

Technical Support Document
Notice of Construction [Preliminary Determination](#)
VoltaGrid – QWA-1 Electrical Generation Plant
AQPID No. A0250335
Quincy, WA

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1. Project Summary

VoltaGrid LLC - QWA1 – Electrical Generation Plant (the source) is a baseload power facility with maximum output of 30 MWe classified as a synthetic minor source for NOx, CO, VOC, formaldehyde, and acetaldehyde with multiple new emissions units. This review is for construction of the facility with 14 trailer-mounted Jenbacher J620 natural gas-fired prime power engines and one natural gas-fired emergency generator.

An initial Notice of Construction (NOC) application dated September 22, 2025, was submitted by VoltaGrid LLC for the QWA1 – Electrical Generation Plant project. The Washington State Department of Ecology (Ecology) reviewed the initial application and found it incomplete per Washington Administrative Code (WAC) 173-400-111 on October 17, 2025. Amended NOC application information was received by Ecology on January 14, 2026, through April 27, 2026, and found to be complete on May 14, 2026.

2. Application Processing

Public Notice

This project is subject to a mandatory 30-day public comment period per WAC 173-400-171(3)(n) and (k), due to anticipated public interest and an order issued under WAC 173-400-091 that establishes limitations on a source's potential to emit. The comment period was held July 7 through August 13, 2026. Response to comments is attached as Appendix B. Legal notices were posted in English and Spanish on Ecology's website and The Quincy Valley Post Register.

Resources used to determine outreach:

Department Of Health Disparities map:[Information by Location | Washington Tracking Network \(WTN\)](#)

Washington GIS map:[Limited English Proficiency Application \(arcgis.com\)](#)

State Environmental Policy Act (SEPA)

The City of Quincy issued a determination of non-significance (DNS) on January 22, 2026, for this facility.

3. Applicable Regulations

State Regulations

i. Minor New Source Review Applicability

Per WAC 173-400-110, an NOC application and an order of approval must be issued by the permitting authority prior to the establishment of a new source or modification.

As stated in the NOC application and consistent with Ecology's review, the prime power natural gas fueled generators and one emergency generator are being constructed for this project and therefore are subject to minor new source review (NSR).

A. Potential to Emit (Potential Emissions)

The potential emissions from the project, based on before control estimates which are lower than the New Source Performance Standard limitations and no controls for toxic air pollutants, are greater than the exemption levels listed under WAC 173-400-110(5) as shown below in Tables 1 and 2 (in bold).

Table 1. Potential emissions for pollutants listed under WAC 173-400-110(5), versus the Minor NSR Exemption Levels

Pollutant	New Units (tons/year)	Minor NSR Exemption (tons/year)
Carbon Monoxide (CO)	815	5.0
Lead (Pb)	0.000	0.005
Nitrogen Oxides (NO _x)	429	2.0
PM ₁₀	10.3	0.75
PM _{2.5}	6.65	0.5
Total Suspended Particulates (TSP)	22.1	1.25
Sulfur Dioxide (SO ₂)	6.2	2.0
Volatile Organic Compounds, total (VOC)	205	2.0
Ozone Depleting Substances, total	0.0	1.0
Greenhouse Gases (GHG)	187,108	N/A

Table 2. Potential Toxic Air Pollutant (TAP) emissions increase and de minimis emission values

Pollutant	Potential Emissions from Project (pounds/averaging period)	De Minimis Emission Values	Averaging Period
Acetaldehyde	26,780	3	Year
Acrolein	47	0.0013	24-hr

