renewable energy moving forward.⁵²

⁴⁹ The development process and content of both the Carbon Plan and Integrated Resource Plans are sufficiently similar for the Commission to be considering merging them together. NC Util. Comm’n, Order Requiring Filing of Carbon Plan and Establishing Procedural Deadlines, E-100 Sub-179 (2021).

⁵⁰ N.C. GEN. STAT § 62-110.1(c).

⁵¹ Similar to how the Commission, after developing the Integrated Resource Plan, “shall consider such analysis in acting upon any petition by any utility for construction,” N.C. GEN. STAT § 62-110.1(c), the Carbon Plan also provides the extensive analysis upon which petitions for a certificate of public convenience and necessity will be judged. These processes are, however, distinct.

⁵² Press Release, Governor’s Office, Governor Cooper Comment on Pipeline Decision (July 5, 2020), <https://governor.nc.gov/news/governor-cooper-comment-pipeline-decision>.

This statement by Governor Cooper is a meaningful way to close this discussion points in reference to the Commission's Carbon Plan. The question before the Commission and our State is: Are we going to follow and commit to the "changing energy landscape" that "should lead to cleaner and more reliable energy generation in North Carolina?" Duke Energy seeks to make the case that a massive expansion of gas is a vital part of the "least cost" commitment of our state and that a rapid shift to clean renewable energy will not provide the most reliable and secure energy grid that our state needs. EJCAN and DECAESJC strongly disagree with Duke Energy on both accounts and, according to Governor Cooper's statement, he most likely does as well. When all the evidence is compiled, reviewed, and analyzed, EJCAN and DECAESJC anticipate that the Commission's position will be in alignment with Governor Cooper's stated position and the one presented in these comments. If that be the case, the question remains: Will the Commission have the will to lead our state in the direction toward cleaner and more reliable energy generation in North Carolina? EJCAN and DECAESJC expect and hope that will be so.

The EJCAN and DECAESJC appreciate the opportunity to provide comment on the North Carolina Carbon Plan process and Duke Energy's draft carbon plan, and hope that the Commission finds this information and commentary useful as it seeks to craft a Carbon Plan that truly represents all of North Carolina.

Respectfully submitted this 15th day of July, 2022.

s/Ethan Blumenthal
Ethan Blumenthal
N.C. Bar No. 53388
ECB Holdings LLC
1624 Nandina Corners Alley
Charlotte, NC 28205

Phone: (704) 618-7282

Attorney for EJCAN and DECAESJC

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the foregoing document upon all counsel of record as listed in docket E-100, Sub 179 on the Commission's website by email transmission.

This the 15th day of July, 2022.

/s/ Ethan Blumenthal
Ethan Blumenthal