GEORGIA
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ENVIRONMENTAL PROTECTION DIVISION

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NARRATIVE

TO: Cynthia Dorrough

FROM: Alexander Lagunas

DATE: December 2, 2025

Facility Name:	VoltaGrid ATL-1 EGU
AIRS No.:	217-00080
Location:	Covington, GA (Newton County)
Application #:	29947
Date of Application:	November 12, 2025

Background Information

VoltaGrid LLC proposes the construction and operation of VoltaGrid ATL-1 EGU, a greenfield power generation facility with a maximum power output of 90 MW, consisting of 33 natural gas-fired, four-stroke lean-burn (4SLB) reciprocating internal combustion engines (RICE), two (2) 4 MMBtu/hr natural gas-fired fuel gas heaters, and a natural gas-fired black start emergency generator. The facility will be a baseload facility, operating continuously for 8,760 hours per year. The facility proposes to operate up to five 3,628 hp natural gas-fired temporary engines for two months during the construction of the facility.

The facility will provide prime power to itself and to a nearby Serverfarm facility (AIRS: N/A), owned and operated by an external third party. Based on EPA guidance, the two facilities are considered separate sources because they do not meet the three general conditions: same industrial grouping, contiguous or adjacent, and under common control. The two facilities are not in the same industrial grouping because VoltaGrid ATL-1 EGU is a power plant and the nearby Serverfarm facility is a data center. The two facilities are on adjacent parcels of land but will be fenced off to prevent unauthorized access. The two facilities are not under common control based on the April 2018 Meadowbrook Memo. As a result, the two facilities are considered separate sources.

The mechanical power generated by the RICE units will connect to an on-site generator. The electrical power generated by the generator will be connected to a substation for distribution to the Serverfarm facility. A portion of the power generated by the RICE units will be used to power the ancillary, on-site equipment through a switch gear. The fuel gas heaters will warm up incoming pipeline natural gas to prevent freezing and avoid condensation and formation of moisture. The black start emergency engine will provide power to the ancillary systems to power up the first RICE unit post a black out event.

The RICE units are equipped with a built-in combustion exhaust treatment system, consisting of a selective catalytic reduction (SCR) system and an oxidation catalyst.

The facility proposes a limit of 99.0 tpy of carbon monoxide (CO) emissions in order remain under the major source threshold with respect to Title V. The facility also proposes a limit of 0.022 lb formaldehyde

per hour per engine. This limit has demonstrated that formaldehyde will remain below its allowable ambient concentration (AAC) based on SCREEN3 modeling, thus requiring no further refined modeling.

The facility is a currently unpermitted greenfield project and located in Newton County, which is in attainment for all criteria pollutants.

Purpose of Application

VoltaGrid LLC submitted App. 29947 for the construction and operation of VoltaGrid ATL-1 EGU, a greenfield power generation facility, which consists of 33 natural gas-fired 4SLB combustion engines, two natural gas-fired fuel gas heaters, and one natural gas-fired black start emergency generator. The facility will be a synthetic minor with respect to Title V by limiting CO emissions to 99.0 tpy. The facility will have an emission rate limit for formaldehyde. The Public Advisory period ended on December 19, 2025, and comments were received by the Division.

Updated Equipment List

Emission Units			Associated Control Devices	
Source Code	**Description**	**Installation Date**	**Source Code**	**Description**
EU1 – EU33	Generators #1 through #33 Jenbacher J620 4,425 hp 4-stroke lean-burn Natural gas-fired	2026*	CD1 – CD33	SCR and Catalytic Oxidation
EU34	Black Start Emergency Generator MESA GV22PU 684 hp 4-stroke rich-burn Natural gas-fired	2026*	--	--
EU35 – EU36	Fuel Gas Heaters #1 & #2 Algas-SDI SH400-LN 4 MMBtu/hr Natural gas-fired	2026*	--	--
TEMPGEN1 through TEMPGEN5	Temporary Engines #1 through #5 Caterpillar G352 3,628 hp 4-stroke, rich-burn Natural gas-fired (Only operating in the months of April and May 2026)	2026*	--	--

