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Recommendations to the NCUC for Duke Energy's CPIRP

These comments, as prepared by Tina Katsanos (Environmental Justice Committee Char with the Charlotte Mecklenburg NAACP), recommend a rejection of Duke Energy's Carbon Plan/Integrated Resources Plan (CPIRP). They also recommend a formal, comprehensive, and more effective Environmental Justice plan as an integral part of the CPIRP process. The commentary provides detailed justification for such a process. Following this critique are four specific recommendations for the NCUC.

Duke Energy's current Carbon Plan/Integrated Resources Plan (CPIRP) undermines the State of NC's [Clean Energy Plan | NC DEQ](#). Specifically it violates [Executive Order NO. 80: NC's Commitment to Address Climate Change and Transition to a Clean Energy Economy](#), [NC Executive Order No. 246: North Carolina's Transformation to a Clean Equitable Economy](#), and [House Bill 951: Energy Solutions for North Carolina](#). In particular, EO 246 requires the application of environmental justice principles. HB 951 requires the NC Utilities Commission to take "all reasonable steps" to achieve a 70% carbon reduction goal to 2005 levels and to do so by following "the least cost path".

The CPIRP ignores the experiences and realities of Low-Income and Disadvantaged Communities (LIDACS) which are disproportionately Black, Brown, Indigenous, and People of Color (BIPOC) communities and demonstrates a complete disregard for a "just and equitable" energy transition. The plan will exacerbate, rather than mitigate, two areas of acute vulnerability for LIDACS: 1. Energy Insecurity and 2. Health Risks. These are also, often, Environmental Justice (EJ) communities that bear a disproportionate amount of environmental harm through the cumulative impacts of industrial agriculture, petrochemical pollution, proximity to super fund sites, and the wood pellet industry.

## Energy Insecurity

The CPIRP relies heavily on methane gas expansion as it “plans to add 9,000 megawatts of new gas generated electricity to the grid.” A recent report commissioned by the Environmental Defense Fund finds that Duke Energy rate payers have seen dramatic increases in their power bills due to the volatility of methane gas prices. ( [New report links rate increases for Duke Energy customers mostly to natural gas volatility](#) ). The following are the key takeaways as summarized by Dale Evarts:

- In the Duke Energy Carolinas (DEC) service territory, increases in fuel costs account for roughly 67% of the increase in residential retail rates since 2017, making the portion of the rate increases attributable to fuel costs **more than double** the amount from all other rate components.
- The Duke Energy Carolinas service territory has been subjected to more rate hikes associated with high fuel costs because gas represents a higher percentage of DEC’s generation mix.
- In the Duke Energy Progress (DEP) service territory, where gas currently represents a slightly lower percentage of the generation mix, increases in fuel costs account for roughly 46% of the increase in the residential retail rates since 2017.
- High gas prices contributed to bill increases in both of Duke’s territories, and the territory with more gas plants (DEC) was burdened with higher bill increases than the territory with fewer gas plants (DEP) as a result of high gas prices.
- Because of the processes and timelines for regulatory approvals for Duke to recoup fuel costs, there is often significant lag time from when the high gas charges were incurred and when the high gas charges are imposed on customers, making it difficult for ratepayers to have clarity around the true costs of their energy use.

Increasing methane (natural) gas buildouts is in violation of HB 951 and will increase energy insecurity. According to the Nicholas Institute for Energy, Environment, and Sustainability:

*In the Southeast, nearly nine million low-income households — representing more than a quarter of all households in the region — pay in excess of 10 percent of their gross household income on energy bills. That energy burden far exceeds the generally accepted threshold of 6 percent. Families impacted by this prevalent issue are often forced to make choices between keeping the lights on or spending their money on other essential*

expenses such as food, housing, or healthcare. [Energy Insecurity | The Nicholas Institute for Energy, Environment & Sustainability \(duke.edu\)](#)

### Health Impacts

[NC Executive Order No. 246](#) states:

Climate change disproportionately impacts people of color, low-income communities, and Indigenous communities, and responsible solutions to climate change must equitably reduce GHG emissions, increase community resilience, advance sustainable economic recovery and infrastructure investment efforts, promote public health and health equity, and ensure fair treatment and meaningful engagement in decision-making and implementation.

