

Prevention of Significant Air Quality Deterioration Review

Final Determination

October 2025

Facility Name: Smarr Combined Cycle Energy Facility

City: Smarr

County: Monroe

AIRS Number: 04-13-207-00042

Application Number: 29663

Date Application Received: April 14, 2025



State of Georgia
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BACKGROUND

On April 14, 2025, Oglethorpe Power Corporation (hereafter OPC) submitted an application for an air quality permit to construct and operate the Smarr Combined Cycle Energy Facility, a greenfield electric power generation facility. The facility is located at 555 Ray Hartley Road in Smarr, Monroe County. The proposed energy facility will have a nominal power output of 1,425 megawatts and will include two combined cycle combustion turbines with heat recovery steam generators and duct burners, two fuel gas heaters, one fire pump engine, and two emergency generators. The combustion turbines, duct burners, and fuel gas heaters will be fired exclusively on natural gas. The fire pump engine and emergency generators will be ultra-low sulfur diesel fired.

On September 17, 2025, the Division issued a Preliminary Determination stating that the modifications described in Application No. 29663 should be approved. The Preliminary Determination contained a draft Air Quality Permit for the construction and operation of the modified equipment.

The Division requested that OPC place a public notice in a newspaper of general circulation in the area of the existing facility notifying the public of the proposed construction and providing the opportunity for written public comment. Such public notice was placed in the *Monroe County Reporter* (legal organ for Monroe County) on September 24, 2025. The public comment period expired on October 24, 2025.

During the comment period, comments were received from the general public. There were no comments received from the U.S. EPA Region IV or the facility.

A copy of the final permit is included in Appendix A. A copy of written comments received during the public comment period is provided in Appendix B.

DAVID PEDERSEN COMMENTS

Comments were received from David Pedersen by email on October 10, 2025. Note that Mr. Pedersen's comments were submitted in narrative form without separate, clearly delineated comments. The entire body of the email is present below and was broken into separate comments by EPD to aid in the response to the comments.

Comment 1

[o]ur public health scientists and doctors have told us that there is no threshold, that any air pollution is harmful. The Clean Air Act is based on the assumption, although we knew at the time it was inaccurate, that there is a threshold. When we set the standards, we understood that below the standards that we set there would still be health effects.

- Senator Edmund Muskie, Clean Air Act Amendments of 1977: Hearings Before the Subcommittee on Environmental Pollution of the Senate Committee on Environment and Public Works, 95th Cong. 8 [1977]

I respectfully submit these comments in opposition to the draft air quality permit for Smarr Combined-Cycle Energy Facility, located at 555 Ray Hartley Road in Smarr (Monroe County).

I am a computer scientist and clean-air and climate activist who has spent the past five and a half years fighting for humanity's right to clean air in jurisdictions all over the world, including in your state regarding a recent proposal by Georgia Power to burn woody biomass for electricity generation (which, like I am doing today, I strongly opposed).

I disagree in the strongest possible terms with the proposed issuance of the permit because it would further deprive Monroe County residents and visitors of their right to clean air, which is a prerequisite for the rights of life and liberty (both of which are constitutionally- and internationally-protected). The residents are already exposed to pollution from cooking, mobile sources (namely on-road vehicles and agricultural machinery), wood burning, and other sources. Already, air pollution in your state has been linked to approximately 4,000 premature deaths in 2018 and possibly 9,000 deaths annually in more recent years (with an estimate of approximately 100,000 per year nationwide).

This permit, like almost every other, is based on the assumption that the emissions limitations and control technologies contained therein are adequate to protect public health and welfare. However, as the aforementioned quote shows, that assumption is simply not true, because air pollution is a binary phenomenon (the air is either clean/safe or dirty/unsafe) rather than a linear one. In fact, it would not be hyperbole to classify these operating permits as "licenses to kill" (as the late Ian Fleming might have referred to them as), since they allow permittees to discharge deadly substances into the air others breathe and remain shielded from prosecution for doing so as long as they abide by the terms and conditions in their permits.

I am extremely disturbed - indeed appalled - by your determinations "that these emissions will not

cause an adverse impact on ambient air quality, and the air quality levels should pose no significant health risk around the plant" and "that the facility will not adversely affect the air quality". These claims are patently false; it is a fundamental scientific fact that the introduction of ANY pollutant at ANY concentration above zero into an airshed adversely affects that airshed and puts every single living thing in that airshed at risk of permanent health damage and even premature death. Because these claims are false, they cannot be used to justify the issuance of the permit and excuse the negative health effects that will follow.

I also disagree with the concept of "significant deterioration" as a benchmark to determine whether the facility poses a risk to public health. To reiterate, the introduction of ANY pollutant at ANY above-zero concentration is "significant" from a health standpoint.

EPD Response.

The Clean Air Act and the Georgia Air Quality presume that there is a safe or acceptable threshold for air pollutants based on sound scientific research and practices. The U.S. EPA and Georgia EPD have promulgated rules with emission limits (e.g., 40 CFR 60 Subpart KKKK, Georgia Rule 391-3-1-.02(2)(d), etc.). Each of these emission limits is established with the presumption of an acceptable level of one or more air pollutants. Furthermore, the Prevention of Significant Deterioration (PSD) rules require best available control technology (BACT) for any pollutant subject to PSD, but the PSD rules do not require zero emission rates for any air pollutant.