*proposed within current application

Fuel Burning Equipment

Source Code	Input Heat Capacity (MMBtu/hr)	Description	Installation Date	Construction Date
EU 35 – EU36	4	Fuel Gas Heater #1 & #2	2026*	2026*

Emissions Summary

Based on 8,760 hours of operation of all emission units, except for 100 hours of operation for the black start engine, the facility would be a major source with respect to Title V. The Permittee proposes a CO emission limit of 99.0 tpy to ensure facility-wide CO emissions remain below the major source threshold. Since CO is the limiting pollutant, limiting CO below the major source threshold for Title V, all other criteria pollutants will be under the major source threshold as a result. The Permittee proposes to operate a SCR and oxidation catalyst system at all times the engines are in operation to control CO emissions, making the facility a synthetic minor source with respect to Title V.

CO emissions will be tracked using the hours of operation of each emission unit and an associated emission factor, in lb/hr. The generators (Source Codes: EU1 through EU33) have two operating modes: startup and steady state. Startup consists of approximately five minutes in which the control devices are not operating at expected efficiency. The facility estimates three (3) startup events for each generator per month. Steady state is the normal operation of the generators and control devices. Each operating mode will have its own emission factor. For the purposes of calculating emissions, startup will consist of five minutes at startup and 55 minutes at steady state for a combined one hour. CO emission factors were provided by the manufacturer and have a safety factor of 5% added. Performance test data provided for Jenbacher J620 demonstrate actual emission rates significantly lower than the emission rate used for the purposes of tacking CO emissions. As a result, the proposed CO emission factors are considered conservative.

Potential emission from the temporary engines (Source Codes: TEMPGEN1 through TEMPGEN5) are based on the two months (April and May 2026) operation. Operation of the temporary engines will not overlap with the operation of the main generators (Source Codes: EU1 through EU33). For the purpose of potential emissions for the year 2026, emissions were calculated from the operation of the temporary engines for two months and the normal operation of the facility for the remaining seven months of the year. All criteria pollutants are below the major source threshold.

Facility-Wide Emissions
(in tons per year)

Pollutant	Potential Emissions without the temporary engines			Potential Emissions in 2026 with the temporary engines		
	Before Mod.	After Mod.	Emissions Change	Before Mod.	After Mod.	Emissions Change
$PM/PM_{10}/PM_{2.5}$	--	17.61	+17.61	--	11.09	+11.09
NOx	--	26.88	+26.88	--	30.38	+30.38
SO_2	--	8.78	+8.78	--	5.14	+5.14
CO	--	96.01	+96.01	--	75.10	+75.10
VOC	--	26.38	+26.38	--	19.06	+19.06
Max. Individual HAP (Formaldehyde)	--	2.61	+2.61	--	4.47	+4.47
Total HAP	--	6.13	+6.13	--	7.82	+7.82
Total GHG (if applicable)	--	427,859	+427,859	--	255,023	+255,023

Regulatory Applicability

40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Not applicable.

This subpart applies to steam generating units which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less but greater than 10 MMBtu/hr.

The fuel gas heaters (Source Codes: EU35 and EU36) are steam generating units with maximum heat input capacity less than 10 MMBtu/hr and thus are not subject to this subpart.

40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Applicable to the generators (Source Codes: EU1 through EU33) and the black start engine (Source Code: EU34).

This subpart applies to spark ignition (SI) internal combustion engines (ICE) constructed after June 12, 2006 and manufactured after July 1, 2007.

The generators and the black start engine are SI ICE constructed and manufactured after July 1, 2007, and thus subject to this subpart. Engines with power greater than 100 HP are subject to emission standards in Table 1 to Subpart JJJJ.

