SOUTHERN COALITION for SOCIAL JUSTICE

PO Box 51280
Durham, NC 27717
919-323-3380
southerncoalition.org

November 22nd, 2024

Via electronic mail (daq.publiccomments@deq.nc.gov)
Mark J. Cuilla
North Carolina Department of Environmental Quality
Division of Air Quality (DAQ)
1641 Mail Service Center
Raleigh, North Carolina 27699-1641

Re: Comments on the Environmental Justice Implications of Issuing Permit Modification to Retire Duke Energy's Roxboro Steam Electric Plant and Replace it with New Natural Gas-Fired Turbines

Dear Chief Cuilla,

Please accept the following comments on behalf of Southern Coalition for Social Justice (SCSJ), Appalachian Voices, 350 Triangle, Blue Ridge Environmental Defense League (BREDL), Clean Water for North Carolina, Down Home North Carolina, Property Rights and Pipeline Center, and North Carolina Environmental Justice Network (NCEJN). These organizations united in their commitment to protecting communities across the Southern United States, are dedicated to preventing environmental degradation and ensuring equity and justice. We write in response to the North Carolina Department of Environmental Quality's ("NCDEQ") public notice regarding the Preliminary Determination of Air Quality Permit Application for Duke Energy Progress, LLC ("Duke Energy")- Roxboro Steam Electric Plant ("Roxboro Natural Gas Plant" or "Proposed Project"). The Application by Duke Energy relates to the request for a permit modification to retire the existing coal-fired boilers and replace them with new natural gas-fired turbines at 1700 Dunnaway Road, Semora, NC 27343, Person County.

EXECUTIVE SUMMARY

The application for the proposed Roxboro Natural Gas Plant, as submitted by Duke Energy to the NCDEQ, presents significant environmental, economic, and social concerns that require scrutiny by the DAQ. While touted as a necessary step to retire existing coal-fired units, the proposed project fails to align with the federal and state climate goals and raises concerns about its long-term feasibility. This project also threatens to exacerbate existing inequities in the surrounding community.

The plant conflicts with the Environmental Protection Agency's (EPA) stringent carbon pollution standards, requiring it to operate at less than 40% capacity by 2032 and achieve a second-phase reduction with 90% carbon capture or 96% hydrogen co-firing. These requirements will impose costly retrofits and operational burdens, thereby inflating the utility rates for ratepayers. Further, the proposed facility risks becoming a stranded asset as the energy sector shifts rapidly toward renewables, placing financial strain on communities already overburdened by environmental and economic vulnerabilities.

The project's disproportionate impact on low-income communities of color near the proposed site is particularly concerning as these communities rank high nationally in climate vulnerability, childhood asthma rates, cardiovascular disease-related mortality, and other chronic health conditions. The addition of harmful emissions from the proposed Roxboro Natural Gas Plant and associated infrastructure, including a new natural gas pipeline will only exacerbate the disparities and environmental injustice.

Critically, Duke Energy's reliance on outdated emission factors and limited air quality monitoring in the permit application undermines the ability to accurately assess the facility's environmental and health impacts. Further, without a binding retirement date for the existing coal-fired units, emissions in the near term are expected to increase, contradicting claims of an overall reduction in pollution. Rather than doubling down on the fossil fuel infrastructure, Duke Energy should prioritize renewable energy solutions that offer a more cost-effective, sustainable, and equitable path forward.

In light of the concerns further discussed below, the DAQ must reject the air permit application of the Roxboro Natural Gas Plant, as any such approval would impose significant financial, social, and environmental costs while delaying the transition to a cleaner and more resilient energy infrastructure for the state and the country.

DISCUSSION

I. Emission Factors Assumptions and Startup, Shutdown, Malfunction (SSM) Emissions Underestimate True Emissions.

There is considerable scientific evidence that facility-derived emission factors significantly underestimate true emissions from industrial facilities. Despite this, the NCDEQ, in its draft permit, relies heavily on facility-derived emission factors to understand the impact of the power plant on the neighboring community. Researchers

are increasingly finding that the majority of modeled concentrations using dispersion models like Air Quality Dispersion Modelling ("AERMOD") routinely underestimate measured ambient concentrations. Taking acrolein and formaldehyde as two examples, nationwide acrolein measurements are 26 times greater than AERMOD estimates, and formaldehyde measurements are more than double. In North Carolina specifically, the measured formaldehyde concentrations are 1.4 to 1.8 times higher than modeled, with bias closer to industrial sites likely higher.[1,2] It is reasonable to assume that other pollutants would follow this trend, and an additional margin of safety should be taken by DEQ when evaluating Acceptable Ambient Levels ("AALs").

