

ENVIRONMENTAL HEALTH PROJECT

DEFENDING PUBLIC HEALTH SINCE 2012

environmentalhealthproject.org

January 15, 2026

Kathleen Reiser
Director, Office of Adjudications
Connecticut Department of Energy and Environmental Protection
79 Elm Street,
Hartford, CT 06106-5127

Re: Comments regarding the Iroquois Gas Transmission System Permit Applications - Brookfield Compressor Station Permits 028-0027, 028-0028, 028-0029 and 028-0030

Introduction

The Environmental Health Project (EHP) is submitting this written comment to the Connecticut Department of Energy and Environmental Protection (CT DEEP) to express our opposition to the expansion of the Brookfield Compressor Station. The proposed installation of two gas turbines and an emergency generator at the Brookfield Compressor Station puts undue risk on community members and the environment. EHP recommends that these permit applications are rejected by the CT DEEP in order to better protect public health and the lives of many impacted residents. EHP also recommends granting an adjudicatory hearing to ensure transparency and adequate information about these permit applications and the proposed project for the residents of Brookfield.

EHP is a nonpartisan, data-driven, nonprofit organization that has defended public health in the face of oil and gas development since 2012. We provide frontline communities with data collection and analysis tools, health and wellness education, and policy and advocacy resources. Our team of public health professionals, community educators, analysts, and communications experts is committed to securing health-protective solutions to reduce harm from exposure to oil and gas pollution.

Public Health Impacts

Every stage of shale gas development poses public health risks, including mid-stream facilities such as compressor stations. Gas compressor stations emit a mixture of chemicals that are known to be harmful to human health.¹

The proposed changes to the Brookfield Compressor Station will increase emissions of greenhouse gases, nitrogen oxides, particulate matter, sulfur oxides, carbon monoxide, and volatile organic compounds. Below are the health impacts of these air pollutants, listed in order of greatest to least total change in emissions reported in the permit application documents.

- **Greenhouse Gases:**

- **Methane and Carbon Dioxide:** climate change-induced health impacts, such as insect-borne diseases, heat-related illnesses, and injuries and deaths from storms, floods, and wildfires.²
- **Ozone:** respiratory symptoms, including coughing, throat and lung irritation; reduced lung function; and worsening of existing conditions such as asthma or bronchitis.³

- Note: While ozone is not directly emitted from compressor stations, other pollutants emitted from the facility, including NO_x and VOCs, contribute to its formation.⁴
- **Nitrogen Oxides (NO_x):** respiratory irritation and infections; exacerbation of respiratory diseases, such as asthma.⁵
 - This proposed expansion is considered a minor modification because the allowable NO_x limit is set at 24.9 tons per year, which is just below the 25 tons per year threshold, which would require it to be considered a major modification. Without continuous, on-site monitoring, it will be impossible to confirm if the facility's annual NO_x emissions stay below this threshold.
- **Particulate Matter 2.5:** impaired lung function, asthma exacerbation, irregular heartbeat and heart attacks; can lead to premature death in those with heart and lung diseases, such as chronic obstructive pulmonary disease (COPD).⁶
- **Carbon monoxide:** decreased exercise tolerance, decreased vigilance, and increased risk for cardiac ischemia in individuals with heart disease.⁷
- **Sulfur Oxides:** Breathing difficulties, particularly during exercise; aggravation of existing respiratory illnesses.⁸
- **Volatile Organic Compounds, including benzene, toluene, hexane, xylene, and formaldehyde:** eye, nose, throat, and skin irritation; headaches, nausea; loss of coordination, dizziness; damage to liver, kidneys, and central nervous system; increased risk of cancer, fatigue, confusion, rapid heart rate, nausea, memory difficulties, and poor coordination.⁹
 - Note: the toxicity of individual volatile organic compounds varies widely, but some of those commonly emitted from compressor stations introduce greater health risks.¹⁰

In addition to the level and duration of exposure, additional factors contribute to the health impacts experienced by individuals and communities. Some populations, including children, older adults, expecting or new parents, and individuals with chronic respiratory or cardiovascular conditions, are more vulnerable than the general population to the impacts of air pollution. Figure 1, below, shows 21 schools (green dots) within a 5-mile radius of the Brookfield Compressor Station (purple dot). One of these schools, Whisconier Middle School, is only 1900 feet from the compressor station. The additional air pollution, a consequence of the expansion of this facility, would impact young learners and other vulnerable groups of people living near this compressor station the most, especially considering the already existing air pollution in the area.