The generators are subject to the following:

- Emission standards in Table 1 to Subpart JJJJ of Part 60, per 40 CFR 60.4233(e)
- Demonstrate compliance through the purchase of a certified engine or purchase of a non-certified engine with a maintenance plan and performance testing, per 40 CFR 60.4243(b)
- Maintain records in 40 CFR 60.4245(a)

The black start engine is subject to the following:

- Emission standards in Table 1 to Subpart JJJJ of Part 60, per 40 CFR 60.4233(e)
- Installation of a non-resettable hour meter, per 40 CFR 60.4237(a)
- Demonstrate compliance through the purchase of a certified engine or purchase of a non-certified engine with a maintenance plan and performance testing, per 40 CFR 60.4243(b)
- Requirements to be an *emergency stationary ICE* under this subpart, per 40 CFR 60.4243(d)
- Maintain records in 40 CFR 60.4245(a) – (b)
- Submit annual report if used for the purposes of 40 CFR 60.4243(d)(3)(i), per 40 CFR 60.4245(e)

40 CFR 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Applicable to the generators (Source Codes: EU1 through EU33) and the black start engine (Source Code: EU34).

This subpart applies to stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions.

The generators and the black start engine are RICE located at an area source of HAP emissions, and thus subject to this subpart. They are considered *new* because they will commence construction at an area source after June 12, 2006. *New* stationary RICE at an area source meet the requirements of this subpart by meeting the requirements of 40 CFR 60 Subpart JJJJ. The generators and the black start engines will meet the requirements of 40 CFR 60 Subpart JJJJ, thus no further requirements apply to these engines.

40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Not applicable.

This subpart applies to boilers and process heaters located at major sources of HAP emissions.

The facility is not a major source of HAP emissions, and thus the fuel gas heaters (Source Codes: EU35 and EU36) are not subject to this subpart.

40 CFR 63 Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Avoidance.

This subpart applies to boilers located at an area source of HAP emissions. *Gas-fired boilers* are not subject to this subpart.

The fuel gas heaters (Source Codes: EU35 and EU36) are boilers located at an area source of HAP emissions; however, they will only fire natural gas, meet the definition of a *gas-fired boiler* as stated below, and thus are not subject to this subpart.

"(any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing maintenance, or operator training on liquid fuel)"

391-3-1-.02(2)(b) – Visible Emissions

Applicable to the generators (Source Codes: EU1 through EU33) and the black start engine (Source Code: EU34).

This rule applies to emission units that are subject to other emission limitation under the Georgia Rules. The generators and the black start engine are subject to Rules (g) and (mmm) and thus subject to this rule.

The fuel gas heaters (Source Codes: EU35 and EU36) are subject to stricter limitation in Rule (d) and are not subject to this rule.

391-3-1-.02(2)(d) – Fuel-Burning Equipment

Applicable to the fuel gas heaters (Source Codes: EU35 and EU36).

This rule applies to *fuel-burning equipment* as defined in 391-3-1-.01(cc).

The fuel gas heaters are *fuel-burning equipment* and thus are subject to this rule. They are subject to a fly ash and/or particulate matter emission standard defined by the equation P = 0.5 pounds per million Btu heat input, and to a visible emissions standard of not equal to greater than twenty (20) percent, except for one six-minute period per hour of not more than twenty-seven (27) percent opacity.

391-3-1-.02(2)(g) – Sulfur Dioxide

Applicable to the generators (Source Codes: EU1 through EU33), the black start engine (Source Code: EU34), and the fuel gas heaters (Source Codes: EU35 and EU36).

This rule applies to fuel-burning sources. The generators, the black start engines, and the fuel gas heaters will fire natural gas and thus are subject to this rule. They are subject to a sulfur fuel content standard of no more than 3 percent sulfur, by weight.

391-3-1-.02(2)(tt) – VOC Emissions from Major Sources

Not applicable.

This rule requires RACT to sources of VOC emissions greater than the threshold for a listed county.

