

12 PRINCIPLES

For a North Carolina Carbon Plan in the Public Interest

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VOTE SOLAR

Overview

In October 2021, the North Carolina General Assembly passed, and Governor Cooper signed a new [energy bill, HB 951](#), into law. The new law called on the North Carolina Utilities Commission (NCUC) to develop a carbon plan for the state by the end of 2022 that would reduce carbon dioxide emissions to 70% below 2005 levels by 2030 and achieve carbon neutrality by 2050.

Wasting no time, the NCUC issued an [order](#) in November instructing Duke Energy to file a proposed carbon plan this spring, and to hold three stakeholder meetings prior to that filing to gather input from North Carolinians. This document strives to indicate what a carbon plan created in the public interest would acknowledge and include, and to serve as a call to action to groups across North Carolina with an interest and a stake in decarbonizing our electric power systems.

Our Vision

People Power NC, a group of clean energy and social justice organizations, envision a North Carolina where everyone, no matter where they live, has a right to clean and affordable energy, and is assured of equitable energy production, transmission, distribution and consumption that protects our health, soil, air, water, and climate.

We envision a North Carolina centered on anti-racist energy policies that are determined fairly, with democratic accountability at all levels of government.

We envision a North Carolina that is fossil fuel free and powered by local renewable energy, with a clean energy economy where workers are free to unionize, valued for their work, and guaranteed a living wage irrespective of their occupations or employers.

A North Carolina Carbon Plan in the Public Interest Should...

- 1. Be the Responsibility of the North Carolina Utilities Commission**
- 2. Center Stakeholder Feedback**
- 3. Establish Comprehensive Metrics for Success**
- 4. Reflect Work from the Previous Clean Energy Plan Process**
- 5. Maximize Near-Term Deployment of Renewable Resources and Storage**
- 6. Set an Ambitious Timeline for Closing Coal**
- 7. Allow No New Gas**
- 8. Capture Maximum Benefits of Customer-Owned Resources**
- 9. Lead to Fair and Affordable Rates**
- 10. Address Historic Harm from Fossil Fuels and Dirty Energy**
- 11. Build Climate Resilience**
- 12. Identify & Drive Changes in State/Local Policies Necessary for Plan Execution**

1. Be the Responsibility of the North Carolina Utilities Commission

The language of HB 951 (session law 2021-165) states clearly that the carbon reduction goals, and the plan that dictates how Duke Energy will achieve them, are the responsibility of the NCUC. This is important to ensure that the carbon plan represents the interests of North Carolina citizens, not Duke Energy's investors.

The NCUC, a government agency with a mission to regulate utilities in the public interest, should acknowledge that there are multiple pathways to emissions reduction. It should also acknowledge that, as a corporation bound by fiduciary responsibility, Duke Energy is biased toward a pathway that would maximize their bottom line, and shareholder value, rather than prioritize renewable energy innovation, energy sovereignty, energy efficiency, and weatherization at the customer level.

As a result, there is inherent tension in the road to a fossil-free North Carolina. By allowing Duke Energy to lead the process, the number of pathways available would decrease, hurting consumers, businesses, and future generations of North Carolinians. We call on the NCUC to take full authority over this process and to see it as an opportunity to envision a new North Carolina energy grid.

2. Center Stakeholder Feedback

Every North Carolina city, business, and household will be impacted by the design of the NC carbon plan. The plan will: 1) help cities meet their own carbon reduction goals; 2) help businesses meet their Environmental, Social, and Governance (ESG) goals; and 3) help households gain access to clean energy. Therefore, input from all of these constituencies is needed in designing the carbon plan.

The stakeholder feedback process should:

A. Have an explicit focus on environmental justice. Communities with higher percentages of people of color and low- to moderate-income households have been harmed most by an energy system run on fossil fuels. The transition to a clean energy system should be designed with those populations in mind.

B. Acknowledge and address carbon plans that are dependent on Duke Energy's actions. Cities and businesses across the state have developed their own carbon goals, based on the feedback of citizens, customers, and investors. The success of these plans relies heavily on Duke Energy doing its part to help its large accounts reduce their emissions.

C. Be conducted across the service area. Duke Energy serves customers across North Carolina. Meetings held for public input should be scheduled with geographic, racial, and income diversity in mind.

