

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

**APPLICATION FOR SOURCE CATEGORY PERMIT APPROVAL TO CONSTRUCT
AND/OR OPERATE A NATURAL GAS FIRED EMERGENCY ENGINE SUBJECT TO
NSPS SUBPART JJJJ**

Instructions: Please complete a separate copy of this form for each covered generator.

I. Applicability (Check all that are applicable)

- The equipment consists of a natural gas fired emergency generator set or other natural gas fired emergency engine.
- The equipment is stationary (i.e., it will remain in place for greater than 12 months).
- The equipment is to be used exclusively for emergency purposes (except maintenance and testing and limited non-compensated non-emergency operations specified in Condition IV(c)(2) of the source category permit) and will not participate in a voluntary demand reduction program or any other interruptible power supply arrangement with a utility, other market participant, or system operator (demand response).
- The equipment will operate for fewer than 500 hours in any given 12 month period for all purposes, combined.
- The equipment's potential to emit (PTE) oxides of nitrogen (NO_x) is less than 25 tons per year (TPY). See the table in Section IV of this application to calculate PTE from this unit.
- Construction of this engine, in combination with any other equipment constructed as part of the same construction project, did/will not trigger applicability of 20 DCMR 204, Permit Requirements for Major Sources Located in Non-Attainment Areas (New Source Review) at the time of construction. You may check this box if you checked the previous box and there was no other air pollutant-emitting equipment constructed as part of the same construction project. If other air pollutant-emitting equipment was or will be constructed as part of the same construction project, please perform and submit a full applicability evaluation pursuant to 20 DCMR 204 or contact the Air Quality Division (AQD) at (202) 535-2250 to request further guidance.
- Check this box if any of the following is true:
 1. This application is for existing equipment installed before January 1, 2014;
 2. This application is for equipment that has been or will be installed after January 1, 2014 and is no more than one model year older than the year of installation (e.g., if it is installed in calendar year 2015, it is no older than a model year 2014 unit.); or

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3. The potential to emit NO_x from the equipment, assuming 500 hours per year of operation, is less than 5 TPY. (See Section IV of this application for calculation procedures.)

The equipment will be constructed and operated in compliance with the “Source Category Permit to Construct and Operate Stationary Natural Gas-Fired Emergency Engines Subject to NSPS Subpart JJJJ” (Permit No. 7043-SC-R1).

Check this box if any of the following three items is applicable and indicate (by number) which one is applicable here: _____

1. The maximum engine power is less than or equal to 25 horsepower (HP) [19 mechanical kilowatts (kWm)] and it was manufactured on or after July 1, 2008;
2. The manufacturer participates in the voluntary manufacturer certification program described in 40 CFR 60, Subpart JJJJ and the date of manufacture of the emergency engine is after January 1, 2009; or
3. The emergency engine was ordered after June 12, 2006, was manufactured on or after January 1, 2009, and has a maximum engine power greater than 25 HP (19 kWm).

If you have checked all of the boxes above, you are eligible to apply for coverage under this source category permit. Please complete the remainder of this form. Note that your coverage under this source category permit is still subject to Air Quality Division (AQD) approval. AQD may deny approval under this permit if it deems that further review is necessary due to special or unique circumstances related to a given application. Approval will occur either by active acknowledgement by AQD or by passive approval which will occur 45 days after submission of the complete application to AQD unless AQD objects to the approval in writing in that time.

If you are not eligible for coverage under this source category permit, you may still be eligible for a standard source-specific permit. Please contact AQD at (202) 535-2250 to discuss alternate permitting options or check the AQD website (<http://doee.dc.gov/air>) for the appropriate application forms.

If you have questions about your eligibility or how to complete this application, please contact AQD at (202) 535-2250.

APPLICATION CONTINUED ON NEXT PAGE

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II. Facility and Applicant Information

1. _____
Full Legal Name of Applicant/Organization

2. _____
Type of Organization

3. _____
Name of Owner(s) or Principal Partner(s) of Above Organization

4. _____
Mailing Address of Applicant (No., Street, City, State, Zip)

5. _____
Street Address of Facility (if different from Mailing Address)

6. Owner/Responsible Official Name: _____

Owner/Responsible Official Title: _____

Phone No. _____ E-mail: _____

7. Contact Person: _____

Contact Person Title: _____

Phone No. _____ E-mail: _____

8. Type of Project: New Construction Renewal/Transfer of Existing Permit
 Initial Permitting of Existing Source

Note that replacement of an existing source is considered "New Construction".

