Prevention of Significant Air Quality Deterioration Review

Final Determination
January 2026

Facility Name: Plant Bowen
City: Cartersville
County: Bartow
AIRS Number: 04-13-015-00011
Application Number: TV-905935
Date Application Received: March 5, 2025

State of Georgia
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BACKGROUND

On March 5, 2025, Bowen Steam-Electric Generating Plant (hereafter referred to as "The Plant") submitted an application for an air quality permit to construct and operate up to four (4) combined-cycle (CC) electric generating units and associated equipment. The facility is located at 317 Covered Bridge Rd in Cartersville, Bartow County. The proposed project will include construction of the proposed CT units and will include installation of new associated equipment, such as six (6) emergency generators, two (2) emergency fire water pump engines, four (4) cooling towers, and four (4) fuel gas heaters.

On August 29, 2025, the Georgia Environmental Protection Division (EPD) issued a Preliminary Determination stating that the modifications described in Application No. TV-905935 should be approved. The Preliminary Determination contained a draft Air Quality Permit for the construction and operation of the modified equipment.

EPD requested that The Plant 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 *Daily Tribune* (legal organ for Bartow County) on September 10, 2025. The public comment period expired on October 14, 2025.

During the comment period, comments were received from the public, Georgia Power, the Environmental Protection Agency (EPA), the Southern Environmental Law Center (SELC), Environment Georgia, Georgia Interfaith Power & Light, the Sierra Club, and the National Parks Conservation Association.

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.

GEORGIA POWER – PLANT BOWEN COMBUSTION TURBINE ELECTRIC GENERATING FACILITY COMMENTS

Comments were received from Pilar Johanssen, Senior Air Programs Engineer/Jon Bandzul, Air Programs Manager, by letter/email on October 13, 2025.

Comment I

Summary of Requested Revisions

- Add Best Available Control Technology (BACT) citation, 40 CFR 52.21(j)(3), in Permit Table 3.1.1 for each emission unit.
- Correct Table 3.1.1 control device descriptions for Emission Unit ID Nos. DB7, DB8, DB9, and DB10 from "Dry low NOx combustor" to "Low NOx burner".
- Administrative edit of 40 CFR 52.21 BACT references throughout Permit Section 3, from (j)(2) to (j)(3).
- Add references to state rule "d" (subsumed) for NOx and particulate matter to Permit Conditions 3.3.17.b, 3.3.18.b, 3.3.17.f, and 3.3.18.e respectively.
- Edit Conditions 3.3.17.a, 3.3.18.a, 5.2.35, 6.1.7.a.iv to correctly reference the 40 CFR 60 Subpart KKKK 30-day rolling average NOx limit.

EPD Response

With the exception of the request to correctly reference the 40 CFR Part 60, Subpart KKKK 30-day rolling average NOx limit, which has been superseded by Subpart KKKKa requirements as described below, EPD agrees and has made the requested changes in the final permit amendment.

SELC COMMENTS

Comments were received from SELC on behalf of itself, Environment Georgia, Georgia Interfaith Power & Light, the Sierra Club, and National Parks Conservation Association (hereafter, the "Commenters"). The letter was received on October 14, 2025.

Please refer to Appendix B to view the entire comments. EPD will only address the comments relevant to the draft permit and application below.

Comment I

Residents of the Atlanta Metropolitan Area Already Suffer from Exposure to Unhealthy Levels of Smog and Soot Pollution.

Comment I.A. The Atlanta Area is Violating the Primary 8-Hour NAAQS for Ozone.

EPD Response

The statement by Commenters that "the Atlanta area has fallen back into nonattainment for ozone, triggering EPD's obligation to implement the Maintenance Plan's contingency measures" is not entirely accurate since the Atlanta area has not fallen back into nonattainment. Rather, the Atlanta area has measured a 3-year design value over the 2015 ozone standard, which does trigger the EPD's obligation to implement contingency measures as described in our approved Maintenance Plan[1]. The Maintenance Plan approval for the 2015 ozone standard was published in the Federal Register on October 17, 2022, and was effective November 16, 2022 (87 FR 62733). While the trigger for implementing contingency measures has occurred, the Maintenance Plan lays out a process for implementing contingency measures which could take up to 24 months. First, EPD must conduct a comprehensive analysis to examine the data, including the severity of the trigger condition, meteorological conditions, and potential contributing emission sources. If the required analysis determines emissions from the local area are contributing to the trigger condition, EPD will evaluate those measures as specified in Section 172 of the Clean Air Act for control options as well as other available measures. Any resulting contingency measure(s) will be based upon cost effectiveness, emission reduction potential, economic and social considerations, ease and timing of implementation, and other appropriate factors. The adoption of additional control measures is subject to necessary administrative and legal processes, including input from interested and affected persons in the area. No contingency measure will be implemented without providing the opportunity for full public participation, including publication of notices, an opportunity for public hearing, and other measures required by Georgia law.

In addition, EPD is in the process of developing exceptional event demonstrations to document that the only reason the Atlanta area is currently violating the 2015 ozone standard is due to Canadian wildfires in 2023. If EPA concurs with our exceptional event demonstrations, all ozone

[1] https://epd.georgia.gov/atlanta-2015-ozone-maintenance-plan

monitors in Atlanta will have 2022-2024 and 2023-2025 design values that comply with the 2015 ozone standard. As a result, contingency measures would no longer be required.

Comment I.B. The Atlanta Area is Currently Exceeding the Primary Annual NAAQS for $PM_{2.5}$, a Pollutant for Which There is No Safe Exposure Level.