In addition to errors in industry-standard emission factors, data show companies also regularly artificially underestimate emissions by abusing excess or accidental emissions loopholes. Environmental legal and research nonprofit Environmental Integrity Project summarized this in their assessment of Texas' air permitting failures:

> "*..because Freeport LNG told the TCEQ that its new equipment would only emit 6.03 tons of nitrogen oxides each year, the 2018 permit authorizing construction of these units was not subject to the stringent offset and pollution control requirements that apply to major projects. In 2019, when those liquefaction units went into operation, Freeport LNG released nearly 119 tons of unauthorized nitrogen oxide pollution during 25 separate unexpected emissions events. In 2020, the liquefaction plant released another 103 tons of unauthorized nitrogen oxide pollution during unexpected emissions events. Thus, the TCEQ's determination that construction and operation of these new units was safe was based on its consideration of nitrogen oxide emissions that accounted for less than three percent of the amount of pollution those units actually emitted during the first two years of operation…it turns out that some of these unauthorized releases were not the product of unplanned emergency "emissions events" after all. In August 2022, Freeport LNG applied for a permit amendment to increase its nitrogen oxides limit from 6.03 to 43.50 tons per year. In that application, Freeport LNG explained that the increase was necessary to authorize "streams associated with seal gas venting and proposed maintenance, start-up, and shutdown events that have become known through actual operation of these facilities". In other words, Freeport LNG drastically underestimated – or perhaps underrepresented – the amount of pollution its source would emit in order to get its project authorized and built quickly without having to comply with stringent pollution control requirements for major sources*."[3]

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[1] Padilla & Lauren, *Formaldehyde LNG Question*, Email correspondence with Environmental Defense Fund air quality scientist (March 28, 2024).

[2] Qi Li et al., *A modeling framework to assess fenceline monitoring and self-reported upset emissions of benzene from multiple oil refineries in Texas,* 23 ATMOSPHERIC ENV'T: X (2024).

[3] Gabriel Clark-Leach et al., *The Polluter's Playbook, How Loopholes and Lax Enforcement Harm Air Quality in Texas,* Environmental Integrity Project (March 23, 2023), https://environmentalintegrity.org/wp-content/uploads/2023/03/TX-Polluters-Playbook-report-3.23.23.pdf.

Federal climate regulatory requirements, discussed in Section VI of this comment, would require this facility to operate at only 40% capacity within four years of the new units coming online. Excess emissions related to facility startups and shutdowns appear to be baked into the operation of this plant and yet are not evaluated appropriately in DEQ's draft permit for the Proposed Project. With the additional threat of climate disasters, the potential for regular startups and shutdowns of the planned units, as well as the original coal-fired units until they are retired, is high. Studies from Gulf Coast states often show high levels of pollution and associated healthcare costs related to facility startups, shutdowns, and malfunctions ("SSM").[4] Given these facts, the threat to public health related to facility SSM has not been appropriately assessed in DEQ's draft permit for the Proposed Project.

II. The surrounding Community is Already Overburdened.

The community surrounding this area is already overburdened with environmental pollution and many residents already suffer from chronic health conditions which would be exacerbated by the operation of new gas-powered units alongside the existing coal plant.

The Climate Vulnerability Index (CVI) is a tool developed by researchers at the Environmental Defense Fund (EDF) and Texas A&M University, which "..visualizes how drivers of cumulative vulnerability disadvantage communities across the United States. Better understanding of the intersections between growing climate risks and pre-existing, long-term health, social, environmental, and economic conditions is critical to effectively building climate resilience for everyone and deploying targeted adaptation efforts." According to this tool, the census tract where the proposed facility would be built is already disproportionately impacted by and vulnerable to climate impacts. It is located in the 86th percentile nationally for overall climate vulnerability and ranks 610 out of 2,195 tracts in North Carolina.[5] This can be compared to a rural tract in nearby Rougemont, NC, which is in the 25th percentile nationally and ranks 1,994 of 2,195 tracts in North Carolina.[6]

According to the CVI, overall vulnerability is driven both by disproportionately high vulnerability to environmental and economic disruptions from climate change as well as greater vulnerability related to longstanding inequities shaping resilience to climate impacts. For example, the area surrounding the power plant is in the 90th percentile nationally for childhood asthma incidence and in the 95th percentile for cardiovascular disease-related PM2.5 mortality in those 65 and older. This area is also in the 97th percentile of infant mortality nationally and the 95th in childhood mortality.

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[4] Carol Geiger, *Excess Emissions Make Significant Contribution to Air Pollution*, Public Citizen (March 1, 2018), https://www.citizen.org/news/excess-emissions-make-significant-contribution-to-air-pollution/.

[5]The U.S. Climate Vulnerability Index, *Map*, https://map.climatevulnerabilityindex.org/report/cvi_overall/tract-37145920200-roxboro-nc?mapBoundaries=Tract&mapFilter=0&reportBoundaries=Tract&geoContext=State.