Pollutant	Potential Emissions from Project (pounds/averaging period)	De Minimis Emission Values	Averaging Period
Ammonia	85	1.9	24-hr
Benz(a)anthracene	0.18	0.045	Year
Benzene	1,420	1	Year
Benzo(a)pyrene	8.4E-03	0.0082	Year
Benzo(b)fluoranthene	0.53	0.045	Year
Benzo(k)fluoranthene	0.024	0.045	Year
1,3-Butadiene	1,150	0.27	Year
Carbon Monoxide	186	1.1	1-hr
Carbon Tetrachloride	120	1.4	Year
Chlorobenzene	0.28	3.7	24-hr
Chloroethane	1.7E-02	110	24-hr
Chloroform	91	0.35	Year
Chrysene	2.2	0.45	Year
Dibenz(a,h)anthracene	8.4E-03	0.0041	Year
1,1-Dichloroethane	76	5.1	Year
1,2-Dichloroethane	76	0.31	Year
1,2-Dichloropropane	86	0.81	Year
1,3-Dichloropropene	85	2	Year
Ethylbenzene	220	3.2	Year
Ethylene Dibromide	140	0.014	Year
Formaldehyde	250,620	1.4	Year
Indeno(1,2,3-cd)pyrene	0.022	0.045	Year
Methanol	23	74	24-hr
Methylene Chloride	64	490	Year
n-Hexane	10	2.6	24-hr
Naphthalene	240	0.24	Year
Nitrogen Dioxide	9.81	0.46	1-hr
Perchloroethylene	7.9	1.3	Year
Phenol	0.22	0.74	24-hr
Propylene	47	11	24-hr
Styrene	0.22	3.2	24-hr
Sulfur Dioxide	1.42	0.46	1-hr
1,1,2,2-Tetrachloroethane	130	0.14	Year
1,1,2-Trichloroethane	100	0.51	Year
1,2,3-Trimethylbenzene	0.21	0.22	24-hr
1,2,4-Trimethylbenzene	0.13	0.22	24-hr
1,3,5-Trimethylbenzene	0.30	0.22	24-hr

Pollutant	Potential Emissions from Project (pounds/averaging period)	De Minimis Emission Values	Averaging Period
Toluene	3.8	19	24-hr
Vinyl Chloride	48	0.92	Year
Xylenes	5.7	0.82	24-hr

ii. Prevention of Significant Deterioration (PSD)

PSD does not apply, based on controlled emissions.

iii. Other Applicable Requirements

In accordance with WAC 173-400-113, the proposed new units must comply with all applicable emission standards adopted under Chapter 70A.15 RCW. The following applicable emission standards are associated with the proposed project:

- A. [WAC 173-400-040](#) General standards for maximum emissions: limits visible emissions from all sources to no more than three minutes of 20 percent opacity, in an hour, of an air contaminant from any emission unit.
- B. [WAC 173-400-050](#) and [-060](#) Emission standards for combustion and incineration units and general process units: limits emissions of particulate matter from combustion and general process units to 0.23 gram per dry cubic meter at standard conditions (0.10 grains per dry standard cubic foot) of exhaust gas.
- C. [WAC 173-400-115](#) Standards of performance for new sources: adopts by reference 40 C.F.R. Part 60, Subpart JJJJ. See more below.

Federal Regulations

In accordance with WAC 173-400-113, the proposed new units must comply with all applicable new source performance standards (NSPS) included in 40 C.F.R. Part 60, national emission standards for hazardous air pollutants (NESHAPs) included in 40 C.F.R. Part 61, and NESHAPs for source categories included in 40 C.F.R. Part 63. The following applicable emission standards are associated with the proposed project:

i. Standards of Performance for New Stationary Sources

NSPS Subpart A – General Provisions provides applicable requirements for testing, monitoring, notifications and recordkeeping. Any source that is subject to another subpart under 40 C.F.R. 60 is also subject to Subpart A, unless otherwise stated in the specific subpart. Since the proposed facility will be subject to NSPS JJJJ, the proposed project will be required to comply with applicable provisions of Subpart A.

NSPS Subpart JJJJ – Stationary Spark Ignition Combustion Engines applies to new, modified, and reconstructed spark ignition (SI) internal combustion engines (ICE). New engines with engine power greater than 19 kW are subject to this regulation if construction of the SI ICE commenced after June 12, 2006, and if the engine was manufactured on or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 horsepower (hp).

ii. National Emission Standards for Hazardous Air Pollutants

NESHAP Subpart A provides generally applicable requirements for testing, monitoring, notifications and recordkeeping. Any source that is subject under 40 C.F.R. 63 is also subject to Subpart A, unless otherwise stated in the specific subpart.