EPD Response

As part of the formal designating process for $PM_{2.5}$, EPD recently prepared exceptional events demonstrations that propose to exclude data collected at two monitoring sites (Forest Park and Gwinnett Tech) on certain days in 2023 since that air quality was impacted by smoke from Canadian wildfires. Both of these sites have a certified 2022–2024 design value of 9.1 µg/m^3. Assuming that the U.S. Environmental Protection Agency (EPA) concurs with EPD's proposal to exclude certain data from 2023, the 2022–2024 design values for these monitors will decrease to 9.0 µg/m^3 in compliance with the primary annual NAAQS. Although the Kennesaw monitor ceased operation in January 2025, it recorded sufficient data in the preceding years to yield a certified 2022–2024 design value of 8.7 µg/m^3. EPD did not prepare an exceptional events demonstration for the NR-GA Tech $PM_{2.5}$ monitor in the Atlanta area, which has a certified 2022–2024 design value of 9.4 µg/m^3. Since the $PM_{2.5}$ data collected at the NR-GA Tech site is measuring traffic-related pollution and is not representative of the overall Atlanta-Sandy Springs-Alpharetta Metropolitan Statistical Area (MSA) level of $PM_{2.5}$ exposure, this site has been classified as a "microscale" site since 2014, the NR-GA Tech $PM_{2.5}$ monitor is not eligible for comparison to the annual $PM_{2.5}$ NAAQS. This has been documented in the EPD "Addendum to 2024 Ambient Air Monitoring Plan" (submitted to EPA on November 7, 2024, and located at https://airgeorgia.org/networkplans.html) and is supported by the text below found in 40 CFR 58.30:

> *$PM_{2.5}$ measurement data from monitors that are not representative of area-wide air quality but rather of relatively unique micro-scale, or localized hot spot, or unique middle-scale impact sites are not eligible for comparison to the annual $PM_{2.5}$ NAAQS. $PM_{2.5}$ measurement data from these monitors are eligible for comparison to the 24-hour $PM_{2.5}$ NAAQS.*

Assuming EPA concurs with the exceptional event requests submitted by EPD on September 19, 2025[2], all $PM_{2.5}$ monitors in the Atlanta area will show compliance with the primary annual $PM_{2.5}$ NAAQS. Even if EPA does not concur with our exceptional event requests, the Atlanta area is currently designated attainment for all NAAQS; therefore, the PSD modeling analysis that was performed is appropriate to demonstrate that the project will not cause or contribute to a NAAQS violation.

[2] https://epd.georgia.gov/air-protection-branch/air-branch-programs/planning-and-support-program/exceptional-event

Comment II

Pursuant to the Maintenance Plan for the Atlanta Area, Georgia Power Must Obtain a Nonattainment New Source Review Permit Addressing Air Pollution Related to Ozone Formation.

EPD Response

The Atlanta area was redesignated to attainment for the 2015 ozone NAAQS on November 16, 2022. Therefore, the proposed project is not located in a nonattainment area. Further, the nonattainment new source review requirements were removed from the Georgia Rules for Air Quality Control on June 19, 2023. Therefore, it is not appropriate for EPD to require Georgia Power to follow nonattainment new source review requirements. On September 2, 2025, EPA proposed to remove permitting requirements related to nonattainment, including nonattainment new source review (NNSR), from Georgia's State Implementation Plan (90 FR 42343):

> *"The Environmental Protection Agency (EPA) is proposing to approve a State Implementation Plan (SIP) revision submitted by the State of Georgia through the Georgia Environmental Protection Division (EPD) on June 27, 2024. The revision seeks to remove permitting requirements related to nonattainment, including nonattainment new source review (NNSR), from Georgia's SIP as obsolete, remove certain provisions related to the use of emission reduction credits (ERCs), and make other changes based upon the lack of any areas designated as nonattainment for the National Ambient Air Quality Standards (NAAQS) in Georgia. EPA is proposing to approve these changes pursuant to the Clean Air Act (CAA or Act)."*

Regardless of the SIP and rule changes discussed above, the proposed project is located in an area currently designated as attainment; therefore, the Plant is not required to obtain a nonattainment new source review permit.

Comment III

To Protect the Public from Exposure to Unhealthy Ground-Level Ozone Pollution that Violates the NAAQS, EPD Must Require Georgia Power to Comply with the Lowest Achievable Emissions Rate and Obtain Emission Offsets.

EPD Response

A project is required to achieve the Lowest Achievable Emissions Rate (LAER) and obtain emission offsets as a requirement of the NNSR Permitting Program. The proposed project does not have to meet these requirements because it is located in a designated attainment area as stated in the response to Comment II above.

Comment IV

The Permitting Record Does Not Support EPD's Determination that the Proposed Expansion of Plant Bowen Will Not Cause or Contribute to Violations of National Ambient Air Quality Standards.

EPD Response

Commenters state that the project will contribute to the ongoing ozone NAAQS violation and would cause or contribute to a violation of the $PM_{2.5}$ annual NAAQS, and therefore EPD cannot issue the permit as currently drafted.

EPD and EPA Region 4 reviewed and approved Georgia Power's modeling protocol for the project. The modeling results, which EPD also reviewed, determined that the project will not cause or contribute to a NAAQS violation.

Comment IV.A. Georgia Power Bears the Burden of Demonstrating Its Project Will Not Cause or Contribute to NAAQS Violations.

EPD Response

EPD agrees with Commenters.

Comment IV.B. The Source Impact Analysis Relies on Old Data from a Rural Air Monitor, Yielding Background Concentrations that are Not Representative of Areas that Will Be Impacted by the Project's Increased Emissions.

1) Georgia Power Failed to Perform Pre-construction Monitoring to Collect Representative Background Data.

EPD Response

EPD's ambient monitoring network provides sufficient pre-construction monitoring. The ambient monitoring network is implemented with the Ambient Air Monitoring Plan that is required by federal regulations under 40 CFR 58.10 (a)(1). The plan provides documentation of the establishment and maintenance of an air quality surveillance system in Georgia that meets all federal requirements found in Appendix A through E of 40 CFR 58, where applicable. In addition, EPD fulfills the requirements specified in the federal monitoring regulations (40 CFR 58) with its Five-Year Network Assessment.

EPD reviewed and concurred with Georgia Power's analysis of background air quality and pre-construction monitoring in Volume II of the Application in Section 6.2.

Comment IV.B 2) The Existing Monitoring Data Relied Upon for the Source Impact Analysis is Neither Representative nor Current.

EPD Response

Appendix W states that background air quality should include the ambient impacts of nearby sources and other sources, but not the project source under consideration. The Yorkville NO_2 monitor is the only rural background NO_2 monitor in the state. In addition, Appendix W specifies that proximity should not be the sole factor in determining the appropriate monitor for background concentrations. Based on distance and other factors, EPD determined that the selected NO_2 background concentration was representative for the project site.