[6] *Id.*

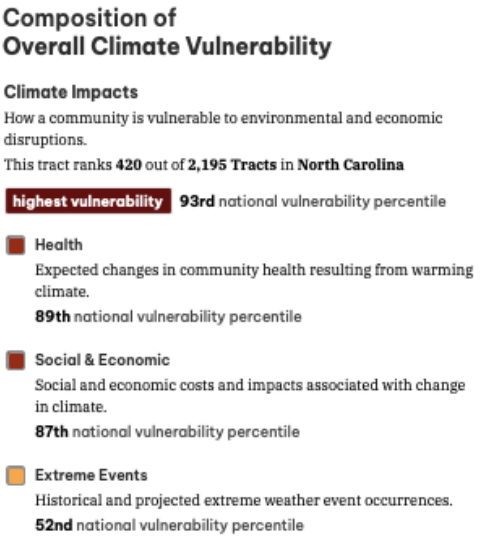

Figure 1: Overall climate vulnerability in the census tract where the draft permit is located. Indicates that the high overall vulnerability score is driven primarily by large health burdens and social and economic costs related to climate change.[7]

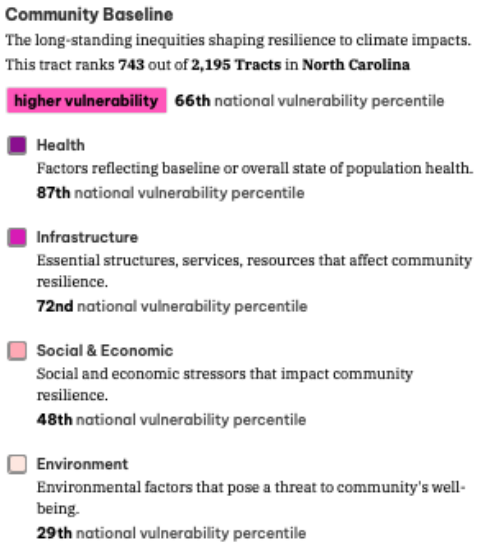

Figure 2: CVI data indicates that the tract already experiences high vulnerability related to existing health and infrastructure burdens which make the community more vulnerable to future climate change.[8]

The community has a significant existing disease burden, which the new gas plants will worsen. The tract ranks 725 out of 2,195 in North Carolina for overall chronic disease risk. It is in the 76th percentile nationally for stroke, 74th for chronic heart disease, 71st for rate of COPD, and 73rd for cancer. Additionally, life expectancy in the community is reduced by more than 6 years compared with tracts in nearby Durham County and is significantly lower than other areas in the county.[9]

Additionally, Woodland Elementary School is located approximately three-quarters of a mile from the proposed site of the gas plants. More than 200 children, ages five through eleven, attend Woodland and would be exposed to harmful air pollutants associated with higher risks of asthma, cardiovascular issues, and cancer. In addition to this, approximately 97% of students at this school qualify for free or

[7] *Id.*
[8] *Id.*

[9] National Center for Health Statistics, *Data Visualization Gallery*, https://www.cdc.gov/nchs/data-visualization/life-expectancy/index.html.

reduced lunch i.e., most of them belong to low-income families.[10] Furthermore, because the proposed site has inadequate access to natural gas, a new pipeline, called the T15 Project, would need to be built and would run directly next to Woodland, posing an additional safety risk on top of the exposure to air pollution.