In addition, NC EO 246 requires state agencies to utilize the Federal Interagency Working Group on the social-health costs of greenhouse gasses (GHGs). Duke Energy's CPIRP fails in the aforementioned solution areas.

The proposed CPIRP does not offer enough responsible solutions for climate change mitigation. Instead, the plan proposes four portfolios that include expansion of hydraulic fractured methane (natural) gas facilities, continued coal usage, and new nuclear plants based on untested SMR technologies. The necessary amount of solar and wind energy to cost-effectively mitigate climate change is lacking within the four portfolios. Gas facilities and pipelines, and coal plants pose substantial threats and dangers to surrounding communities which will be enumerated below. Including this unreasonable percentage of high GHG emission energy sources threatens the possibility of meeting the Paris Accord goals, and consequently threatens any hope of a healthy, safe, and dignified life for a disproportionate amount of historically marginalized peoples: Black, Indigenous, and People of Color (BIPOC). The increase in flooding, heat waves, mudslides, droughts, and infectious diseases (and other impacts) will further burden the health and economic hopes of our Low-Income and Disadvantaged communities.

### Continued Coal Usage Health Risks

The CPIRP further defies the Federal Interagency Working Group social costs by continuing to rely on coal within all four of the portfolios. This ignores the disproportionately high health costs that unfairly burden historically underserved and marginalized communities, health costs created by coal extraction, coal plants, and coal pollution. According to the CPIRP, coal plants will begin retirement earliest with Units Allen 1 and 2 in 2025; and Cliffside 6 will be the latest retirement in 2049. Notably, the updated CPIRP reflects extensions of the closure times included in the 2022 Carbon Plan.

#### Coal Unit Retirement Schedule with 2023 proposed delays ([CPIRP Update](#))

Unit	2022 Carbon Plan	2023 Resource Plan Path 3
Allen 1 and 5	2024	2025 +1 year
Cliffside 5	2026	2031 +5 years
Mayo	2029	2031 +2 years
Roxboro 3 and 4	2028-2034	2034 +6 years

As presented, this is collectively 14 years of delays. It will mean additional years of exposure to atmospheric toxicity for nearby communities. It will mean an increased risk of coal ash pollution. The 2014 coal ash spill is a testament to the dangers of coal plants to nearby communities AND the dangers of pipelines. Pipes leak, break, and burst frequently whether they are drainage pipes or fossil fuel transmission pipes. The spill (which began due to a burst drainage pipe) and Duke Energy's irresponsible response has created an incredible amount of distrust among community members. There are impacted residents that will never drink unbottled water again. But more tragically, community members are now at a higher risk for cancer, other diseases, and premature deaths. These delays also suggest an established tactic within the fossil fuel industry: delay, delay, delay.

According to the U.S Environmental Protection Agency (EPA), burning fossil fuels like coal creates inequitable health impacts. From the report [Power Plants and Neighboring Communities | US EPA](#):

Minority, low-income, and Indigenous populations frequently bear a disproportionate burden of environmental harms and adverse health outcomes, including the development of heart or lung diseases, such as asthma and bronchitis, increased susceptibility to respiratory and cardiac symptoms, greater numbers of emergency room visits and hospital admissions, and premature deaths.

The American Public Health Association reiterates the U.S. EPA's analysis in their report [The Public Health Impact of Energy Policy in the United States \(apha.org\)](#):

Coal power plant emissions impact the health of nearby communities; they can also be transported across state and national boundaries to affect distant communities. Coal combustion (as when coal is burned in coal-fired power plants to produce electricity) is a major contributor to the "criteria pollutants": particulate matter (PM<sub>2.5</sub>), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), ozone (O<sub>3</sub>), carbon dioxide (CO<sub>2</sub>), and airborne heavy metals such as mercury. These pollutants are linked to respiratory disease, cardiovascular disease, stroke, diminished cognitive functioning, and adverse birth outcomes.