EPD also determined the Yorkville monitor is conservatively representative of current conditions. While EPA's 2024 Guidance on Developing Background Concentrations for Use in Modeling Demonstrations recommends the ambient monitoring data should be current (e.g., measured in the three most recent years of data similar to those years used in the design value calculation), it also allows for data that is "otherwise representative of current conditions." EPD evaluated concentration and emission trends and determined that NOx concentrations and emissions have decreased over time in the vicinity of the Yorkville monitor and across the state. Therefore, the use of the older Yorkville NO_2 data is a conservative approach for this project.

Comment IV.C. The Source Impact Analysis Relies on Flawed Inputs and Assumptions, Resulting in Underestimated Impacts.

EPD Response

EPD does not agree with the Commenters. Related to startups and shutdowns, the source impact analysis provided by Georgia Power in Volume II, Sections 4.2.2 and 5.1 of the March 5, 2025, application, which follows Appendix W, includes modeling startup and shutdown emissions for NOx. Georgia Power did not include startup and shutdown emissions in the modeling for the NOx BACT emission limitation found in Condition 3.3.16a. of the draft permit because the highest emissions from each proposed Combined Cycle Combustion Turbine would occur when the unit is operating continuously at full load as shown in Tables C-3, C-4, and C-5 in Appendix C of the March 2025 application. EPD agrees with this approach.

Additionally, Georgia Power states in the application in Volume II at 8 that for CO emissions, "annual emissions include startup and shutdown operations as this scenario reflects higher annual emissions compared to the scenario that assumes 8,760 hours per year of operation at full load."

Commenters also stated Georgia Power used an unjustified assumption that distillate fuel combustion will be limited to 1,200 hours per year. In the draft permit, this limit is expressed as gallons in Condition 3.2.5: "The Permittee shall limit the total amount of distillate oil fired in each combustion turbine… to 29,600,000 gallons or less during any twelve consecutive months." Georgia Power stated that this limit is equivalent to 1,200 hours of operation on oil at full load at annual average ambient conditions. EPD has reviewed the information and concurs.

Comment IV.D. The Source Impact Analysis Improperly Relies on Modeled Emission Rates for Precursors and Significant Impact Levels to Avoid Required PSD (Prevention of Significant Deterioration) Modeling.

EPD Response

The Commenters' concerns were addressed in the project's modeling protocol that was reviewed and approved by EPD as well as EPA Region 4. Additionally, the modeling submitted for the project was reviewed and approved by EPD. This modeling review considered the following concerns.

Comment IV.D.1) Georgia Power's Reliance on Significant Impact Levels to Avoid Further Analysis Conflicts with the Plain Statutory Language of the Clean Air Act.

EPD Response

EPD reviewed the facility's air dispersion modeling analysis based on the requirements specified in "Appendix W", EPA's "Guidance for Ozone and Fine Particulate Matter Permit Modeling" (dated July 29, 2022), and EPD's PSD modeling guidance. Also, EPD required the applicant to submit a technically sound modeling protocol that was reviewed and approved by EPD and reviewed by EPA Region 4 as a part of the final modeling analysis. Based on the use of EPA approved methodologies and reviews by both EPD and EPA Region 4, EPD has concluded that the facility will not cause NAAQS exceedances that lead to violations of NAAQS.

Comment IV.D.2) Georgia Power's Reliance on Modeled Emission Rate for Precursors to Avoid Further Analysis Also Conflicts with the Plain Statutory Language of the Clean Air Act.

EPD Response

EPA guidance allows permitting agencies to rely on Modeled Emission Rates for Precursors ("MERPs") to find, on a case-by-case basis, that a project's emissions will not cause or contribute to a NAAQS violation for ozone or secondary $PM_{2.5}$. EPD has historically relied on this guidance in previous permitting actions.

Georgia Power provided the following information regarding their use of MERPs. EPD has reviewed the information and concurs.

> MERPs are an EPA and Division accepted Tier I tool which is used to calculate secondary $PM_{2.5}$ and ozone concentrations. The application implemented EPA's most recent guidance, issued in 2024, which reiterated EPA's support of MERPs and provided updated guidance on application of MERPs.[3] To determine ozone concentrations, the updated MERPs guidance outlines how to calculate ozone concentrations based on a normalized relationship between NOx and VOC emissions with a representative hypothetical source.

[3] EPA Memorandum, *Clarification on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and $PM_{2.5}$ under the PSD Permitting Program* (April 30, 2024).

> For the MERPs analysis conducted for the Project, the hypothetical source located in Tallapoosa, AL, was chosen over the hypothetical source in Fulton County, GA, because the Fulton County source is located in a metropolitan area, which is not representative of the project that is located in a rural area. Consistent with EPD and EPA guidance, if the calculated ozone concentration is over 1 ppb, then the concentration is added to a representative background monitor to verify that the total concentration is below the NAAQS.

In addition to emissions rates and stack parameters, distance is another MERP parameter to estimate offsite impacts. This approach is commonly used in Class I area impact analyses. Considering distances, the projected impact at the Douglasville monitor is 69.46 ppb while the projected impacts at United Avenue, Gwinnett Tech, and South DeKalb are below SIL (1.0 ppb).

Georgia Power further provided the following information regarding their use of MERPs. EPD has reviewed the information and concurs.

> As approved in the Modeling Protocol, the Kennesaw ozone monitor, located 20 miles to the southeast of the Plant in Cobb County, was selected for this analysis because it is the closest and most representative ozone monitor to the project. Other monitors located in more urban areas are inappropriate for the MERPs analysis for the project because the analysis should be based on the most representative airshed relative to the project. Consistent with EPA's MERP guidance, estimations of secondary $PM_{2.5}$ concentrations included emissions from background inventory sources, using the same representative hypothetical source, based on guidance from EPD. Inclusion of secondary $PM_{2.5}$ from background sources in the analysis is not required because the contribution of secondary emissions from existing background sources is already reflected in the background monitor concentration that is also added to the maximum modeled design concentration for comparison to the NAAQS.