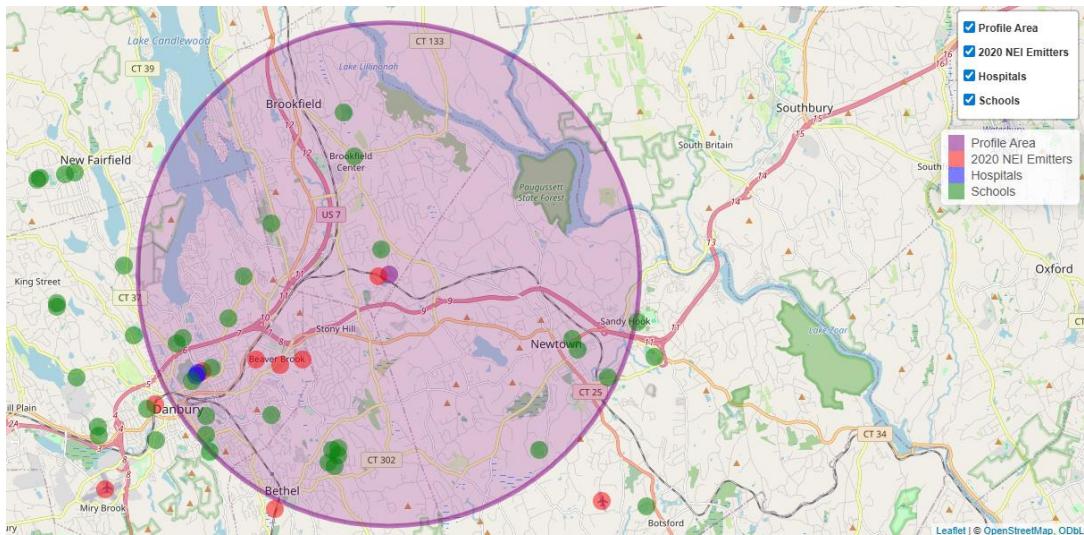


Figure 1. Schools, hospitals, and point source emitters within 5 miles of the Brookfield Compressor Station. Map created by EHP.

Emissions of toxic pollutants from compressor stations happen in a variety of ways. Blowdowns, incomplete combustion, leaks, and accidents are all sources of air emissions from compressor stations.¹¹ Once emitted, these pollutants can travel significant distances from the site of emission depending on various factors including weather conditions, wind direction, and topography.

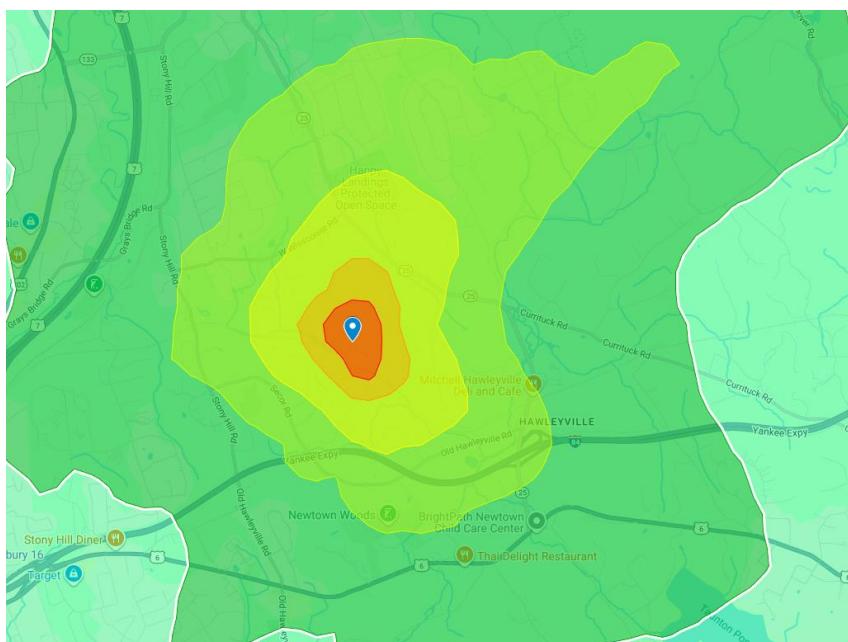


Figure 2. Modeled relative annual average airborne pollutant levels from the Brookfield Compressor Station. Modeling conducted by EHP.

The length and severity of exposure to these pollutants contribute significantly to health impacts experienced by community members. Figure 2, above, is a NOAA HYSPLIT analysis modeling how air emissions from the Brookfield Compressor Station disperse in nearby communities on an annual basis. The innermost, dark red ring depicts the area that experiences at least 50 percent of the annual average

ground-level concentration of air pollution from the Brookfield Compressor Station. The orange, yellow, yellow/green, and dark green rings represent areas that experience 25%, 10%, 5%, and 2% of the annual average concentration, respectively. The local topography results in unequal dispersion from the facility, ranging from 6-12 miles from the facility. Within this area of likely pollution dispersion are several recreational and community gathering spaces including parks, trails, schools, childcare centers, businesses, and churches. The varied terrain in this area, as well as changing weather conditions, and intermittent emissions from the plant, contribute to short-term episodic exposures to air pollution that can trigger acute and chronic health concerns.