Citing this EPA report [Human and Ecological Risk Assessment of Coal Combustion Wastes](#), The Physicians for Social Responsibility state the following:

The Environmental Protection Agency (EPA) has found that living next to a coal ash disposal site can increase your risk of cancer or other diseases. If you live near an unlined wet ash pond (surface impoundment) and you get your drinking water from a well, you may have as much as a 1 in 50 chance of getting cancer from drinking arsenic-contaminated water. If eaten, drunk or inhaled, these toxicants can cause cancer and nervous system impacts such as cognitive deficits, developmental delays, and behavioral problems. They can also cause heart damage, lung disease, respiratory distress, kidney disease, reproductive problems, gastrointestinal illness, birth defects, and impaired bone growth in children. Is coal ash a big problem? The EPA estimates that 140 million tons of coal ash are generated annually. Arsenic is one of the most common, and most dangerous, pollutants from coal ash. The EPA also found that living near ash ponds increases the risk of damage from cadmium, lead, and other toxic metals.

## Expanded Methane Gas Buildouts Health Risks

The expansion of hydraulic fractured methane (natural) gas facilities will contribute significantly to climate change due to the associated methane emissions. According to the US Environmental Protection Agency, one molecule of methane is twenty-five times more potent than one molecule of carbon dioxide and accounts for an average of 20% of greenhouse gas emissions. ([Importance of Methane | US EPA](#)) The EPA further states: “Because methane is both a powerful greenhouse gas and short-lived compared to carbon dioxide, achieving significant reductions would have a **rapid** and significant effect on atmospheric warming potential.” Furthermore, methane is a worse GHG than coal when it leaks (which it does) and it still emits CO2 and traditional pollutants when it burns. This may be less than coal, but its use is not a viable path to the 2050 zero-carbon goal.

The Intergovernmental Panel on Climate Change (IPCC) has stated the need for **rapid** energy transitions and urgency if we hope to escape the worst-case scenarios, scenarios that will have more volatile impacts on Black, Indigenous, and People of Color (BIPOC) across the globe and indeed in North Carolina. Part 1 of the IPCC’s Sixth Assessment Report, [Climate Change 2021: The Physical Science Basis](#), forecast was so dire that UN General-Secretary Antonio Guterres summarized the findings as “a **code red for humanity**” and stated: “Countries should also end all new fossil fuel exploration and production, and shift fossil-fuel subsidies into renewable energy. ( [Code Red for Humanity](#)) Part 2 of the 6<sup>th</sup> Assessment Report, [Climate Change 2022: Impacts, Adaptation and Vulnerability](#), states that we have reached tipping points across the globe where climate change is now irreversible, and some places are now beyond adaptation. The report states that 40% of the world’s population is “highly vulnerable” to the impacts of climate change. The report reiterates the urgency of taking **rapid** action **now** if we hope to escape the future worst scenarios.

In addition, The CPIRP’s buildout of methane gas includes a proposed pipeline to carry “lower cost” methane gas from Appalachia. Numerous academic studies have proven the negative impacts of methane gas extraction/gathering and transmission via pipelines. For instance, research spearheaded by North Carolina State University and published in the academic journal, *GeoHealth*, speaks to these negative impacts. The article, [Natural Gas Gathering and Transmission Pipelines and Social Vulnerability in the United States](#), summarizes the key points of the article’s conclusions:

- Natural gas gathering and transmission pipelines in the US tend to be concentrated in counties with high social vulnerability

- Negative impacts associated with pipelines fall disproportionately on communities with limited capacity to deal with the impacts
- Decision-makers who plan and permit pipelines should consider whether new projects maintain the inequitable status quo

The article elaborates on the amplified risks of “natural” gas gathering and transmission pipelines within Environmental Justice (EJ) communities. The authors list the specific threats and risks of pipeline networks as: “spills and leaks, explosions, structural failures, construction impacts, and other factors” and point out how these events exacerbate and amplify currently existing low-income disparities. In other words, pipeline intrusions can heighten pre-existing health risks and safety issues. The ever-increasing climate change disasters will serve as triple threat events increasing the risks of injury, displacement, and death.