Additionally, EPD did source apportionment modeling with the CAMx photochemical grid model as part of its designation recommendations for the 2015 ozone standard. Bartow County was modeled with 10,762 tons/year of NOx in this modeling. Using the ppb/ton ratio of this modeling result, EPD estimates that the project impacts are 0.09 ppb at United Avenue, 0.06 ppb at Conyers, 0.075 ppb at McDonough, 0.11 ppb at Gwinnett Tech, 0.22 ppb at Douglasville, and 0.074 ppb at South DeKalb. All of these values are less than the SIL (1.0 ppb). Therefore, EPD concludes that the project will not cause or contribute to a violation of the 2015 ozone NAAQS in metro Atlanta.

Comment IV.E Georgia Power's Air Dispersion Modeling Excludes Receptors in Areas Where the General Public May Have Practical Access.

EPD Response

Georgia Power provided the following information regarding their use of modeling receptors. EPD has reviewed the information and concurs.

> Although not explicitly stated in Volume II of the application, public access to the Plant along the southern portion of the ambient air boundary used in the source impact analysis is in fact controlled by perimeter fencing and patrolled once each day to confirm gates are secured. This includes areas to the east and west of Raccoon Creek that are within the Plant's property boundaries.
>
> Commenters take issue with the use of an internal access road to define a portion of the eastern ambient air boundary. This road, which can be seen in Commenters' Figure 9, crosses the railroad tracks to the north, and proceeds south alongside a borrow pit which contains fill dirt used onsite for various purposes. However, the Plant owns an additional 300 acres of land east of the borrow pit. Access to the entire area is precluded via perimeter fencing, and the only means of entry is a security gate at Picklesimer Road, over one-half mile farther east of Raccoon Creek. To be conservative, the modeling analysis included receptors beyond the road, including areas immediately surrounding Raccoon Creek, which addresses Commenters' concerns.

Comment IV.F Georgia Power's Source Impact Analysis Fails to Demonstrate the Project Would Not Cause or Contribute to NAAQS Violations.

Comment IV.F.1) Georgia Power's Own Cursory Analysis Demonstrates the Project Would Significantly Contribute to the Atlanta Area's Ongoing Violation of the Ozone NAAQS.

EPD Response

As stated earlier, metro Atlanta is designated as an attainment area for the ozone NAAQS. The applicable regulations under the Clean Air Act are found within the rules for PSD rather than NNSR. The conservative air quality analysis in support of the permit application conducted by Georgia Power and reviewed by EPD demonstrates that the project, under worst-case ambient conditions and worst-case potential emissions will not cause or contribute to an exceedance of any NAAQS or allowable PSD increment. For more information, see the response to Comment II and IV.D.1.

Commenters also state that EPD must secure enforceable emission offsets as needed to demonstrate that the Project would not cause or contribute to a violation of the ozone NAAQS. Offsets and other aspects of NNSR are not required for the Project because it is located in an area designated as attainment for all NAAQS.

Comment IV.F.2) Even Without Correcting All of the Deficiencies Identified Above, It Is Clear the Project Would Cause or Contribute to a Violation of the Primary Annual NAAQS for $PM_{2.5}$.

EPD Response

EPD determined that Georgia Power's air dispersion modeling analysis was based on the requirements specified in "Appendix W", EPA's "Guidance for Ozone and Fine Particulate Matter Permit Modeling" (dated July 29, 2022), and EPD's PSD modeling guidance. EPD concurs with the analysis and has determined the Project will not cause or contribute to a violation of the annual $PM_{2.5}$.

Comment IV.F.3) Even Without Correcting All of the Deficiencies Identified Above, the Project Would Likely Cause or Contribute to a Violation of the Primary 1-Hour NAAQS for NO_2.

EPD Response

EPD has determined the Project will not cause or contribute to a violation of the 1-hour NO_2 NAAQS. EPD found that the facility's air dispersion modeling analysis is based on the requirements specified in "Appendix W" and EPD's PSD modeling guidance. For more information, see response to Comment IV B.2.

Comment V

EPD's Draft Permit Fails to Impose Adequate Emission Limits.

Comment V.A. Pursuant to the State's Maintenance Plan for Ozone, EPD Must Impose Emission Limits that Reflect the Lowest Achievable Emission Rate for NOx and VOC.

EPD Response

A facility is required to obtain the Lowest Achievable Emissions Rate (LAER) and emission offsets as a requirement of the NNSR Permitting Program. The Project is located in an attainment area and does not have to meet these requirements as stated in the response to Comment II.

Comment V.B. The Proposed BACT Limit for NOx Emissions from the Combustion Turbines Does Not Reflect the Maximum Degree of Reduction Achieved at Similar Facilities.

Comment V.B.1) EPD Must Impose a Shorter Averaging Time for Purposes of Compliance with the NOx Limit Applicable During Normal Operations.

EPD Response

As stated in the preliminary determination:

> For natural gas, the Plant is proposing the level of control equivalent to the most stringent emission limit achieved in practice. This level of control is the same as Plant Barry Unit 8 (AL-0328) and Jackson Energy Center (JEC) Units 1 and 2 (IL-0130), which are the most similar CC units in commercial operation in the U.S., except that those units are gas-fired only and are not capable of firing distillate oil as a backup fuel.[4]

EPD reviewed the RACT/BACT/LAER Clearinghouse (RBLC) database and noted that the more stringent NOx averaging periods cited by facilities with permits that require 1-hour or 3-hour averaging periods are not proven in practice since the facilities are not currently in operation and some example facilities as denoted in the application as either planned, under construction, or canceled and never built. BACT limits are selected based on what has been achieved in practice.

The recently promulgated federal standards of performance for new stationary combustion turbines and stationary gas turbines confirm that a 4-hour averaging period is more appropriate for this source category; accordingly, BACT for the project was proposed consistent with EPA's approach for regulating these units.[5]

Comment V.B.2) EPD Must Impose Short-Term Emission Limits and/or Operational Limitations on Startup, Shutdown, and Fuel Switching.