The facility will be located in Newton County, one of the listed counties with a threshold of 100 tpy. The facility has potential emissions of VOC emissions less than 100 tpy and thus is not subject to this rule.

391-3-1-.02(2)(yy) –Emissions of Nitrogen Oxides from Major Sources

Not applicable.

This rule requires RACT to sources of NO_X emissions greater than the threshold for a listed county.

The facility will be located in Newton County, one of the listed counties with a threshold of 100 tpy. The facility has potential emissions of NO_X emissions less than 100 tpy and thus is not subject to this subpart.

391-3-1-.02(2)(lll) – NO_X Emissions from Fuel-Burning Equipment

Not applicable.

This rule applies to *fuel-burning equipment* with a maximum heat input capacity equal to or greater than 10 MMBtu/hr and less than or equal to 250 MMBtu/hr, located in a listed county.

The fuel gas heaters (Source Codes: EU35 and EU36) have heat input capacities less than 10 MMBtu/hr and thus are not subject to this rule.

391-3-1-.02(2)(mmm) – NO_X Emissions from Stationary Gas Turbines and Stationary Engines used to Generate Electricity

Applicable to the generators (Source Codes: EU1 through EU33) and the black start engine (Source Code: EU34).

This rule applies to stationary engines used to generate electricity located in a listed county. The generators and the black start engine are used to generate electricity and located in Newton County, one of the listed counties, and thus are subject to this rule.

The generators are non-emergency engines and subject to the emission standard of (mmm)1 during the period of May 1 through September 30. A performance test will be required to demonstrate compliance, as set by PTM 2.120.2. Monitoring of the catalyst inlet temperature, pressure drop across the catalyst, and the reagent injection rate of the SCR of each generator is required by PTM 2.120.3(a) – (c). An annual test measurement to demonstrate compliance prior to ozone season is also required by PTM 2.120.3(d).

The black start engine will be an *emergency standby stationary engine,* as defined in (mmm)4, and will not be subject to the emission standard.

391-3-1-.02(2)(rrr) – NO_x Emissions from Small Fuel-Burning Equipment

Not applicable.

This rule applies to *fuel-burning equipment* as defined in 391-3-1-.01(cc) located in a listed county, installed after May 1, 1999, have a maximum design heat input capacity of less than 10 MMBtu/hr, and have an individual potential emissions of NO_X exceeding one tpy.

The fuel gas heaters are *fuel-burning equipment*, located in Newton County, one of the listed counties, will be installed after May 1, 1999, and has a heat input capacity less than 10 MMBtu/hr; however, each individual fuel gas heater has potential NO_X emissions less than 1 tpy and thus are not subject to this rule.

Permit Conditions

Condition 2.1 limits emissions of CO to 99.0 tpy as part of Title V Avoidance.

Condition 2.2 limits emissions of formaldehyde from each generator (Source Codes: EU1 through EU33) to 0.022 lb/hr, as part of Avoidance of Air Toxics and Avoidance of 40 CFR 63.2.

Condition 2.3 limits the hours of operation of the black start engine (Source Code: EU34) to 100 hours, as part of Avoidance of Air Toxics.

Condition 2.4 establishes the applicability of 40 CFR 60 Subpart A and 40 CFR 60 Subpart JJJJ to the generators (Source Codes: EU1 through EU33) and the black start engine (Source Code: EU34).

Condition 2.5 sets the emission standards applicable to the generators (Source Codes: EU1 through EU33) and the black start engine (Source Code: EU34), per 40 CFR 60 Subpart JJJJ.

Condition 2.6 sets the criteria for the black start engine (Source Code: EU34) to be considered an emergency generator in 40 CFR 60 Subpart JJJJ.

Condition 2.7 establishes the applicability of 40 CFR 63 Subpart A and 40 CFR 63 Subpart ZZZZ to the generators (Source Codes: EU1 through EU33) and the black start engine (Source Code: EU34).

Condition 2.8 requires the fuel gas heaters (Source Codes: EU35 and EU36) to only fire natural gas to be considered *gas-fired boilers* for 40 CFR 63 Subpart JJJJJJ Avoidance.

