

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 primarily for emergency purposes 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).
- ☐ Non-emergency operations (except maintenance and testing) will not exceed 50 hours per year and will comply with Condition IV(c)(2) of the attached source category permit.
- ☐ 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 particular unit and sum NO_x emissions from all permit applications related to this project.
- ☐ 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
 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".

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☐ 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.

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)

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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:

III. General Equipment Information

1. Equipment Name/Identification: _____

2. Engine type: ☐ Reciprocating ☐ Turbine ☐ Other

If "Other", describe: _____

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.

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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

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

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: ☐

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Table: Potential to Emit ¹					
Pollutant	Emission Factor ²	Units of Emission Factor ³	Emission Rate (lb/hr)	Maximum Hours Per Year of Operation ⁴	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.
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. The complete application and applicable supporting documentation must be submitted to the following address:

Branch Chief, Permitting Branch
Air Quality Division
1200 First Street NE, 5th Floor
Washington, DC 20002

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

Attachment 1

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

Permit No. 7043-SC

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

September 16, 2015

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 15, 2020 [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 15, 2020.
- 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 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 an 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].
- 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 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:

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1. For engines associated with emergency generators, an electrical power outage 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 emergency generators, when there is a deviation of voltage or frequency from the electrical provider to the premises of 5 percent or more below standard voltage or frequency such that the equipment being supported cannot be safely or effectively operated;
 3. When a sudden, unexpected event occurs that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. An emergency includes operations necessitated by non-routine failures of equipment, but it does not include voluntary demand reductions covered by Condition IV(f);
 4. For engines associated with fire pumps, any fire emergency; or
 5. 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 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. Any such operation shall be counted as part of the 100 hours per calendar year for maintenance and testing as provided in Condition IV(c). 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. All operations prohibited under Condition IV(f) are also prohibited under this condition. [40 CFR 60.4243(d)(3) and 20 DCMR 201]
- d. The emergency engine shall fire only natural gas. [20 DCMR 201]

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- e. The emergency engine shall be operated and maintained in accordance with the recommendations of the equipment manufacturer. [20 DCMR 201]
- 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, and maintained in a log at 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 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 due to a deviation in voltage from the utility pursuant to Condition IV(b)(2) this shall be specifically noted;
 - ii. If the unit is operated in non-emergency situations pursuant to Condition IV(c), the specific purpose for each operation period must be recorded; and
 - iii. If the unit is operated for emergency purposes, what classified the operation as emergency.

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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 due to a deviation in voltage or frequency from the utility pursuant to Condition IV(b)(2) each calendar year, totaled by January 15 of each calendar year for the previous calendar year;
 5. Records of the maintenance performed on the unit;
 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.
- b. The owner or operator shall maintain a copy of the emergency generator's manufacturer's maintenance and operating recommendations at the facility.
 - c. The owner or operator shall maintain a copy of the EPA Certificate of Conformity at the facility at all times. [40 CFR 60.4245(a)(3)]

VI. Reporting Requirements:

- a. If the Permittee ever operates the emergency generator for more than 15 hours in a calendar year for the purpose described in Condition IV(b)(2), the Permittee shall thereafter submit annual reports to the U.S. Environmental Protection Agency (EPA) and the Department as specified in Condition VI(b). These annual reports shall contain the following information [40 CFR 60.4245(e)]:
 1. Company name and address where the engine is located;

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2. Date of report and the beginning and ending dates of the reporting period;
 3. Engine site rating and model year;
 4. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place;
 5. Hours operated for the purpose specified in Condition III(b)(2), including the date, start time, and end time for engine operation for the purpose specified in Condition III(b)(2); and
- b. Reports required pursuant to Condition VI(a) shall be submitted as follows:
1. Reports to the Department shall be submitted to the following address:

Department of Energy and Environment
Chief, Compliance and Enforcement Branch
Air Quality Division
1200 First Street, NE, 5th Floor
Washington, D.C. 20002
 2. Reports to EPA must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the EPA Administrator at the following address:

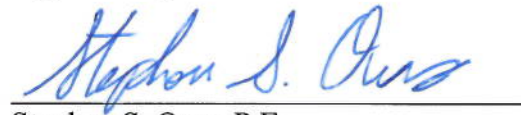
EPA Region III
Director, Air Protection Division
1650 Arch Street
Philadelphia PA, 19103
- c. For reports required by Condition VI(a), the first annual report must cover the calendar year 2015 or the first calendar year thereafter that the unit operated for more than 15 hours for the purpose specified in Condition IV(b)(2). Each annual report must be submitted by March 31 of the calendar year following the year covered by the report.
- d. In addition to the reporting required pursuant to Conditions VI(a) through (c), 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.

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Approved by:



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

9/16/2015
Date

SSO/OA