NESHAP Subpart ZZZZ applies to new and existing stationary RICE located at both major and area sources of HAP emissions. Per 40 C.F.R. 63.6590(c), for new or reconstructed stationary RICE located at an area source of HAP emissions, the only requirement under NESHAP Subpart ZZZZ is to meet the requirements of NSPS Subpart IIII for compression ignition ICE and of NSPS Subpart JJJJ for SI ICE. Since the proposed SI ICE at the facility will be in compliance with NSPS Subpart JJJJ, the units will also be in compliance with NESHAP Subpart ZZZZ. No further requirements apply for these engines under this regulation.

4. Emissions

Emission Factors/Calculations

J620 Engines:

Maximum emission factors for VOC, NO_x, CO, PM (filterable and condensable), SO₂ and Formaldehyde are provided by the manufacturer. NO₂ is assumed to be 10 percent of NO_x in the exhaust stack. For all other toxic air pollutants, maximum emission factors are taken from AP-42 Chapter 3.2 Natural Gas-Fired Reciprocating Engines and California Air Toxics Emission Factors (CATEF). Formaldehyde is controlled by 95 percent per vendor specification. To be conservative, all other toxics are assumed to be controlled by 90 percent.

Startup events assume no emission control during the event. Short-term (hourly) emissions are calculated, assuming one five-minute startup event occurs during an hour. Daily emissions are calculated assuming one five-minute startup event occurs during a day. Annual emissions are calculated, assuming 36 five-minute startup events per year.

Ammonia slip data provided by the manufacturer, 5.0 parts per million by volume (5 ppmv).

Black Start Emergency Engine:

Maximum controlled emission factors provided by the manufacturer for VOC, NO_x, and CO. Emissions of PM and SO₂ are based on AP-42, Table 3.2-3 (Emissions Factors for natural gas-fired four stroke rich burn engines). All PM emissions include filterable and condensable PM emissions. NO₂ emissions are assumed to be 10 percent of NO_x emissions in the stack exhaust.

Toxic air pollutants emission factors are based on AP-42, Chapter 3.2-3. Ammonia slip data provided by the manufacturer, 5.0 ppmv.

Best Available Control Technology (BACT) | Best Available Control Technology for Toxics (tBACT)

J620 Engines:

The permittee proposes to construct 14 Jenbacher J620 natural gas-fired RICEs, equipped with built-in combustion exhaust treatment system consisting of a dual Selective Catalytic Reduction (SCR) and oxidation catalyst. Manufacturer guarantees provide 98 percent control of NO_x emissions and 95 percent control of CO, and VOC for the J620s. Organic toxic emissions are assumed to be controlled up to 90 percent for the J620s. Manufacturer guaranteed emission rates in pounds per hour will be set as limits in the final Approval Order.

There are no add-on controls proposed for PM or SO₂ emissions, but the use of clean, low sulfur and low ash fuel such as natural gas satisfies BACT for these pollutants. Good combustion practices and use of natural gas will ensure that manufacturer guarantees for these pollutants will be satisfied.

TAP emissions from the permittee are classified as various species of VOCs. The oxidation catalyst used to control VOC emissions will also control TAP emissions with a guaranteed 90 percent control efficiency for the J620s. Potential emissions of ammonia (as ammonia slip) during SCR operation will be limited to no more than 5 ppmv.

Black Start Emergency Engine:

The permittee proposes to construct one natural gas-fired black start emergency RICE, equipped with a built-in combustion exhaust treatment system consisting of a Non-Selective Catalytic Reduction catalyst that controls emissions of NO_x, CO, VOC and organic TAPs. Manufacturers guaranteed emission rates in pounds per hour will be limits in the final Approval Order.

There are no add-on controls proposed for PM or SO₂ emissions, but the use of clean, low sulfur and low ash fuel such as natural gas satisfies BACT for these pollutants. Good

combustion practices and use of natural gas will ensure that manufacturer guarantees for these pollutants will be satisfied.

Allowable Emissions

The allowable emissions from the project, considering all emission controls and operational limits specified by the approval order, are shown in the tables below.