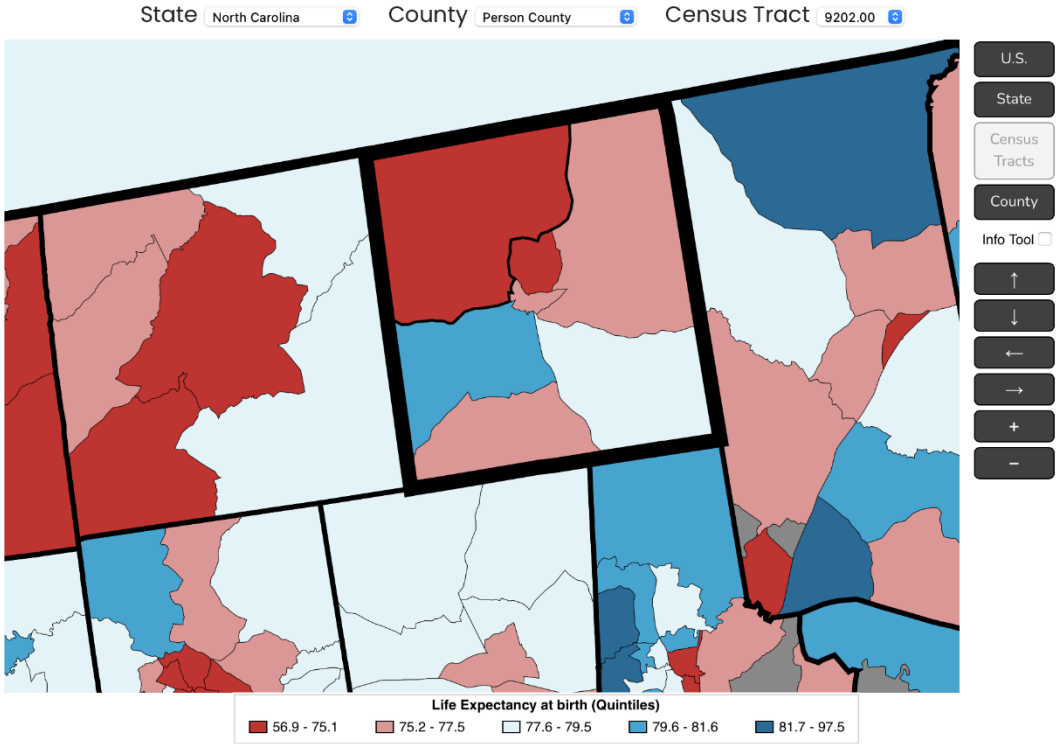

Figure 3: National Center for Health Statistics map showing significantly lower life expectancy in the tract containing the proposed new gas units as compared to the tract just to the south and others in neighboring Durham and Orange Counties.[11]

III. DAQ Must Consider Cumulative Impacts.

In addition to the existing disease burden the community is shouldering, they are also on the pathway of several new projects that will all worsen environmental pollution in the area. These include the expansion of the Enbridge T15 pipeline and the construction of a Microsoft data center a few miles from the community, among other projects. Residents in the area have already experienced significant water pollution from Duke's coal ash contamination, and some still do not have clean drinkable water at their homes.

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[10] Shelley Robins, *Duke Energy's Proposed Roxboro Gas Plant: A Primer*, cleanenergy.org (July 19, 2024), https://www.cleanenergy.org/blog/duke-energys-proposed-roxboro-gas-plant-a-primer/.
[11] *Supra* note 9.

There is widespread consensus among environmental health professionals that cumulative risks from multiple pollutants and routes of exposure causing negative health outcomes should be considered when making permitting decisions, rather than analyzing health risk pollutant-by-pollutant and source-by-source, as has been done here. This is because the additive effects of multiple sources can lead to more serious health effects than would be expected merely from the sum of the individual impacts.

Evaluating risk from unconventional oil and gas extraction in Colorado, researchers at the EDF found that evaluating the risk of both hazardous air pollutants as well as criteria air pollutants led to an exceedance of Environmental Protection Agency (EPA) thresholds, which were not exceeded when evaluating pollutants individually.[12]

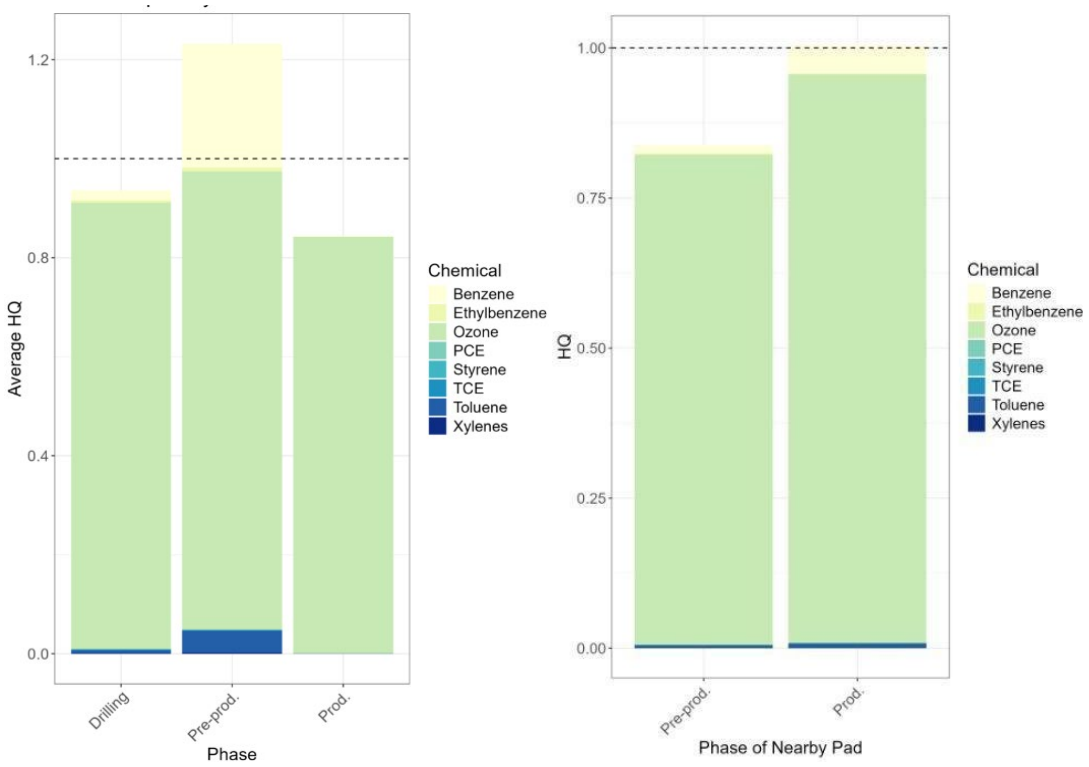

Figure 4: Acute hazard quotients (HQ) by phase at 95th percentile concentrations for oil and gas sites for respiratory endpoints (left); Acute HQ by phase at nearest unconventional oil and gas extraction site at the 95th percentile chemical concentrations at a community air monitoring site for respiratory endpoints (right)[13]

[12] *Id.*

[13] M.L.Weisner et al., *Cumulative risk of regional ozone and volatile organic compound exposure from unconventional oil and gas sites in Colorado's Front Range*, In prep, TARGET J.: ENV'T SCI. & TECH. (2024).