EPD Response

As stated in the preliminary determination:

> Compliance with the Nox BACT emission limits will be determined by CEMS[6]. Similar to other CC units permitted by EPD, the Plant is proposing short-term emissions limits that

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[4] Unit 1 at PowerSouth Cooperative's Charles R. Lowman Power Plant is also similar to the proposed CC units and in commercial operation but was not subject to PSD. Other similar units may be in commercial operation but operate in a different configuration (e.g., 2-on-1 or 3-on-1 combined-cycle configuration). Several permits have been issued to construct similar 1-on-1 CC units, but these projects were either canceled (Chickahominy Power (VA-0332)) or the applicant ultimately installed a different CT technology (e.g., Long Ridge Energy Station (OH-0375) and NTE Ohio (OH-0363)).

[5] *See* 91 FR 1910, 1928 (January 15, 2026) (describing EPA's rationale for requiring a 4-hour averaging period in NSPS Subparts GG, KKKK, and KKKKa).

[6] CEMS stands for continuous emission monitoring system.

> exclude emissions during certain periods of operation, coupled with a mass cap that includes all valid emissions measured. For purposes of the proposed short-term Nox BACT emission limits above, the definitions of startup, cold startup, warm startup, hot startup, shutdown and fuel switching have been stated in the application. Imposing limitations on the frequency or the total hours per year for each operating scenario is only possible due to the limits of the combustion turbine design itself, which can only be determined during the compliance testing.

Commenters suggest that the draft permit must contain emission or operational limits on startup, shutdown, and fuel switching as defined in Condition 3.3.19. However, the draft permit defines startup, shutdown, and fuel switching, along with annual mass emission caps as stated in Conditions 3.2.5 and 3.3.16, which effectively limits how often these events may occur.

Comment V.B.3) The Draft Permit Fails to Impose Any Limitations on Simple-Cycle Operation of the Combustion Turbines When Pollution Controls are Bypassed.

EPD Response

The draft permit does not directly prohibit operation of the turbines in simple-cycle mode and does not impose any restrictions on the frequency, duration, or justification for such operations. In order to operate in simple-cycle mode, the exhaust from the combustion turbine would have to bypass via a diverter damper the HRSG (Heat Recovery Steam Generator), and there would have to be a bypass stack for the exhaust gas. Since there are no diverter valves or bypass stacks for the combustion turbines in the equipment layout design, the exhaust gas is forced to go through the HRSG pathway. Even if simple cycle mode was possible, the SCR and oxidation catalyst BACT controls would be ineffective to meet the BACT limits. Therefore, the draft permit effectively prohibits operation of the turbines in simple-cycle mode.

Comment V.B.4) The BACT Analysis Fails to Evaluate the Exclusive Use of Methane Gas or More Stringent Limitations on the Use of Distillate Fuel Oil.

EPD Response

As stated in the preliminary determination:

> RBLC listed five facilities that have CC units for which permits were issued with an emission limit of 4 ppmvd when firing distillate oil: Killingly Energy Center (CT-0161), Sewaren Generating Station (NJ-0081), Middlesex Energy Center (NJ-0085), Cogen Tech Lingen Venture LP (NJ-0088), and Renovo Energy Center (PA-0334). Notably, only one of these five facilities, Sewaren Unit 7, has been constructed.[7] Sewaren Unit 7 is a second-generation General Electric (GE) H-class unit (GE 7HA.02) and has approximately 30%

[7] Both Middlesex Energy Center and Renovo Energy Center were issued permits for, but never constructed, CC units based on the GE 7HA.02 and Siemens SGCT-8000H CT technologies, while those at Killingly Energy Center and Cogen Tech Lingen Venture LP would have been based on the Mitsubishi 501GAC and GE 7FA.05 CT technologies. NOx emissions in the CT exhaust (and inlet to the SCR) for all these CT technologies are at least 30% lower compared to the proposed CC units.

> lower NOx emissions in the CT exhaust (and inlet to the SCR) compared to the proposed CC units, due to their lower firing temperature. To account for this significant difference between Sewaren Unit 7 and the Project, The Plant is proposing 5 ppmvd as NOx BACT when firing distillate oil, which is a level of control consistent with proposed NSPS Subpart KKKKa[8].

Commenters assert that the exclusive use of methane gas must be evaluated as BACT because that was part of the BACT determination for the water bath heaters. This is incorrect, because the water bath heaters in this project will exclusively fire natural gas. The proposed CC units are designed to be dual-fueled, and BACT was properly evaluated for each fuel.

Comment V.C. EPD Should Impose More Stringent Limits on Emissions of Ozone Precursors During the Ozone Season.

EPD Response

As discussed in response to Comment IV, the proposed project does not cause or contribute to a violation of the ozone NAAQS; therefore, more stringent limits on NOx and VOC emissions during the ozone season are unnecessary.

Comment V. D. The BACT Analysis for Greenhouse Gas Emissions from the Combustion Turbines Fails to Consider the Applicable New Source Performance Standards.

EPD Response

Page 48 of the Preliminary Determination briefly discusses the applicability of NSPS Subpart TTTTa as restated below:

> The Plant also considered relevant federal and state emission standards and relied on Southern Company's experience as a leader in low-carbon technology research and innovation to identify additional potential control options for CO_2 emissions from the proposed CC units. EPA's 2023 proposed GHG emissions standards identified co-firing low GHG-hydrogen as a potential control option,[9] although this control option was not included in the final regulations adopted in Subpart TTTTa.[10] EPA's final emission GHG standards in Subpart TTTTa, which are potentially applicable to the Project, identify carbon capture and storage (CCS) as a potential control option. No additional control options were identified based on Southern Company's low-carbon technology research activities.

EPD and stakeholders collaborated over the course of multiple meetings to address the proposed reconsideration of NSPS TTTTa and the possibility of a repeal of NSPS TTTT. Therefore, to take

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[8] EPA finalized this rule at 40 CFR 60 Subpart KKKKa effective January 15, 2026. *See* 91 FR 1910 (January 15, 2026).

[9] 88 FR 33284 (May 23, 2023).