Table 3. Allowable emissions for pollutants listed under WAC 173-400-110(5)

Pollutant	New/Modified Units (tons/year)
Carbon Monoxide (CO)	41
Nitrogen Oxides (NO _x)	8.7
PM ₁₀	6.9
PM _{2.5}	6.3
Total Suspended Particulates (TSP)	8.8
Sulfur Dioxide (SO ₂)	6.2
Volatile Organic Compounds, total (VOC)	10
Greenhouse Gases (GHG)	186,934

Table 4. Allowable TAP emissions

Pollutant	New Units (pounds/year)	Averaging Period
Acetaldehyde	2,678	Year
Acrolein	1,641	24-hr
Ammonia	30,848	24-hr
Benz(a)anthracene	0.018	Year
Benzene	142	Year
Benzo(a)pyrene	8.4E-04	Year
Benzo(b)fluoranthene	0.053	Year
1,3-Butadiene	115	Year
Carbon Monoxide	82,003	1-hr
Carbon Tetrachloride	12	Year
Chloroform	9.1	Year
Chrysene	0.22	Year
1,1-Dichloroethane	7.6	Year
1,2-Dichloroethane	7.6	Year
1,2-Dichloropropane	8.6	Year
1,3-Dichloropropene	8.5	Year
Ethylbenzene	22	Year
Ethylene Dibromide	14	Year
Formaldehyde	12,531	Year

Pollutant	New Units (pounds/year)	Averaging Period
n-Hexane	360	24-hr
Naphthalene	24	Year
Nitrogen Dioxide	1,741	1-hr
Perchloroethylene	0.79	Year
Propylene	1,680	24-hr
Sulfur Dioxide	12,440	1-hr
1,1,2,2-Tetrachloroethane	13	Year
1,1,2-Trichloroethane	10	Year
1,3,5-Trimethylbenzene	10.8	24-hr
Vinyl Chloride	4.8	Year
Xylenes	200	24-hr

The table below presents the potential emissions and allowable emissions for VoltaGrid LLC – QWA1 Electrical Generation Plant with the emissions from the project included. This facility is a synthetic minor source for NO_x, CO, VOC, and hazardous air pollutants formaldehyde and acetaldehyde.

Table 5. Potential and Allowable Emissions for Total Source

Pollutant	Total Source Potential Emissions (tons/year)	Total Source Allowable Emissions (tons/year)
Carbon Monoxide (CO)	815	41
Nitrogen Oxides (NO _x)	429	8.7
PM ₁₀	10.3	6.9
PM _{2.5}	6.65	6.3
Total Suspended Particulates (TSP)	22.1	8.8
Sulfur Dioxide (SO ₂)	6.2	6.2
Volatile Organic Compounds, total (VOC)	205	10
Greenhouse Gases (GHG)	187,108	186,934

5. Ambient Air Quality Standards

As specified in WAC 173-400-113, the proposed new or modified source(s) must not cause or contribute to a violation of any ambient air quality standard. This includes the ambient air quality standards for both criteria and toxic air pollutants.

Pollutants Listed Under WAC 173-400-110 (Except TAPs)

For NO₂, CO, SO₂, PM₁₀, PM_{2.5}, modeling was performed to satisfy the requirements of Chapter 173-400-113(3) WAC. The modeling demonstrates that the emissions increase as a result of the project will not exceed the ambient air quality standards. The modeling results are included in the table below.

Table 6. Criteria Pollutant Modeling Results

Criteria Pollutant	Averaging Period	Maximum Modeled Concentration ($\mu\text{g}/\text{m}^3$) (i)	Background Concentration ($\mu\text{g}/\text{m}^3$)	Total with Background Concentration ($\mu\text{g}/\text{m}^3$)	Ambient Air Quality Standard ($\mu\text{g}/\text{m}^3$)
CO	1-hour	110	1,316 (iii)	1,426	40,000
CO	8-hour	61	882 (iii)	943	10,300
NO ₂	1-hour	18	42 (ii)	60	188
NO ₂	Annual	0.18	6.6 (iii)	6.8	100
PM ₁₀	24-hour	8.8	85 (ii)	94	150
PM _{2.5}	24-hour	0.83	18 (ii)	19	35
PM _{2.5}	Annual	0.39	4.9 (ii)	5.3	9
SO ₂	1-hour	4.4	8.8 (iii)	13.3	196
SO ₂	3-hour	5.2	15.3 (iii)	20.6	1,308