DAQ should *comprehensively* consider cumulative risk from the proposed permit or at a minimum, evaluate the cumulative risk of all air pollution proposed rather than looking only at risks of individual pollutants.

IV. Without a Coal Retirement Date, the Community Will Be Exposed to Additional Pollution.

The DAQ project fact sheets state that the permit will lead to "significant reductions in air emissions at this plant and an overall reduction in greenhouse gas emissions in the state"; however, this is misleading, as pollution from the plant will actually *increase* until Duke retires its coal-fired boilers. There is no binding date included in this air permit for retirement.

Documents prepared by DAQ show that the draft permit will result in a decrease in pollution from the plant, in some cases with substantial reductions. This document is misleading and wrong because the new permit will lead to an increase in emissions from the plant while coal and gas-fired units operate together.[14]

V. Additional Air Monitoring Is Needed.

With the many projects coming to Person County, including additional emissions from DEQ's draft permit for the Proposed Project, additional air monitoring needs to be conducted to ensure compliance with NAAQS standards. In February 2024, the EPA revised its annual PM2.5 NAAQS standard from 12 to 9 ug/m3.[15] There is currently no PM2.5 monitoring in Person County, and given the existing industry and planned expansion, relying on design values from distant counties is not appropriate. Community members deserve quality information on what contaminants are in the air they breathe, and the DEQ should require Duke Energy to pay for the installation and operation of at least one regulatory air monitor near the fence line, preferably the one near the Woodland Elementary school, to ensure attainment with updated NAAQS standards.

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[14] *Public Hearing: Duke Energy-Roxboro Steam Electric*, NC Dep't of Env't Quality (Oct. 11, 2024), https://edocs.deq.nc.gov/AirQuality/DocView.aspx?id=515163&dbid=0&repo=AirQuality&cr=1.

[15] National Ambient Air Quality Standards (NAAQS) for PM, 78 Fed. Reg. 3086 (Jan.15, 2013), https://www.epa.gov/pm-pollution/national-ambient-air-quality-standards-naaqs-pm.