9. For renewal or transfer of coverage from a standard permit, provide the existing permit number and expiration date:

10. Describe the facility at which this equipment will be located:

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III. General Equipment Information

1. Equipment Name/Identification: _____
2. Engine type: Reciprocating Turbine Other _____
3. Fuel type: _____
4. Rated fuel consumption: _____ CF/hr
5. Engine is used for: Routine operational use Emergency or back-up use only
Note: If the unit is to be used in a load response program or for peak shaving, please check "Routine operational use" and attach an explanation of the use(s) of the unit. Also note that only engines used in emergency or back-up capacities are eligible for coverage under this source category permit, except as specified in Condition IV(c) of the source category permit.
6. Rated generator electrical output: _____ kW/kWe
Note: Enter n/a if your engine is not associated with a generator
7. Maximum engine power: _____ HP or kWm (choose units) @ _____ RPM
8. Stack height above ground: _____ ft Inner diameter at exit: _____ ft
Exit gas volumetric rate: _____ cfm Gas temperature at exit: _____ °F
Distance of stack from nearest property boundary: _____ ft
Describe the location of the stack outlet: _____
9. Date construction/installation of engine began or is planned to begin: _____
10. Date construction/installation of engine completed (if applicable): _____
11. Manufacturing Information:

Engine Order Date

Engine Manufacture Date

Engine Model Year

Engine Serial Number
(if available)

Engine per cylinder displacement

Engine Manufacturer

Generator Manufacturer

Generator Manufacture Date

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IV. Emissions

Please complete the following “Potential to Emit” table (except as noted below):

Note: It is acceptable to provide calculations in an alternate format as an attachment to this application. Please ensure that any submittal provides sufficient information to allow the application reviewer to reproduce the calculations from the source material. Please also ensure that any alternative submittal provides substantially the same information requested in the following table.

If potential emissions are provided in an attachment, please check the following box:

Table: Potential to Emit¹					
Pollutant	Emission Factor²	Units of Emission Factor³	Emission Rate (lb/hr)	Maximum Hours Per Year of Operation⁴	Maximum Potential Emissions (Tons/yr)
NO_x					
SO_x					
VOC					
CO					
PM_(Total)					

¹ “Potential to Emit” is the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is enforceable as a practical matter. Secondary emissions do not count in determining the potential to emit of a stationary source. [20 DCMR § 199]

² The emission factor should reflect the maximum emissions expected from the unit when operating properly.

³ Examples of commonly used units are lb/million SCF of natural gas and lb/million BTU of heat input.

⁴ The default value for this column should be 500 hours per year for emergency engines. If a different value is used, you are not eligible for coverage under this source category permit so you should seek a standard unit-specific permit.

Cite the source(s) of the emission factors:

V. Notes and Required Attachments

1. Please attach a copy of the EPA Certificate of Conformity applicable to the unit.
2. Please attach a copy of the manufacturer’s specifications for the unit and any other appropriate supporting documentation, including the basis for manufacturer-specified emission factors.

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- 3. Deviations from submitted plans and specifications are not permissible without securing formal approval from AQD via an application update request and re-approval, if already approved. If an application update is submitted, the 45 day passive approval period will re-set as of the date of submission of the revised application.
- 4. Please attach a copy of a recent “Certificate of Clean Hands” which can be obtained from mytax.dc.gov.
- 5. The complete application and applicable supporting documentation must be submitted to the following address:

Branch Chief, Air Quality Permitting Branch
Department of Energy and Environment
1200 First Street NE, 5th Floor
Washington DC 20002

VI. Applicant Certification:

I hereby certify, under penalty of D.C. Official Code § 8-101.05e, that I am authorized to submit this application on behalf of the applicant and that the statements contained herein are true and correct to the best of my knowledge. I further certify that all attached information and previously submitted information referenced in this application remains true, correct, and current, to the best of my knowledge.