Condition 2.9 sets a visible emission standard to the generators (Source Codes: EU1 through EU33) and the black start engine (Source Code: EU34), per Georgia Rule (b).

Condition 2.10 sets a fly ash and/or PM emissions standard to the fuel gas heaters (Source Codes: EU35 and EU36), per Georgia Rule (d).

Condition 2.11 sets a visible emissions standard to the fuel gas heaters (Source Codes: EU35 and EU36), per Georgia Rule (d).

Condition 2.12 sets a sulfur fuel content limit on all fuel fired in the generators (Source Codes: EU1 through EU33), the black start engine (Source Code: EU34), and the fuel gas heaters (Source Code: EU35 and EU36), per Georgia Rule (g).

Condition 2.13 sets a NO_X emissions standard to the generators (Source Codes: EU1 through EU33), per Georgia Rule (mmm).

Condition 2.14 sets the criteria for the black start engine (Source Code: EU34) to be considered an emergency generator under Georgia Rule (mmm).

Condition 4.1 requires the operation of the SCR and oxidation catalyst (Source Codes: CD1 through CD33) whenever the generators (Source Codes: EU1 through EU33) are in operation, as part of Title V Avoidance.

Condition 5.1a requires a non-resettable hour meter on the black start engine (Source Codes: EU33) as part of Title V Avoidance and 40 CFR 60 Subpart JJJJ.

Condition 5.1b-c requires a system to monitor hours of operation of the generators (Source Codes: EU1 through EU33) and of the fuel gas heaters (Source Codes: EU35 and EU36), as part of Title V Avoidance.

Condition 5.2 requires monitoring of the inlet temperature of the SCR (Source Codes: CD1 through CD33), per PTM 2.120.3(a) for Georgia Rule (mmm).

Condition 5.3 requires monitoring of the pressure drop across the SCR (Source Codes: CD1 through CD33), per PTM 2.120.3(b) for Georgia Rule (mmm).

Condition 5.4 requires monitoring of the reagent injection rate of the SCR (Source Codes: CD1 through CD33), per PTM 2.120.3(c) for Georgia Rule (mmm).

Condition 5.5 requires monitoring of NO_X emissions from the generators (Source Codes: EU1 through EU33) after the initial performance test by performing a test measurement, per PTM 2.120.3(d) for Georgia Rule (mmm).

Condition 6.2 requires an initial performance test for formaldehyde on the generators (Source Codes: EU1 through EU33) to demonstrate compliance with Condition 2.2.

Condition 6.3 requires an initial performance test on the generators (Source Codes: EU1 through EU33) or the black start engine (Source Code: EU34) if the requirements of Condition 7.4 are not met, per 40 CFR 60 Subpart JJJJ.

Condition 6.4 requires an initial performance test for NO_X on the generators (Source Codes: EU1 through EU33) in order to demonstrate compliance with Condition 2.11, per PTM 2.120.2(b) for Georgia Rule (mmm).

Condition 7.2 determines the monthly CO emissions from each emission unit and the total CO emissions from all emission units using three equations and an emission factor table.

Condition 7.3 requires the use of the monthly CO emissions records of Condition 7.2 to determine the 12 consecutive month total CO emissions to demonstrate compliance with Condition 2.1.

Condition 7.4 requires the purchase of a certified engine to demonstrate compliance with Condition 2.5, per 40 CFR 60 Subpart JJJJ.

Condition 7.5 requires a maintenance plan and triggers a performance test in Condition 6.2 if the requirements of Condition 7.4 are not met, per 40 CFR 60 Subpart JJJJ.

Condition 7.6 lists records required per 40 CFR 60 Subpart JJJJ.

Condition 7.7 requires records of the hour of operation using the non-resettable hour meter in Condition 5.1a, per 40 CFR 60 Subpart JJJJ.