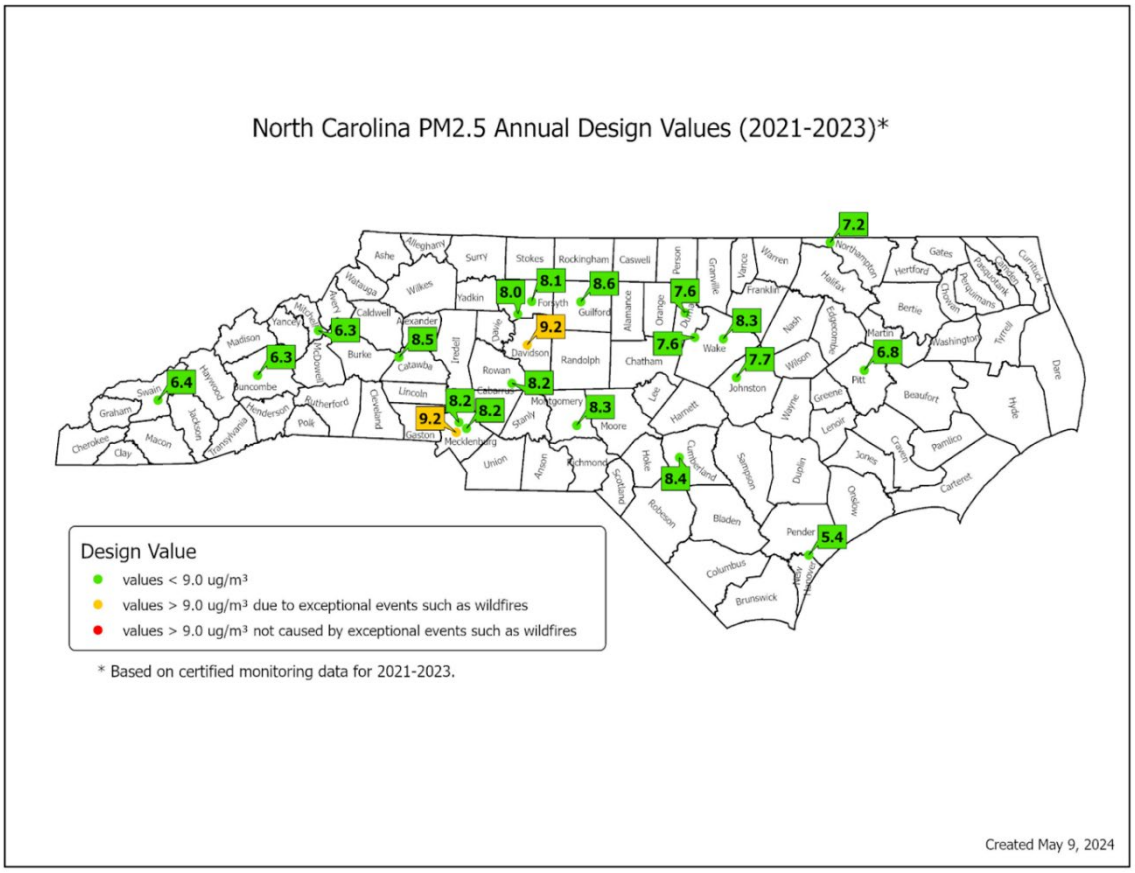

Figure 5: *Map of NC PM2.5 design values. Many of the monitors closest to the proposed permit are near the updated 9 ug/m3 design value, but there is no data in Person County itself.*[16]

In addition to the need for additional monitoring to ensure regulatory compliance, monitoring is also needed to fully understand and inform community members of air pollution-related health impacts. As it stands currently, the surrounding community has no access to data on air quality and has to rely on industry and regulator assurances that the air is safe to breathe. The draft permit text as written requires only continuous emissions monitoring of stack emissions for select pollutants. Stack test data is often unavailable to the public to view or inaccessible to understand by nature of its technicality. The residents near the site, and in all of Person County, deserve clear, accurate, actionable data on air pollution levels in their community.

Person County has only one air monitor located approximately 16 miles away from the Roxboro Natural Gas Plant. This monitoring site currently only includes one ozone instrument. There are no monitors for the pollutants of greatest concern to the

[16] North Carolina Department of Environmental Quality, *2024 PM2.5 Annual Standard*, https://www.deq.nc.gov/about/divisions/air-quality/air-quality-planning/attainment/2024-pm25-annual-standard.

community and no monitors for the pollutants Duke may emit above legal limits. Because there is no monitoring of pollutants of concern, the community does not have baseline data on pollution levels prior to the construction and operation of the new units. Such baseline data is essential for understanding the true impacts of an industrial facility and is helpful for both the community and industry to understand the source of air pollution issues within a community.

In response to questions about another gas facility proposed in the county, the Moriah Energy Center (MEC), DAQ Deputy Director, Taylor Hartsfield, and Public Information Officer, Shawn Taylor sent the following to community organizers involved in the NoMEC campaign:

> "*Specifically, a question was raised about DAQ's ability to require MEC to install and operate an ambient air monitor for formaldehyde emissions. DAQ does have the ability to require a facility to install and operate an ambient air monitor, but this is usually done due to sufficient evidence of a limit or standard potentially being exceeded.*
>
> *As an example, DAQ previously entered into an ambient air quality monitoring plan with another facility to install and operate two nitrogen dioxide (NO_2) monitors due to air dispersion modeling of that facility indicating a potential exceedance of the NO_2 1-hour National Ambient Air Quality Standard (NAAQS). When that facility monitored for NO_2 for a 36-month period, the collected data demonstrated that the NO_2 1-hour NAAQS had not been exceeded. After the set monitoring period, the monitors were decommissioned, and there is no ongoing monitoring requirement for this facility today*."[17]

As discussed above, industry-standard emissions factors like the ones used in the DEQ's draft permit for the Proposed Project are likely underestimates and indicate the need for better emission factors. Air monitoring should be used as a way to ground truth and check Duke's emission factor assumptions, especially for pollutants without Continuous Emissions Monitoring (CEM) requirements. We understand that this is typically required in response to violations of a facility's permit, but waiting until the community has already been polluted and exposed is unacceptable. Moreover, the lack of data impairs the community's ability to monitor the facility for suspected violations and to advocate on their own behalf for greater regulatory oversight.

Communities across the US are beginning to evolve the way that they track industrial air pollution. The Houston Health Department, for example, obtained grant funding to conduct mobile formaldehyde monitoring around industrial sites in 2019. This monitoring work added to the understanding of formaldehyde and cancer risk in the community, and the use of mobile monitoring allowed the agency to leverage limited monitoring resources to support the understanding of health impacts in many different communities. Similar research could be undertaken by the DAQ through

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[17] Email from Taylor Hartsfield, *Thank you for meeting with us yesterday!,* (July 20, 2024).

grant funding to understand cancer risk in the community surrounding the proposed gas plants and other communities across the state.