The Division's review of Application No. 29663 for the Smarr Combined Cycle Energy Facility determines whether the facility, as proposed, can reasonably be expected to comply with the rules and regulations promulgated by the US EPA and by Georgia EPD. Permit 4911-207-0042-P-01-0 has been drafted to ensure compliance with these rules and regulations, and the Preliminary Determination documented the process of review of the application and the drafting of the permit.

Comment 2

I am also extremely concerned about the 2.0 parts-per-million-by-volume-dry NO₂ limit, which is "based on good combustion and operating practices, dry-low NO_x (DLN) combustors, and a selective catalytic reduction (SCR) system". This limitation is 20 times the federal hourly NO₂ standard (currently 100 parts per billion) and almost 38 times the annual one (currently 53 parts per billion), meaning it is not health-protective even though the federal standards are not protective as such either as the quote at the beginning of this message proves. Furthermore, while it is understandable, your finding that the use of Zero-Slip™ technology is not technically feasible is concerning as it implies that there will be uncontrolled ammonia emissions (and therefore secondary particulate formation) due to the "ammonia slip" phenomenon. Here in British Columbia, we lost someone several years ago to an ammonia leak in a community arena, so any uncontrolled ammonia emissions (or a reasonable risk thereof) stirs up great fear in me (and hopefully in you as well).

EPD Response.

The commentor has conflated an emission limit from a stationary source (i.e., 2.0 ppmvd NO_x, corrected to 15% oxygen) with the National Ambient Air Quality Standards (NAAQS) (i.e., 53 ppb annual and 100 ppb 1-hour NO₂). The NAAQS do not apply at the exhaust point to the atmosphere from the combined-cycle combustion turbines. The PSD rules, however, require a modeling determination that the Smarr Combined Cycle Energy Facility will not cause or contribute to a violation of the NAAQS. This modeling determination can be found in Volume II, Section 5.0 of the permit application and in Section 6.0 of the preliminary determination.

With regards to ammonia slip, modeling results show that the potential maximum ground level concentration of ammonia will be far below the acceptable ambient concentrations established in Georgia's *Guideline for Ambient Impact Assessment of Toxic Air Pollutant Emissions, Revised May 2017* (see Section 7.0 of the preliminary determination). An accidental ammonia release is a separate issue from ammonia slip. The Smarr Combined Cycle Energy Facility plans to store aqueous ammonia at concentrations less than 20%. Because the ammonia stored at the facility will be less than 20%, a risk management plan is not required by 40 CFR Part 68. Note that aqueous ammonia, which is ammonia dissolved in water, is much safer to store and use than anhydrous ammonia, which is pure ammonia stored as a pressurized gas or liquid with no water present.

Comment 3

I am also disturbed by the proposed use of "oxidation catalysts", as "The EPA admits that it approved the use of a thermal oxidizer at Roystone to limit VOC emissions that does increase NO_x emissions, even though the agency's approval stated that there were no NO_x emissions from the proposed RACT at the facility" (Center for Biological Diversity v. United States Environmental Protection Agency, No. 21-3023 [3d Cir. 2023]). Therefore, this appears to be something of a vicious cycle, since such a technology simply exchanges one pollutant for another.

EPD Response.

Oxidation catalysts and thermal oxidizers are two different technologies that can be used to reduce organic compounds in gaseous streams. As noted in Section 4.0 of the preliminary determination, an oxidation catalyst utilizes a catalyst to reduce CO and VOC concentrations at lower temperatures (typically between 600° F and 800°F). A thermal oxidizer, which is neither discussed in the preliminary determination nor proposed in this project, uses high temperatures (typically 1400° F to 1600° F) to reduce VOC concentrations in waste streams. Additionally, thermal oxidizers often attain these elevated temperatures through the use of additional combustion sources in the unit which increase NO_x emissions. Because an oxidation catalyst operates at much lower temperatures than thermal oxidizers and do not require the supplemental heat source, the NO_x emissions are significantly less.

Comment 4

In short, there is no way that this permit can be written to protect the health and welfare of the public (as well as that of plants and other animals) from the emissions of the proposed facility in the proposed location. As such, there are only two justifiable paths forward: denial of the permit, or - if the facility is truly needed - a change in its proposed location such that its emissions will not reach anyone outside of the facility, which I understand would be challenging and potentially impractical given the associated infrastructure build-outs that would be required and the assessments and studies associated therewith. Whatever decision you make though, the right to clean air - and, by extension, life and liberty - MUST come first.

I respectfully urge you to do the right thing and take one of the two "justifiable" actions listed in the above paragraph. Your citizens are counting on you; their health is quite literally in your hands.

Furthermore, I plan on attending the virtual public hearing for this permit on October 24, although it is unlikely I will raise my hand to comment verbally as I have already done so in a written manner with this e-mail. As such, repeating the remarks I have made here during the hearing would be unnecessary and take time away from others who will not have had a chance to submit written comments (or who HAVE submitted written comments but wish to make verbal comments as well).

HÍSWKE (thank you) for taking some of your valuable time to read these comments and for your understanding of the severity of the harms that will occur if the permit is granted in its current form.

EPD Response.

As noted in an earlier response, Georgia EPD has determined that the Smarr Combined Cycle Energy Facility can reasonably be expected to comply with all applicable requirements. Furthermore, the federal and state regulations do not allow for redefining or relocating the proposed facility in the ways that the comment suggests.

APPENDIX A

AIR QUALITY PERMIT

4911-207-0042-P-01-0

APPENDIX B

WRITTEN COMMENTS RECEIVED DURING COMMENT PERIOD