[10] 40 CFR Part 60, Subpart TTTTa.

into consideration potential outcomes for the future of NSPS TTTT and TTTTa, the draft permit expressly requires all applicable requirements regardless of the outcome of EPA's proposals. Importantly, consistent with the PSD regulations, Conditions 3.3.15, 3.3.16c, and 3.3.16d in the draft permit work together to ensure emissions of greenhouse gases (GHGs) will not exceed the floor for BACT, regardless of which standard under 40 CFR Part 60 remains pending litigation or reconsideration.

In EPD's RBLC database search and review of the facility permits mentioned by the Commenters, three facilities were identified to better demonstrate the maximum degree of reduction that is achievable than the GHG BACT limit for the Project. Two facilities (Maple Creek and Magnolia Power) have lower limits than the 905 pound carbon dioxide per megawatt hour (lb CO_2/MW-hr) proposed as BACT for the Project, yet these facilities have a lower capacity and fire only natural gas. For the third facility, Renovo Energy, combustion turbines fire both natural gas and ultra-low sulfur diesel (ULSD) fuel, and they also have a smaller capacity. While Renovo Energy has a slightly lower standard of 894 lb CO_2/MW-hr, the standard is close to the proposed Project BACT limit considering differences in capacity. After reviewing the RBLC database and similar facility permits and considering the NSPS TTTTa standard listed in Table 1 of 800 to 1,250 CO_2/MW-hr, the 905 lb CO_2/MW-hr limit proposed as BACT for the Project's proposed combustions turbines is reasonable.

Comment VI

EPD's Preliminary Determination Fails to Reference Georgia Power's Regional Haze Analysis or Any Consultation with Federal Land Managers Regarding the Project's Potential Impacts on Visibility in Nearby Class I Areas.

EPD Response

In the Preliminary Determination, the references to "the mill" was a typo in the template that was used in the sections on "NAAQS and Increment Modeling" and "Visibility" and should be replaced with "the Plant".

Impacts on Visibility in Class I Areas (Cohutta, Joyce Kilmer-Slickrock, Great Smoky Mountains, Shining Rock and Sipsey) are described in the Preliminary Determination in Section 7.0 Additional Impact Analysis. Modeling and Screening Procedures and Regional Haze for the Class I Area Impact Analysis is discussed in Volume II, Section 7.1, 7.1.1, 7.1.2, 7.1.3, and 7.1.4 of the application.

As stated in Volume II of the application on page 51, CALPUFF (a Lagrangian puff air quality dispersion model) was used for the analysis to assess long-range transport applications (transport distances exceeding 50 km). Specifically, CALPUFF (Version 5.8.5) and three years (2019-2021) of Mesoscale Model Interface Program (MMIF) (Version 4.1.1) meteorological data was used to assess PSD increment consumption along with regional haze and acidic deposition at nearby Class I areas.

Table 7-1 of Volume II of the application presents the emission rates from the Combined Cycle (CC) stacks for the pollutants subject to modeling; and the combustion turbine stack height of 23 feet (ft) in diameter and the exhaust release height of 180 feet (ft) above grade for both natural gas and distillate oil firing.

Section 7.1.3, Class I PSD Increment Analysis as presented in Volume II of the application states that CALPUFF (Version 5.8.5) and CALPOST (Version 6.2.11), a post-processing package for the model, were used with MMIF to assess maximum modeled concentrations of SO_2, NOx, PM_{10}, and $PM_{2.5}$ due to emissions from the project at Cohutta, Joyce Kilmer-Slickrock, Great Smoky Mountains, Shining Rock, and Sipsey.

The modeled concentrations at all receptors within the Class I areas were compared to their proposed significant impact level (SILs) as shown in Table 7-2 of Volume II of the application.

The CALPUFF modeling utilized the EPA-recommended model defaults with the exception that the chemistry and plume depleting mechanisms within the model were turned off. The results of the Class I area SIL modeling are presented in Table 7-3 and show that the maximum modeled concentration for each pollutant at each Class I area is below its respective SIL; therefore, no additional Class I PSD increment modeling was conducted.

Section 7.1.4, Regional Haze, of the Plant's Application discusses the Regional Haze Analysis. The results of the regional haze modeling are presented in Table 7-4 of the Application. As shown in Table 7-4, regional haze impacts are below the 5% change in extinction at the maximum and 98th percentile impact level for each modeled year at all the Class I areas. As such no additional modeling was required.

CALPUFF (Version 5.85) and CALPOST (Version 6.211) were used with MMIF to compute the maximum 24-hour average potential change in light extinction at Cohutta, Joyce Kilmer-Slickrock, Great Smoky Mountains, Shining Rock and Sipsey due to SO_2, SO_4, NOx, PM_{10}, and $PM_{2.5}$ emissions from the project. The CALPUFF modeling utilized the EPA-recommended model defaults along with the MREG=1 switch. Background ozone concentrations were set to the model default of 80 ppb and 1.0 ppb was used for the background ammonia concentration. POSTUTIL (Version 1.56) was also utilized to re-compute the nitric acid (HNO_3)/nitrate (NO_3) partition using the MINITRATE=1 option.

For the regional haze modeling, the primary PM/PM_{10} emission rates were speciated into components of soils, elemental carbon, and secondary organic aerosols for gas and distillate oil-fired turbines. In addition to speciating the primary PM/PM_{10} emissions, CALPUFF regional haze modeling typically considers primary sulfate (SO_4) emissions (derived from sulfuric acid (H_2SO_4)). Primary emissions of SO_4 are modeled because calculations of regional haze are sensitive to SO_4, which combines with free atmospheric ammonia to form light-scattering ammonia sulfate fine particles. In developing the Regional Haze Analysis, details were also processed per Federal Land Managers' (FLM) Air Quality Guidance (FLAG, 2010).

In Section 7.1.5, Acidic Deposition, of the Plant's Volume II Application, the second paragraph references that the Plant referred to the U.S. Department of Agriculture Forest Service (USFS)

website (http://www.fs.fed.us/r6/aq/natarm/document.htm) to utilize data and perform the analysis, and the results were presented in Table 7-5 for the Class I Areas and all deposition impacts are below the 0.01 kg/ha/yr, thus no additional modeling is required.