Furthermore, the entirety of Fairfield County, where the Brookfield Compressor Station is located, has been in serious or severe nonattainment of the National Ambient Air Quality Standards for ozone every year since 2012.¹² Many of the pollutants emitted from compressor stations, such as VOCs and nitrogen oxides, are ozone precursors. The two permit applications under consideration would notably increase nitrogen oxide emissions from this facility, in turn increasing ozone formation in Fairfield County. Expanding this compressor station would increase the cumulative ozone pollution burden for the county, and thus the public health impacts for community members.

Additionally, the State of Connecticut has committed to reducing greenhouse gas emissions through the Global Warming Solutions Act, and rejecting the permit applications to expand the Brookfield Compressor Station maintains the integrity of this commitment.

Recommendations

In summary, EHP recommends the CT DEEP reject the permit applications to expand the Brookfield Compressor Station.

Additionally, the Department should reverse its previous decision and grant Brookfield an adjudicatory hearing. This is critical to providing *meaningful* public participation in the permitting process. There has been a large amount of public interest and engagement regarding this project, and an adjudicatory hearing is warranted to ensure that the public receives the transparency and information they deserve.

Lastly, if the Department decides to approve the permit applications for the expansion of the Brookfield Compressor Station, it is imperative that DEEP requires the implementation of a robust air monitoring program and the use of the best available control technology. A robust air monitoring program would include testing by a third-party, using continuous air monitors and/or frequent sampling for a variety of pollutants that would likely be increased due to this expansion, including but not limited to, methane, ozone, NO_x, PM_{2.5}, CO, SO_x, and VOCs. Meaningful, real-time, unbiased monitoring would allow for timely responses to exceedances of pollution standards. Air monitoring data should also be made available to the public to ensure transparency and allow residents to understand how actual pollutant levels may be impacting their health. Requiring the use of the best available emissions control technology is essential due to the existing air pollution in this area. To protect the health of residents, every tool available should be used to minimize the addition of more emissions to the existing pollution burden.

Preventing an increase in emissions would prevent further harm to the health of the Brookfield community and beyond, considering:

- the extensive literature on the public health impacts associated with the air pollutants emitted from compressor stations,
- Fairfield County nonattainment status for ozone,
- the proximity of homes, schools and other recreational and community gathering spaces to the compressor station, and
- the State of Connecticut's commitment to reducing greenhouse gas emissions.

Thank you for the opportunity to comment on this matter.

Sarra Bridges, MPH, MS

Northeast Project Coordinator
Environmental Health Project
4165 Blair Street, Pittsburgh, PA 15207
724.260.5504
sbridges@environmentalhealthproject.org

¹ Russo, P. N., & Carpenter, D. O. (2019). Air Emissions from Natural Gas Facilities in New York State. *International journal of environmental research and public health*, 16(9), 1591. <https://doi.org/10.3390/ijerph16091591>

² Centers for Disease Control and Prevention (CDC). (2024, February 29). Effects of Climate Change on Health. Climate and Health. <https://www.cdc.gov/climate-health/php/effects/index.html>

³ Environmental Protection Agency (EPA). "Health Effects of Ozone in the General Population." (2016, March 21). www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population.

⁴ Environmental Protection Agency (EPA). "Ground-Level Ozone Basics." (2015, May 29). www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics.

⁵ Environmental Protection Agency (EPA). "Basic Information about NO₂ ." (2025, July 10). www.epa.gov/no2-pollution/basic-information-about-no2.

⁶ Environmental Protection Agency (EPA). (2022, August 30). Health and Environmental Effects of Particulate Matter (PM). <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>

⁷ Environmental Health Project. (2022, November). Potential Health Effects Due to Inhalation of Air Pollutants. https://www.environmentalhealthproject.org/_files/ugd/a9ce25_531c2388f0dc4b6d902de330db6b1639.pdf

⁸ Connecticut Department of Energy and Environmental Protection (CT DEEP). (2010, December 20). "Air Pollutant Information." Connecticut's Official State Website, <https://portal.ct.gov/deep/air/monitoring/air-pollutant-information>

⁹ Environmental Health Project. (2022, November). Volatile Organic Compounds, Shale Gas Development, and Your Health. https://www.environmentalhealthproject.org/_files/ugd/a9ce25_d1e6343afef46899cccad3906a088b.pdf?index=true

¹⁰ Russo, P. N., & Carpenter, D. O. (2019). Air Emissions from Natural Gas Facilities in New York State. *International journal of environmental research and public health*, 16(9), 1591. <https://doi.org/10.3390/ijerph16091591>

¹¹ Davis, C. D., Frazier, C., Guennouni, N., King, R., Mast, H., Plunkett, E. M., & Quirk, Z. J. (2023). Community Health Impacts From Natural Gas Pipeline Compressor Stations. *GeoHealth*, 7(11), e2023GH000874. <https://doi.org/10.1029/2023GH000874>

¹² Environmental Protection Agency (EPA). (2025 August 31). Connecticut Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. https://www3.epa.gov/airquality/greenbook/anayo_ct.html