The authors of the article also support their research by including a geo-spatial mapping tool for the United States. The mapping, based, on data from The Centers of Disease Control and Prevention and the U.S. Energy Information Administration, highlights the overwhelming preponderance of pipeline intrusions within highly vulnerable communities which are disproportionately BIPOC. The CPIRP does not specify the name of this proposed pipe, but an educated guess would suggest the Mountain Valley Pipeline (MVP) already in construction which has plans to extend into Alamance and Rockingham counties in North Carolina. According to the website of this new venture called [MVP Southgate](#):

With a vast supply of natural gas from Marcellus and Utica shale production, the Mountain Valley Pipeline will transport natural gas to markets in the Mid- and South-Atlantic regions of the United States. The MVP Southgate project, as proposed, will receive gas from the Mountain Valley Pipeline in Pittsylvania County, Virginia and extend approximately seventy-five miles south to new delivery points in Rockingham and Alamance Counties, North Carolina. MVP Southgate would provide access to low-cost, reliable access to natural gas produced in the Marcellus and Utica shale regions – for service delivery to PSNC Energy customers, as well as existing and new end-user markets in southern Virginia and central North Carolina.

According to the U.S Department of Agriculture Economic Data Service ([Poverty usda.gov](#)) both Rockingham and Alamance counties rank above the average poverty level for the entire state of NC.

Increasing methane gas usage is at odds with NC EO 246. It significantly contributes to climate change due to high GHG emissions and it ignores the research and directives of accredited climatologists serving with the IPCC who have stated the need for rapid transition to non-fossil fuel energy sources and the science-based mandate to stop new fossil fuel construction. The assumption is that new construction will serve to function until the end of its 30-year average lifespan. In the CPIRP Duke Energy proposes retrofitting the new natural gas facilities to hydrogen in the future. Given the uncertain nature of the future, this is an irresponsible proposal and could very well mean additional costs for the retrofits that will overburden low-income BIPOC communities. The irresponsibility is also due to the current low costs of wind and solar renewables that are not subject to the market volatilities of fossil fuels. Lastly the social costs, as in health risks and impacts, have not been factored into Duke Energy's accounting processes as required by the Federal Interagency Working Group.

#### Recommendations to the NCUC Beyond rejecting the CPIRP

1. Require Duke Energy to increase the buildout of solar and wind which is now more affordable, reliable, and less polluting.
2. Require Duke Energy to invest in community solar and onsite battery storage.
3. As we continue to wait for a just and equitable transition to a new energy future, the NCUC should require Duke Energy to expand its LIDAC assistance programs such as customer assistance programs and weatherization services. Duke Energy's commitment to closing polluting facilities and site remediations should be independently monitored. Independent monitoring should also be utilized to measure the economic effectiveness of their promises to retain and increase jobs and the tax base in vulnerable communities where they will have to shutter polluting facilities.
4. Require Duke Energy to provide the public with a meaningful Environmental Justice Plan that goes far beyond their [EJ Priority Brief](#). We need transparency in the specific measures they will undertake. The NCUC should order Duke Energy to have a formal, comprehensive, dynamic EJ plan integral to the CPIRP with clear measures of progress on specific EJ objectives. Duke Energy must measure, justify, and continuously reduce harm to vulnerable communities throughout execution of the plan. The order should include formal input from "on the ground" frontline EJ stakeholders and consistent third-party review.