It is part of EPD's permitting procedures to provide EPA with a copy of the PSD application. This is not required to be mentioned in the Preliminary Determination. EPD also posts the application to its website once it is deemed administratively complete and this was done on March 20, 2025.

The Federal Land Manager is notified of the application by the Plant. The Federal Land Manager is also notified when the Draft Permit is issued. These documents are available on EPD's website.

Comment VII

EPD's and Georgia Power's Failure to Disclose Critical Information Regarding the Project Units' Capacity, Efficiency, and Planned Commercial Operation Dates Deprived the Public of a Meaningful Opportunity to Comment on the Draft Permit.

A. Georgia Power's Request for EPD to Keep Capacity, Efficiency, and Planned Commercial Operation Dates Confidential Was Unjustified and Inconsistent with Treatment of the Same or Similar Information by Other Companies and by the Georgia Public Service Commission.

B. EPD's Withholding of Critical Information Violates the Clean Air Act's Requirement that Title V and PSD Permit Proceedings Provide an Opportunity for Meaningful Public Participation.

EPD Response

The facility checked Box 11 of the Application indicating that confidential information was being submitted in the application, and the guidelines were followed in EPD's "Procedures for Requesting that Submitted Information be treated as Confidential". As such, the make and model number were treated as confidential and were not made available to the public.

Substantiated "trade secrets" will be treated as confidential, but the reports on the nature and amounts of stationary source emissions obtained by EPD will not. Information that constitutes "nature and amount" is listed in Georgia EPD's *"Procedures for Submitting Information Pursuant to a Claim that Information in the Submittal is Protected Under Georgia Law from Disclosure to the Public"* (June, 2015). This document includes information necessary to determine the identity, amount, frequency, concentration, stack parameters, or other characteristics (to the extent related to air quality) of any emissions which has been emitted by the source; or other characteristics (to the extent related to air quality) of the emissions that, under an applicable standard or limitation, the source is, was, or will be authorized to emit, or a general description of the location and/or nature of the source to the extent necessary to identify the source and to distinguish it from other sources.

The applicant must submit substantiation of the confidentiality claim and both a public and confidential version of the application according to the procedures above. EPD is required to review the confidentiality claim and the applications submitted, and if approved, send a letter that the confidentiality status is accepted.

The redaction of the confidential information from the permit application did not hinder EPD's or the public's review because the make and model of a unit is not necessary to evaluate the nature and extent of emissions, and all emissions related information was readily available in the public version of the permit application filed on March 5, 2025.

On the Commenters' second Note (Page 46), the middle limit of 905 lb CO_2/MWh-gross resulted in a 43% estimate from a count of EPD's spreadsheet generated from a RBLC review. The count of the entries resulted in 43% of the facilities having higher proposed limits. This does not account for the variations in size, model, efficiency or other factors affecting the proposed limit and it should be noted that the proposed limit is an average limit under rule 40 CFR 60 Subpart TTTTa. As noted in the application, the level of control for all CC units of a similar configuration (i.e., 1-on-1, without regard to combustion turbine technology, operating mode, or fuel), ranges from 726 to 1,384 lb CO_2/MWh-gross with an average emission limit of approximately 900 lb CO_2/MWh-gross.

Comment VIII

EPD Must Add Permit Conditions to Ensure that All Authorized Units Will Either Be Constructed in a Timely Manner or Will Have Control Technology and Ambient Air Impacts Reassessed Prior to Construction.

EPD Response

EPD has used the "following PSD conditions as listed in the permit amendment to restrain the time to 18 months to commence construction, and to ensure that construction is aligned with what is presented in the application. These conditions are based on the PSD regulation 40 CFR 52.21(r)(1).

7.14.1 The Permittee shall construct and operate the modification as defined in Application No. TV-905935 that is subject to Georgia Rule 391-3-1-.02(7) in accordance with the application submitted pursuant to that rule. If the Permittee constructs or operates a source or modification not in accordance with the application submitted pursuant to that rule or with the terms of any approval to construct, the Permittee shall be subject to appropriate enforcement action.
[40 CFR 52.21(r)(1)]

7.14.2 Approval to construct this modification as defined in Application No. TV-905935 shall become invalid if construction is not commenced within 18 months after the issuance date of this Permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Director may extend the 18-month period

upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date. For purposes of this Permit, the definition of "commence" is given in 40 CFR 52.21(b)(9).
[40 CFR 52.21(r)(1)]

GENERAL PUBLIC AND PUBLIC HEARING COMMENTS

Comments were received prior to and during the Public Hearing held on October 14, 2025. Please refer to Appendix B for all the comments received during the comment period.

Comment I

In an e-mail dated Thursday October 16, 2025, Citizen Robert E. Rutkowski references the comments and analysis of Georgia Power's plans to build four combined-cycle (CC) methane gas-powered generating units at Plant Bowen on October 14, 2025, made by the Sierra Club, Southern Environmental Law Center, Georgia Interfaith Power & Light, National Parks Conservation Association, and Environment Georgia.

Together they state that Georgia Power's analysis failed to demonstrate that air pollution from the plant expansion will not worsen air quality and cause violations of the federal ambient air quality standards.

EPD Response

See response to SELC Comment IV A.

EPD CHANGES

EPD is incorporating 40 CFR 60 Subpart KKKKa. Subpart KKKKa was published in the Federal Register on January 15, 2026 (91 FR 1910), and the affected units are now subject to KKKKa instead of KKKK. The updated applicable conditions of the final permit are provided below.

- In Condition 3.1, all emission units formerly subject to NSPS Subpart KKKK in the Table were updated to reflect being subject to NSPS Subpart KKKKa.
- Condition 3.3.11 was modified to change NSPS Subpart KKKK to NSPS Subpart KKKKa.
- Conditions 3.3.12 through Condition 3.3.14, citations were updated to reference the monitoring requirements in NSPS Subpart KKKKa; no limitations or standards were relaxed in these conditions.
- Condition 3.3.17a was modified to update the NOx emission standard and averaging period for the turbines. The standard is more stringent due to a lower limit and a shorter averaging period based on the fact the turbines are using a CEMS.