Authorized Signature:

Owner/Responsible Official Signature Print Name and Title Date

Mailing Address of Owner/Responsible Official if Different from II.4 above

Report Fraud, Waste, Abuse, and Mismanagement to the District of Columbia Office of the Inspector General.
Confidential Toll Free Hotline: 1-800-521-1639 or 202-724-TIPS (8477). Email: hotline.oig@dc.gov

Attachment 1

Source Category Permit to Construct and Operate Stationary Natural Gas-Fired Emergency Engines Subject to NSPS Subpart JJJJ

Permit No. 7043-SC-R1

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

**Source Category Permit to Construct and Operate Stationary Natural Gas-Fired
Emergency Engines Subject to NSPS Subpart JJJJ**

Permit No. 7043-SC-R1

September 27, 2019

I. Applicability¹:

- a. This source category permit is applicable to a subset of owners and operators of natural gas-fired emergency engines in the District of Columbia who submit an application to the Department of Energy and Environment (“the Department”), Air Quality Division (“AQD”) and are approved for coverage under this permit, either actively or by passive approval which will occur 45 days after submission of the application to AQD unless AQD objects to the approval in writing in that timeframe.
- b. This source category permit covers new installation as well as operation of natural gas-fired spark ignition (SI) internal combustion engines that are regulated under 40 CFR 60, Subpart JJJJ and are classified as emergency engines (a subset of stationary spark ignition internal combustion engines). To be covered under this permit, equipment must meet the following criteria:
 1. The equipment consists of a natural gas-fired emergency generator set or other natural gas fired emergency engine;
 2. The equipment is stationary (i.e., it will remain in place for greater than 12 months);
 3. The project that involves construction of the equipment to be covered does not trigger applicability of 20 DCMR 204, Permit Requirements for Major Sources Located in Non-Attainment Areas (New Source Review);
 4. One of the following must be true:
 - A. The equipment was installed before January 1, 2014;
 - B. The equipment has been or will be installed after January 1, 2014 and is no more than one model year older than the year of installation (e.g., if it is installed in calendar year 2015, it is no older than a model year 2014 unit.); or
 - C. The potential to emit NO_x from the equipment, assuming 500 hours per year of operation, is less than 5 TPY.

¹ For definitions of terms used in this permit, please see the relevant definition sections in 20 DCMR as well as 40 CFR 60.2 and 40 CFR 60.4248.

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5. One of the following must be true:
 - A. The maximum engine power is less than or equal to 25 horsepower (HP) [19 mechanical kilowatts (kWm)] and it was manufactured on or after July 1, 2008;
 - B. The manufacturer participates in the voluntary manufacturer certification program described in 40 CFR 60, Subpart JJJJ and the date of manufacture of the emergency engine is after January 1, 2009; or
 - C. The emergency engine was ordered after June 12, 2006, was manufactured on or after January 1, 2009, and has a maximum engine power greater than 25 HP (19 kWm); and
6. The equipment must be constructed and operated in compliance with all conditions of this permit.
- c. Similar sources that do not meet the above criteria may be eligible for a different source category permit or a standard unit-specific permit issued pursuant to 20 DCMR Chapter 2, but cannot be covered by this source category permit.

II. General Requirements:

- a. The emergency engine shall be maintained and operated in accordance with the air pollution control requirements of the applicable sections of 20 DCMR.
- b. This permit expires on September 26, 2024 [20 DCMR 200.4]. If an applicant covered by this permit wishes to continue operation after this date, the owner or operator shall submit an application for renewal by June 26, 2024.
- c. Construction or operation of equipment under the authority of this permit shall be considered acceptance of its terms and conditions.
- d. The Permittee shall allow authorized officials of the District, upon presentation of identification, to:
 1. Enter upon the Permittee's premises where a source or emission unit is located, an emissions related activity is conducted, or where records required by this permit are kept;
 2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;
 3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and