VI. The Proposed Roxboro Natural Gas Plant Raises Significant Regulatory Concerns.

In addition to the cumulative impacts and the overburdening of the neighboring communities, the proposed project conflicts with federal carbon pollution standards and presents significant long-term feasibility issues, creating substantial uncertainty about its economic and environmental sustainability. If the air quality permit for the proposed Roxboro Natural Gas Plant is approved by the NCDEQ, there will be several regulatory implications along with the risk of statutory and policy violations. They are explained as follows:

a. Federal and State Regulatory Risks

i. Federal regulatory risks

The Environmental Protection Agency's (EPA) carbon pollution standards under the Clean Air Act mandate sharp reductions[18] in greenhouse gas emissions from fossil fuel-fired power plants.[19] For new gas-fired combustion turbines, compliance involves:

- Operating at less than a 40% capacity factor starting 2032 i.e. within 4 years of the first plant being in operation.[20]
- Meeting a second-phase standard requiring 90% CO2 capture possibly necessitating 96% hydrogen co-firing.[21]

These measures impose substantial costs, including retrofitting plants and transmission lines with carbon capture technology and adopting unproven hydrogen technology. These costs will inevitably fall on ratepayers, undermining the economic justification for the proposed plant. In her direct testimony before the North Carolina Utilities Commission, Elizabeth A. Stanton, an expert representing the Southern Alliance for Clean Energy, Sierra Club, and Natural Resources Defense Council, highlighted how Duke Energy plans to recover the capital costs of the proposed

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[18] *BSER At-A-Glance*, Environmental Protection Agency, https://www.epa.gov/system/files/documents/2024-04/cps-table-of-all-bser-final-rule-4-24-2024.pdf.

[19] *Final Carbon Pollution Standards to Reduce Greenhouse Gas Emissions from Power Plants,* Environmental Protection Agency (April 25, 2024), https://www.epa.gov/system/files/documents/2024-04/cps-presentation-final-rule-4-24-2024.pdf.

[20] *Id.*

[21] New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, 40 CFR Part 60, (May 9, 2024), https://www.federalregister.gov/documents/2024/05/09/2024-09233/new-source-performance-standards-for-greenhouse-gas-emissions-from-new-modified-and-reconstructed.

Roxboro natural gas-fueled facility from ratepayers, with the costs amortized over 35 years through 2064.[22] This would also include the rate of return to Duke Energy on those capital costs. Ratepayers would also bear the payment for the replacement resources once the expected generation is reduced. Added to this, the future costs of hydrogen co-firing remain uncertain, given the nascent state of the technology and lack of current commercial availability. Furthermore, the EPA's rules aim to cut 1.38 billion metric tons of CO2 from 2028 to 2047, alongside reducing harmful pollutants such as PM2.5, SO2, and NOx.[23] The proposed Roxboro Plant's projected emissions directly contravene these goals, requiring extensive infrastructure upgrades that will inflate utility rates for consumers.

Recent developments, such as the US Supreme Court's refusal to stay these federal rules, underscore the regulatory challenges Duke Energy will face in aligning this project with climate objectives.[24]

ii. State regulatory risks

The proposed Plant also clashes with North Carolina's statutorily required carbon reduction goals. The N.C. Gen. Stat. § 62-110.9 mandates a 70% reduction in carbon emissions by 2030 and net zero by 2050. The Roxboro Plant fails to provide the least-cost emissions reduction path envisioned by House Bill 951, neglecting health and environmental costs borne by nearby communities. When evaluating the least-cost emissions reduction pathway, it is essential to consider factors such as the immediate and long-term operational costs of the proposed natural gas facility, as well as its impact on nearby low-income communities of color that may already face cumulative environmental burdens or injustices. These considerations are mandated under HB951 and N.C. Gen. Stat. § 62-110.1. Duke Energy's commitment to carbon neutrality is undermined by this proposal, which contradicts its stated goals and North Carolina's legal framework.[25]

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[22] Seirra Club, *Direct Testimony of Elizabeth A. Stanton, PHD On Behalf of Sierra Club*, Docket No. 2020-125-E at Pg.32-33, https://www.sierraclub.org/sites/default/files/PUBLIC%20FINAL%20COPY%20Direct%20Testimony%20of%20Elizabeth%20A%20Stanton_Redacted.pdf.

[23] *Supra* note 21.

[24] *US Supreme Court declines to pause new federal power plant emissions rule*, The Guardian (Oct.16, 2024), https://www.theguardian.com/environment/2024/oct/16/supreme-court-declines-pause-power-plant-emissions-rule.

[25] *Net-Zero Carbon Emissions by 2050*, Duke Energy (2021), https://www.duke-energy.com/-/media/pdfs/our-company/191170-net-zero-carbon-emissions-factsheet.pdf?rev=4d1e940f651f4e9cb55e0a46fb018f39 ; *Climate Change*, Duke Energy, https://www.duke-energy.com/our-company/environment/global-climate-change.

b. Challenges of Unpredictability and Costs in Transitioning to Cleaner Energy Sources

Climate experts emphasize the urgency of transitioning to renewable energy to mitigate severe climate change impacts.[26] Natural gas, often portrayed as a "bridge fuel," only delays the transition while demanding significant investment. The Roxboro Plant risks becoming a stranded asset as evolving regulations and rapid renewable advancements render fossil fuel infrastructure obsolete.