    3.3.17 The Permittee shall not discharge, or cause the discharge, into the atmosphere from any combustion turbine and duct burner (Emission Unit IDs CT7/DB7, CT8/DB8, CT9/DB9, and CT10/DB10), when the combustion turbine is fired with natural gas, any gases which:

    a. Contain nitrogen oxides in excess of 5 ~~15~~ ppmvd, corrected to 15% oxygen, or 96 ppmvd, corrected to 15% oxygen, when operating at less than 70 ~~75~~ percent of the base load rating, on a 4-hour ~~30-day~~ rolling average.
    [40 CFR 60.4320a and 40 CFR 60.4380a]

- Condition 3.3.18a was strengthened to clarify when the NOx emission standard applies and shorten the averaging period for the turbines as required by NSPS Subpart KKKKa.

    3.3.18 The Permittee shall not discharge, or cause the discharge, into the atmosphere from any combustion turbine and duct burner (Emission Unit IDs CT7/DB7, CT8/DB8, CT9/DB9, and CT10/DB10), when the combustion turbine is fired with distillate oil, any gases which:

    a. Contain nitrogen oxides in excess of 42 ppmvd, corrected to 15% oxygen, or 96 ppmvd, corrected to 15% oxygen, when operating during periods of turbine tuning at less than ~~75~~ 70 percent of the base load rating, on a ~~30-day~~ 4-hour average.
    [40 CFR 60.4320a and 40 CFR 60.4380a]

    The remaining sections are unchanged.

- Condition 3.3.19a was modified to include a reference to the definition of turbine tuning that is required by NSPS Subpart KKKKa, which was not previously required nor defined by NSPS Subpart KKKK.

3.3.19 The following definitions of startup, shutdown, and fuel switching, as used in this Permit, shall apply to each combustion turbine and duct burner (Emission Unit IDs CT7/DB7, CT8/DB8, CT9/DB9, and CT10/DB10), except where the definition of "startup" under Part 63 is applicable:
[40 CFR 52.21(j)(3) and 40 CFR 60.4420a]

a. Except during special testing and turbine tuning as defined in Condition 3.3.19.b and 3.3.19.c respectively:

[unchanged]

b. Special testing:

[unchanged]

c. Turbine Tuning:

i. Turbine tuning means planned maintenance or parameter performance testing of a combustion turbine engine involving adjustments of the operating configuration to maintain proper combustion dynamics or testing machine operating performance.

ii. Turbine tuning is limited to 30 hours annually for each combustion turbine.

- Permit Condition 4.2.6 is a citational change.
- Permit Conditions 5.2.1g and 5.2.32 are citational changes.
- Permit Condition 5.2.30 and 5.2.31 are citational changes.

Permit Condition 5.2.35 changes the averaging period of NSPS Subpart KKKK to a more stringent averaging period required by NSPS Subpart KKKKa.

5.2.35 For purposes of Condition 6.1.7.a.iv, each 4-hour ~~30-day~~ rolling average NOx concentration must be based upon the heat input weighted average of the hourly average NO_X emissions ~~is the arithmetic average of all hourly NOx emission data in ppm measured by the continuous emission monitoring equipment~~ for a given operating hour ~~day~~ and the 3 operating hours ~~twenty-nine unit operating days~~ immediately preceding that unit operating hour ~~day~~. ~~A new 30-day average is calculated each unit operating day as the average of all hourly NOx emissions rates for the preceding 30-unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all hours.~~ For operating periods during which multiple emissions standards apply, the applicable standard is the heat input weighted average of the applicable standards during each hour. For hours with multiple

emissions standards, the applicable limit for that hour is determined based on the condition that corresponds to the highest emissions standard.
[40 CFR 60.4350a(g) ~~40 CFR 60.4380(b)(1) and (3)~~]

- Permit Condition 6.1.7a changes the averaging period to 4 hours from 30 days as required by NSPS Subpart KKKKa.

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

i. Excess emissions of nitrogen oxides as described in Condition 6.2.9.

ii. Any 30 operating day period in which the mercury emissions rate from a steam generating unit (Emission Unit IDs SG01, SG02, SG03, and SG04) exceeds the applicable emissions limit in Condition 3.3.8(a).

Regional Haze SIP for reporting, recordkeeping, and work practice standard requirements

iii. Any 30 operating day period in which the SO_2 emissions rate from a steam generating unit (Emission Unit IDs SG01, SG02, SG03, and SG04) exceeds the applicable emissions limit in Condition 3.4.19.

iv. Any operating period in which the ~~30-day~~4-hour rolling average NOx emissions rate from any combustion turbine and duct burner (Emission Unit IDs CT7/DB7, CT8/DB8, CT9/DB9, and CT10/DB10) exceeds the applicable emissions limit in Condition 3.3.17.a or 3.3.18.a.

v. Any 12 consecutive operating month average CO_2e emissions rate from any combustion turbine and duct burner (Emission Unit IDs CT7/DB7, CT8/DB8, CT9/DB9, and CT10/DB10) which exceeds the applicable emissions limit in Condition 3.3.16.d.

- Permit Conditions 6.2.28 and 6.2.29 are citational changes.

- Permit Condition 6.2.31 changes the averaging period to 4 hours from 30 days as required by NSPS Subpart KKKKa.

    6.2.31 The Permittee shall calculate a 4-hour ~~30-day~~ rolling average NOx emission rate (in ppm at 15 percent oxygen) for each combustion turbine and duct burner (Emission Unit IDs CT7/DB7, CT8/DB8, CT9/DB9, and CT10/DB10) using the NOx emission hourly emission rate determined in accordance with Condition 5.2.1.g.
    [40 CFR 60.4350a and 40 CFR 60.4380a]

- Permit Condition 6.2.58 is added as required by NSPS Subpart KKKKa.

    6.2.58 The Permittee shall maintain records of turbine tuning as specified in Condition 3.3.19.c, which identify the hours on which the maintenance was performed and a description of the maintenance.
    [391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 60.4390a(c)]

APPENDIX A

AIR QUALITY PERMIT
4911-015-0011-V-05-1

APPENDIX B

WRITTEN COMMENTS RECEIVED DURING COMMENT PERIOD