Notes:

- i. For the NAAQS analysis, the one-hour NO₂ and 24-hour PM_{2.5} design concentrations are the five-year average of the 98th percentile of the respective daily maximum one-hour averaged and 24-hour averaged concentrations. The annual PM_{2.5} design concentration is the five-year average of the annual mean concentrations. For 24-hour PM₁₀, the design concentration is the high-sixth-high of the five years of 24-hour concentrations. For CO, SO₂, and annual NO₂ concentrations represent the maximum modeled impacts.
- ii. The background concentration for NO₂ is from Ecology's August 2020 Storymap. The background concentration for PM_{2.5} is the 2024 design value from the Quincy monitor. The background concentrations for 24-hour PM_{2.5} and annual PM_{2.5} are from the Quincy monitor operating from 2022 to 2024. The background concentration for 24-hour PM₁₀ is the 2024 Yakima, WA monitor high-first-high value.
- iii. Regional background level obtained for CO, SO₂, and annual NO₂ from Idaho Department of Environmental Quality for model and monitoring data from July 2014 through 2017 (IDEQ accessed April 16, 2026). Values were conservatively assumed to be the maximum background design value near the site for each pollutant.

Toxic Air Pollutants (TAPs)

In accordance with WAC 173-460-040, new TAP sources must meet the requirements of Chapter 173-460 WAC, unless they are exempt by WAC 173-400-110(5).

As shown in Table 2, minor NSR is required for multiple toxic air pollutants. As such, the new emission units must comply with WAC 173-460-070 (ambient impact requirement). The source may demonstrate compliance with the ambient impact requirement by either showing that the emissions increase is less than the small quantity emissions

rates (SQER) or through dispersion modeling. The table below includes the estimated emissions increases associated with the project and the applicable SQER.

Table 7. TAP Analysis

TAP	Estimated Increase	SQER	Modeling Required?
Acetaldehyde	2,678	60	Yes
Acrolein	4.7	0.026	Yes
Ammonia	85	37	Yes
Benz(a)anthracene	0.018	0.89	No
Benzene	142	21	Yes
Benzo(a)pyrene	8.4E-04	0.16	No
Benzo(b)fluoranthene	0.053	0.89	No
1,3-Butadiene	115	5.4	Yes
Carbon Monoxide	24	43	No
Carbon Tetrachloride	12	27	No
Chloroform	9.1	7.1	Yes
Chrysene	0.22	8.9	No
1,1-Dichloroethane	7.6	100	No
1,2-Dichloroethane	7.6	6.2	Yes
1,2-Dichloropropane	8.6	16	No
1,3-Dichloropropene	8.5	41	No
Ethylbenzene	22	65	No
Ethylene Dibromide	14	0.27	Yes
Formaldehyde	12,531	27	Yes
n-Hexane	1.0	52	No
Naphthalene	24	4.8	Yes
Nitrogen Dioxide	1.0	0.87	Yes
Perchloroethylene	0.79	27	No
Propylene	4.7	220	No
Sulfur Dioxide	1.42	1.2	Yes
1,1,2,2-Tetrachloroethane	13	2.8	Yes
1,1,2-Trichloroethane	10	10	Yes
1,3,5-Trimethylbenzene	0.030	4.4	No
Vinyl Chloride	4.8	18	No
Xylenes	0.57	16	No

For the pollutants listed in Table 8, modeling was performed to satisfy the requirements of Washington's state toxics rule in Chapter 173-460 WAC. The modeling demonstrates that the emission increases as a result of the project will not exceed the acceptable

source impact level (ASIL) screening thresholds. The modeling results are included in the table below.