3. Establish Comprehensive Metrics for Success

The carbon plan must outline a clear and transparent method for 1) identifying carbon dioxide equivalent emissions from electric generating facilities and 2) measuring reductions on an annual basis. Reports on plan goals must be released annually to the public with a complete inventory of system emissions included. The method should:

A. Measure all six primary greenhouse gas (GHG) pollutants, not just carbon dioxide. The international standard in GHG reporting is to measure all six primary GHG pollutants. Duke Energy already does this in its current GHG inventories by using the metric measure “carbon dioxide equivalents” (CO₂e). The carbon plan should account for methane and other dangerous pollutants contributing to the climate crisis, not just carbon dioxide.

B. Use a third-party verification service. Verification is the norm for companies seeking investor or regulatory approval of their emissions reduction achievements. In its own filing to the South Carolina Public Service Commission, Duke Energy referred to investor concern about climate risk, and investors are right to be concerned. In order to fully allay these concerns, however, emissions reductions must be independently verified.

C. Account for system-wide emissions. Duke Energy operates two systems (Duke Energy Carolinas and Duke Energy Progress) that both cross the border between North Carolina and South Carolina, and existing inventories conducted by the utility included emissions in both states. Because North Carolina ratepayers are served by Duke Energy assets located in South Carolina, emissions from those assets should continue to be included in the inventory.

D. Clearly identify interim milestones, associated schedules, and responsible parties.

4. Reflect Work from the Previous Clean Energy Plan Process

Throughout 2019 and 2020, North Carolina conducted a clean energy stakeholder process that produced the [NC Clean Energy Plan](#) (CEP), the [Power Sector Carbon Reduction](#) report (which expanded on CEP recommendation A-1) and the [North Carolina Energy Regulatory Process](#) (NERP) report, which expanded on CEP recommendation B-1.

Many local governments, nonprofit organizations, academic institutions, and subject matter experts participated in that process, analyzing a variety of policies that could contribute to decarbonizing the grid. The NCUC order requires that the 2022 carbon plan take recommendations from that clean energy process into account.

The carbon plan should, at a minimum, acknowledge and evaluate emissions scenarios that would result from adopting the policies examined during the CEP process.

Work on two of these – performance-based regulation (PBR) and securitization of retiring fossil assets – is already underway. The NCUC should ensure that these policies are implemented in such a way as to maximize their contribution to the goals of the carbon plan.

The carbon plan should also assess the emissions-reduction potential of CEP policies not yet being considered by the NCUC. If these policies would be useful, the NCUC should determine what legislative or regulatory steps are necessary to enact them in such a way as to minimize the financial and pollution burden on underserved communities that have been disproportionately impacted.

5. Maximize Near-Term Deployment of Renewable Resources and Storage

Decarbonizing the grid on a timeline that will help the world avoid the worst impacts of global warming will require the immediate retirement of fossil fuel facilities and the rapid integration of renewable generation capacity onto the grid. Fortunately, the technology we need to do this already exists. A carbon plan in the public interest should:

a. Advance wind energy

In June 2021, Governor Roy Cooper's Executive Order No. 218 established offshore wind development goals of 2.8 gigawatts (GW) off the North Carolina coast by 2030 and 8 GW by 2040. The carbon plan should incorporate these goals. In addition, by joining this goal with the principle of low-cost procurement, the NCUC should require Duke Energy to compare the costs of procuring wind energy from a third party versus building facilities itself.

b. Couple solar energy with battery energy storage systems

Pairing solar energy systems with battery storage can offer the grid a variety of benefits. [Batteries](#) help to ensure a predictable power supply, even when the wind isn't blowing or the sun isn't shining. They can also help reduce demand and avoid the use of "peaker plants" powered by fossil fuels. Finally, battery storage can help provide communities with the redundancy they need during inclement weather events, such as hurricanes or heat waves. The carbon plan should detail plans to rapidly expand the pairing of solar and storage across the service areas.

c. No imaginary technology

Duke Energy's 2020 climate report coined a new term—"ZELFR" (zero-emitting load-following resources)—to describe future, zero-emissions, on-demand energy sources that Duke claims they need in order to decarbonize the grid. However, ZELFRs seem to be nothing more than a way for Duke to continue to operate a fossil-heavy grid while waiting for a unicorn technology. We know we can reduce carbon emissions with the technologies we have already. A successful carbon plan cannot rely on hypothetical technologies.

