



# Understanding the Roxboro Gas Plant: Impacts and Insights

## Points to Consider for Advocates and Communities

### Overview:

Duke Energy and the NC Electric Membership Corporation have proposed building a new 1,360 MW natural gas-fueled combined cycle electric generating facility. The North Carolina Utilities Commission (NCUC) wants to hear public and community input on the issue.

### Details of Proposal:

- Docket Numbers: E-2, SUB 1318 and EC-67, SUB 55 *\*NOTE\* Comments can be submitted under either docket number*
- Location: Roxboro Plant, Person County

### When Sharing Your Story:

- **Personalize Your Message:** How would the expansion impact your life or community? Focus on what matters most to you. Are you concerned about air quality, rising energy costs, or climate change?
- **Health Concerns:** Discuss the potential health risks (see below) associated with increased air pollution from the gas plant, especially if you or someone you know has respiratory issues.
- **Household Budget:** Gas is dirty. It's also expensive. This buildout will raise household energy bills by an average of \$80 per month over the next 15 years.<sup>1</sup>
- **Clean Energy Future:** This expansion could make it difficult for North Carolina to meet its emission reduction targets under the state Carbon Plan. Rather than continuing to invest in polluting fossil fuels, Duke Energy could focus on renewable energy sources like solar and wind.

### Pollutants from Natural Gas Turbines:

- The combustion of natural gas produces nitrogen oxides (NOx) and climate-changing emissions.<sup>2 3</sup>

- Methane, the primary component of natural gas, is itself a potent global warming pollutant.<sup>3</sup>
- Methane can leak due to the aging of natural gas infrastructure and lack of maintenance.<sup>4</sup>

**Community Health Impacts:**

- High NOx concentration can irritate airways, aggravate respiratory diseases, and lead to hospital admissions.<sup>5</sup>
- NOx also reacts with other airborne substances to produce harmful pollutants such as particulate matter and ozone.<sup>6</sup>
- Natural gas drilling, extraction, and transportation can result in methane leakage.<sup>2</sup>
- Methane leaks also emit other air pollutants, such as benzene, a carcinogen associated with bone marrow suppression and leukemia.<sup>4</sup>
- Methane is an extremely potent greenhouse gas, 34x stronger than CO<sub>2</sub> at trapping heat over 100 years and 86x stronger over 20 years.<sup>2</sup>
- Unconventional oil and gas development may pose health risks to nearby communities by contaminating drinking water sources with hazardous chemicals.<sup>2</sup>

## Sources:

- 1: "Carolinas Resource Plan: Supplemental Planning Analysis." *Duke Energy*, [duke-energy.com/-/media/pdfs/our-company/carolinas-resource-plan/supplements/supplemental-planning-analysis.pdf](http://duke-energy.com/-/media/pdfs/our-company/carolinas-resource-plan/supplements/supplemental-planning-analysis.pdf).
- 2: "Environmental Impacts of Natural Gas." *Union of Concerned Scientists*, 19 June 2014, [ucsusa.org/resources/environmental-impacts-natural-gas](http://ucsusa.org/resources/environmental-impacts-natural-gas).
- 3: "How Natural Gas is Formed." *Union of Concerned Scientists*, 19 June 2014, [ucsusa.org/resources/how-natural-gas-formed](http://ucsusa.org/resources/how-natural-gas-formed).
- 4: "Fossil Fuel Derived Hydrogen is Bad for Health and Worsens the Climate Crisis." *PSR Greater Boston*, [gbpsr.org/climate-change/hydrogen/](http://gbpsr.org/climate-change/hydrogen/).
- 5: "Basic Information about NO<sub>2</sub>." *United States Environmental Protection Agency*, [epa.gov/no2-pollution/basic-information-about-no2](http://epa.gov/no2-pollution/basic-information-about-no2).
- 6: Specht, Mark. "No, Natural Gas Power Plants are Not Clean." *Union of Concerned Scientists*, 9 November 2018, [blog.ucsusa.org/mark-specht/natural-gas-power-plants-are-not-clean/](http://blog.ucsusa.org/mark-specht/natural-gas-power-plants-are-not-clean/).