Condition 7.8 calculates the monthly and subsequently the calendar year total of the black start engine (Source Code: EU34) using the record of Condition 7.7 to demonstrate compliance with Condition 7.4, per 40 CFR 60 Subpart JJJJ.

Condition 7.9 requires the calculation of the total hours of operation of the black start engine (Source Code: EU34) using the records of Condition 7.7 to demonstrate compliance with Condition 2.3.

Condition 7.10 requires an annual report if the black start engine (Source Code: EU34) is used for the purpose of 40 CFR 60.4243(d)(3)(i), per 40 CFR 60 Subpart JJJJ.

Toxic Impact Assessment

The facility conducted a toxic impact assessment in which the pollutants in the table below were identified as TAPs of interest because the potential emissions of these pollutants were greater than their respective MERs. Potential emissions for formaldehyde are based on the proposed formaldehyde limit.

Pollutant --	Potential emissions (lb/year)	Minimum Emission Rate (MER) (lb/year)
1,3-Butadiene	119	7
Acetaldehyde	3,737	1,107
Acrolein	2,298	85
Ammonia	72,707	24,333
Benzene	197	32
Ethylene Dibromide	20	4
Formaldehyde	11,554	22

The facility conducted further analysis using SCREEN3 modeling software (version 13043), which evaluates the maximum 1-hour average impact. Three models were run, one for each emission unit at the facility: one J620 engine with a unit emission rate of 1 g/s, one black start emergency engine with a unit emission rate of 1 g/s, and one fuel gas heater with a unit emission rate of 1 g/s.

The J620 engine and the fuel gas heater are to operate continuously throughout the year, so the short-term and long-term emission rates are identical. The black start emergency engine will only operate 100 hours per year. The short-term emission rate for this engine is the emission rate found in AP-42 for the TAPs. The long-term emission rate was determined to be the ratio of 100 hours to 8,760 hours.

The table below presents the result of this analysis. The short-term and long-term impacts for all TAPs were determined to be equal to or below their allowable ambident concentration (AAC). No further analysis was conducted.

	Short-term (15-min)			Long-term (annual)		
Pollutant	Impact	AAC	Exceeds?	Impact	AAC	Exceeds?
	$\mu g/m^3$	$\mu g/m^3$	--	$\mu g/m^3$	$\mu g/m^3$	--
1,3-Butadiene	0.02	1100	no	0.00	0.03	no
Acetaldehyde	1.73	4500	no	0.04	4.55	no
Acrolein	1.42	23	no	0.02	0.35	no
Ammonia	14.55	2400	no	0.88	100.0	no
Benzene	0.65	1600	no	0.00	0.13	no
Ethylene Dibromide	0.01	23050	no	0.00	0.02	no
Formaldehyde	9.36	245	no	0.09	0.09	no

In the case of formaldehyde, the facility used an emission rate of 0.022 lb/hr, derived from performance test data conducted on six (6) Jenbacher J620 engines of similar size in October 2025 and a safety factor of 20%. Because this emission rate was used to model formaldehyde emissions and because the long-term impact is just under AAC, the facility will be subject to a formaldehyde limit of 0.022 lb/hr, as required in Condition 2.2, and will verify this emission rate by conducting a one-time performance test on each generator, as required in Condition 6.2.

The impact modeling was conducted by limiting the black-start engine to 100 hours of operation per year. As a result, the black start engine is limited to 100 hours of operation, as required in Condition 2.3.

Summary & Recommendations

I recommend that Air Quality Permit No. 7374-217-0078-E-01-0 be issued to VoltaGrid ATL-1 EGU for the construction and operation of greenfield power generation facility consisting of 33 natural gas-fired RICE, two natural gas-fired fuel gas heaters, and one black start emergency generator. The facility will be a synthetic minor with respect to Title V by limiting CO emissions to 99.0 tpy. The facility will be required to limit emissions of formaldehyde. Its Public Advisory period ended on December 19, 2025, and comments were received by the Division.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//