6. Set an Ambitious Timeline for Closing Coal

Duke Energy's coal plants have long been uneconomic. When Duke runs these plants, they make energy unnecessarily expensive and disproportionately pollute the air and water in communities of color and low-wealth communities. Duke's coal plants expose vulnerable populations to coal ash pollution, which causes cancer and can damage the nervous system, heart, lungs, kidneys, and more.

HB 951 called for securitization of costs associated with subcritical facilities. The securitization docket should be combined with the carbon plan. The retirement of all coal plants should be accelerated; Duke should close half of its coal fleet by 2025; achieve coal-free energy by 2030; and include support for just, community-led transition plans for coal plant communities.

7. Allow No New Gas

For two reasons, we need a carbon plan that accomplishes its goals with no new gas infrastructure. First, [climate scientists](#) say it is critical to reduce emissions of methane immediately if we are to prevent catastrophic climate change. Methane, the primary component of gas, is 80 times more potent than CO₂ but stays in the atmosphere only about 12 years, compared to hundreds of years for CO₂. This means cuts in methane emissions help reduce warming almost immediately. However, HB 951 addresses only carbon dioxide. A carbon plan that allows utilities to build new gas plants will not avert climate disaster.

Second, gas-burning power plants have a lifetime of several decades. Even if we ignore methane emissions, any gas plants built now will have to be retired early to meet carbon plan targets, but utilities will still be entitled to collect the full cost of the plants – plus profit – from their customers. A [2021 report](#) estimated those “stranded costs” at \$4.8 billion. We can achieve carbon neutrality without forcing electricity customers to pay billions for plants that aren’t even running.

8. Capture Maximum Benefits of Customer-Owned Resources

Today, most electricity generation occurs at large, centralized facilities that require the use of long transmission and distribution lines to carry electricity to customers. However, if customer-owned resources (such as solar, batteries, thermal water storage, and electric vehicles at homes, warehouses, or schools) can serve as distributed power plants across the service area, our grid will be more resilient and will give customers the energy independence they have long sought.

Energy efficiency (EE) and customer-owned resources, when invested in heavily and intentionally, are an immediate pathway to emissions reduction. A [2020 report](#) from the American Council for an Energy Efficient Economy (ACEEE) found that “Continuing and further expanding on North Carolina’s EE programs and policies could achieve 11% of the electric power sector greenhouse gas (GHG) reductions needed to meet the state’s 2030 goals.”

Policies to achieve this would:

A. Reduce customer demand with distributed solar

Reducing customer demand by encouraging energy independence with renewables plus storage is a cost-effective, sustainable way to reduce greenhouse gas emissions. HB 951 specifically allows the utility to use demand-side management in planning for emissions reduction, and modeling from the group Vibrant Clean Energy in 2021 found that Duke Energy could integrate more than 10 GW of distributed solar if imposed limitations on renewables were eliminated.

B. Increase energy-efficiency in new and existing construction and systems

Energy efficiency is widely accepted as the least cost way to meet energy demands. While Duke Energy currently offers a variety of energy efficiency programs, existing programs do not meet energy efficiency’s full potential. As part of the Carbon Plan Duke should be required to dramatically enhance existing programs and create new programs that fully take advantage of the benefits of energy efficiency. Energy efficiency programs that more fully meet the needs of communities that are low-income should also be created. Finally, energy efficiency improvements should be made in new and existing construction and in new and existing appliances and systems in residential and commercial settings.

9. Lead to Fair and Affordable Rates

Achieving net zero by 2050 will require new investments in the grid that may require additional capital and operational funding. Fortunately, energy efficiency and renewable, clean energy technologies like solar and wind are the cheapest energy options available today.

When designing the carbon plan, the NCUC should 1) consider how it will affect future electricity rates, 2) ensure Duke Energy passes on savings from decarbonization to customers, and 3) require that Duke continue to invest in programs to increase energy security so that all North Carolinians have access to the electricity needed to power their homes and ensure a dignified life for all.

The Southeast Energy Insecurity Stakeholder Initiative has [recommended](#) policies that could support this principle:

- A. Expand community engagement opportunities** and develop an accessible primer program to educate newcomers on the regulatory space and ratemaking processes.
- B. Implement a Pay as You Save (PAYS) model** for energy upgrades and weatherization and aggressively improve programs for people that are low-income.
- C. Use the new performance-based regulation process** to benefit low-income customers.
- D. Institute a Percent of Income Payment Plan (PIPP) program** to cap electric bills at an affordable level for low-income customers, as well as an Arrearage Management Plan to help customers pay off past unpaid bill debt.