Duke Energy's reliance on hydrogen co-firing for compliance compounds this uncertainty. Transitioning directly to renewable energy sources like solar and wind, which have minimal environmental impact, offers a far more prudent path. The proposed site, spanning thousands of acres, is ideally suited for solar or wind projects.

Analysis from Synapse Energy Economics underscores the economic benefits of renewables.[27] These renewable resources can also result in cost savings in the range of $700 million to $2.4 billion by 2030 and $19.4 billion by 2050.[28]

c. Social cost borne by the ratepayers

If the air permit is issued by the DEQ, the Roxboro Plant will impose significant social costs, disproportionately affecting low-income households and exacerbating economic and environmental inequities. The Nicholas School of the Environment highlights that the true societal cost of natural gas is double its apparent price.[29] Hidden costs such as environmental and human health toll range from 4 to 18 cents/kWh, making the project's price tag highly misleading.[30]

Rather than doubling down on outdated fossil fuel infrastructure, Duke Energy should capitalize on federal incentives for renewable energy. These incentives lower financial risks, align with regulatory goals, and provide long-term stability for ratepayers.

The proposed Roxboro Natural Gas Plant is economically unsound, environmentally regressive, and misaligned with federal and state regulations. DEQ must not issue an air permit for this proposed Fossil Fuel Gas Plant. Duke Energy should instead seize this opportunity to lead the transition to renewable energy, securing long-term benefits for its stakeholders while advancing a sustainable future.

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[26] Mark Radka, *Is natural gas really the bridge fuel the world needs?*, UNEP (Jan.12, 2023), https://www.unep.org/news-and-stories/story/natural-gas-really-bridge-fuel-world-needs.

[27] Tyler Fitch et al., *Carbon-Free by 2050*, Synapse Energy Economics Inc. (July 20, 2022), https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=5815f0fe-8690-4aac-86f7-f2d752c73c9b.

[28] Sophie Loeb et al., *Missing the Mark: How North Carolina's Decarbonization Efforts Fall Short and How to Fix Them*, Center for Progressive Reform (March, 2024) https://cpr-assets.s3.amazonaws.com/wp/uploads/2024/03/missing-the-mark-032724.pdf.

[29]Drew Shindell, *New Models Yield Clearer Picture of Emissions' True Costs*, Duke Nicholas School of the Environment (March 3, 2015), https://nicholas.duke.edu/news/new-models-yield-clearer-picture-emissions-true-costs-0.

[30] *Id.*

CONCLUSION

Efficient energy infrastructure is essential to meet growing energy demands, but it must minimize environmental impacts and prioritize the well-being of communities. Federal and state environmental regulations exist to ensure this balance while preparing us to face the escalating climate crisis.

The permit modification for the proposed Roxboro Natural Gas Plant, if approved by the DAQ, would be a step backward in North Carolina's efforts to achieve sustainable energy goals and address the escalating climate change crisis. While framed as a bridge between coal and renewables and a way to reduce emissions, this proposed project would perpetuate dependence on fossil fuels and impose a significant burden on the ratepayers, thereby worsening environmental injustices for vulnerable communities. The facility's reliance on speculative hydrogen co-firing and costly retrofits to meet federal standards highlight the project's long-term impracticality.

Additionally, Duke Energy's permit application falls short of providing an adequate assessment of cumulative environmental impacts on the surrounding overburdened communities. The absence of sufficient air quality monitoring further jeopardizes the well-being of the neighborhood where the proposed Natural Gas Plant is going to be built, especially children and low-income families who will bear the brunt of the plant's emissions.

We kindly request the NC DAQ to deny the air permit for this facility. We urge Duke to align its energy goals with the state, federal, and its own climate goals, protect vulnerable communities, and secure a sustainable future for all North Carolinians.

Sincerely,

Katie Moore

Air Quality Researcher

NoMEC Campaign

klmoore42@gmail.com

SOUTHERN COALITION FOR SOCIAL JUSTICE

Aiswarya Murali

Counsel for Environmental Justice

Aiswarya@scsj.org

P.O. Box 51280

Durham, NC 27717

APPALACHIAN VOICES

Juhi Modi

North Carolina Field Coordinator

juhi@appvoices.org

350 TRIANGLE

Karen Bearden

BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE

Jason Torian

Community Organizer

CLEAN WATER FOR NORTH CAROLINA

Hope Taylor, MSPH

Executive Director

Hope@cwfnc.org

P.O. Box 69

Stem, NC 27581

DOWN HOME NORTH CAROLINA

Jennifer Eison

Climate Justice Campaigner

PROPERTY RIGHTS AND PIPELINE CENTER

Rebekah Sale

Executive Director

NORTH CAROLINA ENVIRONMENTAL JUSTICE NETWORK

info@ncejn.org