Table 8. TAP Modeling Results

TAP	Averaging Period	Maximum Modeled Concentration (µg/m³)	ASIL (µg/m³)	Percent of ASIL
Acetaldehyde	Year	0.030	0.37	8.1%
Acrolein	24-hr	0.28	0.35	80%
Ammonia	24-hr	4.9	500	1.0%
Benzene	Year	0.0017	0.13	1.3%
1,3-Butadiene	Year	0.0013	0.033	3.9%
Chloroform	Year	0.00010	0.043	0.2%
1,2-Dichloroethane	Year	0.000084	0.038	0.2%
Ethylene Dibromide	Year	0.00016	0.0017	9.4%
Formaldehyde	Year	0.14	0.17	82%
Naphthalene	Year	0.00027	0.029	0.9%
Nitrogen dioxide	1-hr	42	470	8.9%
Sulfur Dioxide	1-hr	6.6	660	1.0%
1,1,2,2-Tetrachloroethane	Year	0.00014	0.017	0.8%
1,1,2-Trichloroethane	Year	0.00011	0.063	0.2%

To request ADA accommodation, email regional air quality shared mailbox and phone number. or dial 711 to call through the Washington Telecommunications Relay for services like text telephone (TTY). Visit [Ecology.wa.gov/ADA](https://ecology.wa.gov/ADA) for more accessibility information.

6. Appendix A – Federal Rule Applicability

40 C.F.R. Part 60, Subpart JJJJ

Primary J620 Engines

Emission Standards:

The proposed natural gas-fired generators will be classified as non-emergency generators under this regulation and will have an engine power rating of greater than 75 kW. Per 40 C.F.R. 60.4233(e), the generators will be subject to the applicable emission standards in Table 1 of the NSPS Subpart JJJJ.

The permittee will need to comply with the emission standards by purchasing engines certified by the manufacturer to comply with the emission standards. Further, the site will be required to operate and maintain the engines according to the manufacturer's emission-related written instructions and only change those emission-related settings that are permitted by the manufacturer. Records of conducted maintenance must be maintained on site to demonstrate compliance. The engine must be operated and maintained so that these emissions standards are achieved over the entire life of the engine.

Fuel Requirements:

Fuel requirements under this subsection are only applicable to engines burning gasoline. The potential SI ICEs at the permittee will only burn natural gas and therefore this section is not applicable.

Notifications, Reporting, and Recordkeeping:

An Initial Notification under NSPS Subpart A is not required for stationary ICE that are certified to meet the standards of 40 C.F.R. 60.4231. The permittee is required to keep records of all notifications submitted, all maintenance performed on the engines, and documentation from the manufacturer that the engines are certified. Additionally, the proposed engines will not use propane as an alternative fuel.

Black Start Engine

Emission Standards:

The proposed black start engine will be classified as an emergency generator under this regulation and will have an engine power rating greater than 75 kW. Per 40 C.F.R. 60.4233(e), the generator will be subject to the applicable emission standards in Table 1 of NSPS Subpart JJJJ.

The permittee will comply with the emission standards above by purchasing an engine certified by the manufacturer to comply with these emission standards. Further, VoltaGrid

will operate and maintain the engine according to the manufacturer's emission-related written instructions and only change those emission-related settings that are permitted by the manufacturer. Records of conducted maintenance must be maintained on site to demonstrate compliance. The engine must be operated and maintained so that these emission standards are achieved over the entire life of the engine. Emergency engines are also required to be equipped with a non-resettable hour meter (60.4243(d) & (e)) to track hours of operation for maintenance and testing, for emergencies and non-emergency use.

Fuel Requirements:

Fuel requirements under this subsection are only applicable to engines burning gasoline. The potential SI ICE at the facility will only burn natural gas and therefore this section is not applicable.

Notifications, Reporting, and Recordkeeping:

An Initial Notification under NSPS Subpart A is not required for stationary ICE that are certified to meet the standards of 40 C.F.R. 60.4231. The permittee is required to keep records of hours of operation for maintenance and testing, for emergencies and non-emergency use. Additionally, VoltaGrid must keep records of all notifications submitted, all maintenance performed on the engine, and documentation from the manufacturer that the engine is certified. Additionally, the proposed engine will not use propane as an alternative fuel.

40 C.F.R. Part 63, Subpart ZZZZ

The RICE NESHAP applies to each engine. Condition 1 of the Order requires general compliance with this regulation. However, each engine is also subject to the SI ICE NSPS (see above). At 40 C.F.R. 63.6590(c), the NESHAP specifies that compliance must be met by meeting the requirements of the NSPS; therefore, no further requirements apply to the engines.

7. Appendix B – Response to Comments

This section will be updated following the public comment period.