10. Address Historic Harm from Fossil Fuels and Dirty Energy

Communities living in the shadow of dirty power plants have already paid dearly for our reliance on energy sources that are not clean—suffering more health impacts and adverse impacts to local economies than other communities. To ensure a just transition, a carbon plan must acknowledge the role these facilities continue to play in communities across North Carolina and ensure their voices are heard in visioning a clean energy future.

In January 2022, Governor Roy Cooper signed [Executive Order \(EO\) 246](#), “North Carolina’s Transformation to a Clean, Equitable Economy.” The order will trigger the development of public participation plans and stakeholder processes to foster relationships with the public and increase transparency in decision-making. The carbon plan decision-making process should:

- A. Use best practices identified through the EO 246 deliverables.** The order requires that “each Cabinet agency, supported by the Governor’s Office, shall develop an agency public participation plan informed by stakeholder input. The plan shall include best practices for community engagement, meaningful dialogue, and efficient mechanisms to receive and incorporate public input into agency decision-making.”
- B. Incorporate the social cost of greenhouse gas emissions.** EO 246 states: “the federal Interagency Working Group on the Social Cost of Greenhouse Gases (“IWG”) plans to publish an update of its social cost of greenhouse gas emissions (“SC-GHG”) estimates by January 2022. Wherever feasible, agencies are encouraged to incorporate the IWG’s SC-GHG estimates into agency decision-making processes that impact GHG emissions, even if guidance has not yet been issued for that decision-making context.” We agree with the Governor and encourage the NCUC to consider incorporation, or to explain existing obstacles to doing so.

11. Build Climate Resilience

Mitigation and adaptation are two sides of the same coin. While we must quickly mitigate emissions to ensure the impacts do not become even more severe, communities are already facing disruptions that are requiring them to adapt to climate change. Duke Energy's Working Group on Climate Risk and Resilience predicts that its service areas will see more extreme storm events, more regular flooding, higher temperatures in the summer, and increased opportunities for wildfire in the western part of NC—changes that will almost certainly lead to more power outages.

A carbon plan that encourages customers to incorporate clean energy redundancy systems that will provide power to a home or business in emergency times, but also supply the grid in normal times, is a win-win for customers and the utility. Systems to be encouraged include:

A. Microgrids. These tools can provide lifesaving electricity for customers that need medical equipment or air conditioning in the aftermath of extreme weather events, or for essential businesses that need to keep their operations running. When powered by clean energy, they are helping to mitigate future emissions and becoming more resilient at the same time.

B. Incorporate vehicle-to-home storage applications. Pilot programs testing the ability of electric vehicles to act as power sources during periods of peak demand are currently ongoing across the United States, including at Duke Energy. Duke Energy should monitor the number of electric vehicles coming onto the grid and project their ability to provide redundancy during inclement weather.

A carbon plan should mitigate emissions, even during the most difficult times for the grid. Carbon planning should be connected and responsive to Duke Energy's continuing work on risk and resilience—and decisions made from those processes should be open and transparent to the public. We must ensure that we are planning a grid that is both zero-carbon and able to stand up to the climate challenges that NC communities will face.

12. Identify & Drive Changes in State/Local Policies Necessary for Plan Execution

Decarbonizing the electric power sector in a least-cost manner will require changes to policies that govern both power supply and power demand. Recognizing that Duke Energy does not have authority over some of the limitations to reducing customer demand, the carbon plan should require a stakeholder feedback process with local governments, businesses, and citizens to inventory obstacles to decarbonization, including but not limited to:

- A. Existing building energy codes**
- B. Poorly funded weatherization initiatives**
- C. Land-use planning processes**
- D. Electric vehicle planning processes**
- E. Laws restricting renewable energy financing options**

Tackling the climate crisis in a way that is just and effective will require coordination and communication at all levels of government. The Carbon Plan is more than an Integrated Resource Plan, it is an opportunity to take stock of the progress we have made and the challenges we face in decarbonizing our communities and the electricity that powers them. It is an opportunity to make new partnerships with urban and rural planners, environmental justice organizations, the private sector, water utilities—any group that has the desire to reduce greenhouse gas emissions as quickly as possible. A carbon plan in the public interest would acknowledge that fact, embrace it, and encourage as many voices as possible to engage in the process.