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4. Sample or monitor, at reasonable times, any substance or parameter for the purpose of assuring compliance with this permit or any applicable requirement.
- e. A copy of this permit, as well as any associated coverage approval letter, shall be kept on the premises and produced upon request.
- f. Failure to comply with the provisions of this permit may be grounds for suspension or revocation of a Permittee's approval to construct and operate under this permit. [20 DCMR 202.2]
- g. For any equipment covered by this permit that is located at a major stationary source (as defined in 40 CFR 199) facility or other facility subject to 20 DCMR Chapter 3, the Permittee shall submit a complete Chapter 3 (Title V) permit amendment request or, in the case of a facility with a current application under review, a revision to that pending application, within twelve (12) months of the date of approval of coverage under this permit, to include the requirements of this permit in the facility's Title V permit for the covered equipment. [20 DCMR 301.2]

III. Emission Limitations:

- a. Emissions from the engine shall not exceed those specified in 40 CFR 60.4233 for the appropriate engine type. Any engine subject to a Family Emission Limit (FEL) shall comply with any such limits as specified on the applicable EPA Certificate of Conformity. If the engine is certified as a non-emergency engine, the engine shall comply with the standards to which it has been certified. [40 CFR 60.4233 and 20 DCMR 201]
- b. Visible emissions shall not be emitted into the outdoor atmosphere from the engine, except that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minute period and for an aggregate of twelve (12) minutes in any twenty-four hour (24 hr.) period during start-up, cleaning, adjustment of combustion controls, or malfunction of the equipment [20 DCMR 606.1].

Note that 20 DCMR 606 is subject to an EPA-issued call for a State Implementation Plan (SIP) revision (known as a "SIP call") requiring the District to revise 20 DCMR 606. See "State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction", 80 Fed. Reg. 33840 (June 12, 2015). It is likely that this federal action will result in changes to the requirements of 20 DCMR 606. Any such changes, once finalized in the DCMR, will supersede the language of Condition III(b) as stated above.

- c. An emission into the atmosphere of odorous or other air pollutants from any source in any quantity and of any characteristic, and duration which is, or is likely to be injurious to

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the public health or welfare, or which interferes with the reasonable enjoyment of life or property is prohibited. [20 DCMR 903.1]

IV. Operational Limitations:

- a. The emergency engine shall be operated for fewer than 500 hours in any given 12 month period. If operation of 500 hours or more is intended, the engine is not eligible for coverage under this permit and must seek and obtain an equipment-specific Chapter 2 permit from the Department prior to initiating such operation.
- b. With the exceptions specified in Condition IV(c), the emergency engine shall be operated only during emergencies as follows:
 1. For engines associated with emergency generators, emergencies resulting from electrical power outages due to: a failure of the electrical grid; on-site disaster; local equipment failure; or public service emergencies such as flood, fire, natural disaster, or severe weather conditions (e.g. hurricane, tornado, blizzard, etc.);
 2. For engines associated with fire pumps, any fire emergency; or
 3. For engines associated with emergency water pumps, any stormwater management emergency.
- c. The emergency engine may be operated for the purpose of maintenance checks and readiness testing and in non-emergency situations for a period not to exceed one hundred (100) hours per calendar year as specified in Conditions IV(c)(1) and (2) below. Any such operation shall be considered as part of the 500 hours allowed under Condition IV(a) above. [40 CFR 60.4243(d)]
 1. The emergency engine may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. [40 CFR 60.4243(d)(2)(i) and DCMR 201]; and
 2. The emergency engine may be operated for up to fifty (50) hours per calendar year in non-emergency situations, subject to the following conditions [40 CFR 60.4243(d)(3) and 20 DCMR 201]:
 - i. Any such operations shall be counted as part of the 100 hours per calendar year for maintenance and testing as provided in Condition IV(c);
 - ii. These 50 hours of non-emergency operations per calendar year cannot be used for peak shaving, or as part of any program to supply power to generate income for the facility as part of a financial arrangement with another entity;

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- iii. All operations prohibited under Condition IV(f) are also prohibited under this condition; and
- iv. All operations of the emergency generator resulting from a deviation in voltage or frequency from the electric provider to the premises shall be considered non-emergency operation and counted as part of this 50 hour per calendar year allowance.
- d. The emergency engine shall fire only natural gas. [20 DCMR 201]
- e. The emergency engine shall be certified by the manufacturer according to the procedures specified in 40 CFR 60, Subpart JJJJ, and operated and maintained in accordance with the equipment manufacturer's emission-related instructions. [20 DCMR 201 and 40 CFR 60.4243]
- f. The emergency engine shall not be operated in conjunction with a voluntary demand-reduction program or any other interruptible power supply arrangement with a utility, other market participant, or system operator. [20 DCMR 201]
- g. At all times, including periods of startup, shutdown, and malfunction, the owner shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [20 DCMR 201]

V. Monitoring and Testing Requirements:

- a. The owner or operator shall monitor the date, time, duration, and reason for each emergency engine startup to ensure compliance with Conditions IV(a), (b), (c), and (f).
- b. In order to ensure compliance with Condition IV(a), the owner or operator shall monitor the total hours of operation each month with the use of properly functioning, non-resettable hour metering device. [40 CFR 60.4237(c)]
- c. The owner or operator shall conduct and allow the Department access to conduct tests of air pollution emissions from any source as requested. [20 DCMR 502.1]

VI. Record Keeping Requirements:

- a. The following information shall be recorded, initialed (except records generated automatically by an electronic system), and maintained in a log at the facility (or readily accessible electronically from the facility) for a period not less than three (3) years or, in the case of any major stationary source facility or other facility subject to 20 DCMR

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Chapter 3, five (5) years [20 DCMR 20 DCMR 302.1(c)(2)(B), 20 DCMR 500. 8, and 40 CFR 60.4245(a)]:

1. The date, time, duration, and reason for each start-up of the emergency engine, including the following specific information:
 - i. If the unit is operated in non-emergency situations pursuant to Condition IV(c)(2), the specific purpose for each operation period must be recorded; and;
 - ii. If the unit is operated for emergency purposes, what classified the operation as emergency.
2. The total hours of operation for each month and the cumulative 12-month rolling period shall be calculated and recorded within 15 days of the end of each calendar month for the previous month and the 12-month period ending at the end of that month;
3. The total hours of operation for maintenance checks and readiness testing pursuant to Condition IV(c) each month, recorded within 15 days of the end of each calendar month, and totaled for each calendar year by January 15 of each year for the previous calendar year.
4. The total hours of operation each calendar year for non-emergency purposes pursuant to Condition IV(c)(2).;
5. Records of the maintenance performed on the unit [*Note that these records must be sufficient such that the Permittee is complying with the requirements of Condition IV(e)*];
6. Records of the results of any visible emissions monitoring performed;
7. Records of the occurrence and duration of each malfunction of operation;
8. Records of the actions taken during periods of malfunction to minimize emissions, including corrective actions to restore malfunction process and air pollution control and monitoring equipment to its normal or usual manner of operation; and
9. For any equipment covered by this permit that is located at a major stationary source (as defined in 40 CFR 199) facility or other facility subject to 20 DCMR Chapter 3, the Permittee shall maintain fuel usage records for the unit on a monthly and annual total basis for use in reporting fuel use and emissions from the facility, including equipment covered by this permit, pursuant to the requirements of the Title V permit.

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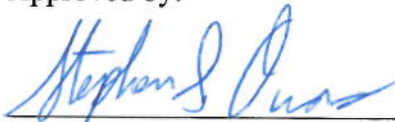
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- b. The owner or operator shall maintain a copy of the emergency engine's manufacturer's maintenance and operating recommendations at the facility or at an electronic location readily accessible from the facility. [20 DCMR 501]
- c. The owner or operator shall maintain a copy of the EPA Certificate of Conformity at the facility (or at an electronic location readily accessible from the facility) at all times. [40 CFR 60.4245(a)(3)]

VII. Reporting Requirements:

If the facility at which the engine is located is subject to a permit issued pursuant to 20 DCMR Chapter 3 (Title V), the Permittee shall include the equipment covered by this source category permit in all reports required by the Title V permit, including, but not limited to, semi-annual and annual compliance certifications and reports.

Approved by:



Stephen S. Ours, P.E.
Chief, Permitting Branch

9/27/2019

Date

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