



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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**Emera Maine  
Hancock County  
Bar Harbor, Maine  
A-615-71-F-R/M (SM)**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Renewal & Minor Revision**

**FINDINGS OF FACT**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

**I. REGISTRATION**

**A. Introduction**

Emera Maine (Emera) has applied to renew their Air Emission License permitting the operation of emission sources associated with their diesel generators.

This equipment was previously licensed to Bangor Hydro-Electric Company. On January 1, 2014 Bangor Hydro-Electric Company merged with Maine Public Service. Bangor Hydro-Electric Company was the surviving entity from the merger and subsequently changed their name to Emera Maine. Therefore, the change is a change in name only and does not denote a change in ownership.

The facility has requested a minor revision to their license in order to:

1. Remove Generators #1 and #4 from their license;
2. Decrease the hours of operation for Generators #2 and #3 from 500 hr/year to 100 hr/year; and
3. Remove the requirement to use a chemical fuel additive for the reduction of particulate emissions.

The equipment addressed in this license is located off Route 233 in Bar Harbor, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

**Generators**

<b>Equipment</b>	<b>Power Output KW</b>	<b>Max Heat Input (MMBtu/hr)</b>	<b>Firing Rate (gal/hr)</b>	<b>Fuel Type, % sulfur</b>	<b>Install. Date</b>
Generator #1*	2,000	21.2	155	diesel, 0.0015%	1962
Generator #2	2,000	21.2	155	diesel, 0.0015%	1962
Generator #3	2,000	21.2	155	diesel, 0.0015%	1962
Generator #4*	2,000	21.2	155	diesel, 0.0015%	1962

\*Generators #1 and #4 have been decommissioned and are being removed from being licensed.

C. Application Classification

The application for Emera does not include the licensing of increased emissions or the installation of new or modified equipment. This amendment will not increase annual emissions of any pollutant. Therefore, this license is determined to be a renewal with a minor revision and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended). With the operating hours restriction on the Generators #2 and #3, the facility is licensed below the major source thresholds and is considered a synthetic minor.

**II. BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Generators #2 & #3

Emera operates Generators #2 and #3 on a limited basis to provide electricity during shortfalls in regular capacity or when regulation of system voltage is required. Generators #2 and #3 are each rated at 21.2 MMBtu/hr and fire diesel fuel with a maximum sulfur content of 0.0015% by weight. They were manufactured and installed in 1962.

Currently Emera is required to use a chemical fuel additive for the reduction of emissions of particulate matter. The fuel additive they have been using is no longer available and the facility has not been able to find a comparable replacement.

Previous emissions testing on Generator #3 has demonstrated that these units are capable of meeting an emission limit of 0.12 lb/MMBtu for PM without the use of the chemical fuel additive.

In addition, Emera intends to permanently shut down Generators #2 and #3 by May 3, 2014. Because Emera uses these units to supply power to the grid as part of a financial agreement, they are classified as existing, non-emergency, stationary compression ignition (CI) reciprocating internal combustion engines (RICE) at an area source of HAP per 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*. Emera has elected to decommission these engines rather than make the physical upgrades required by Subpart ZZZZ.

Due to the inability to find a replacement fuel additive and the demonstrated ability of the facility to meet the PM emission limit in 06-096 CMR 103, Emera has proposed reducing emissions from Generators #2 and #3 by reducing the permitted hours of operation from 500 hr/year to 100 hr/year (on a calendar year basis) in exchange for removing the requirement to use the chemical fuel additive. The Department agrees that this represents BPT for PM for these units.

1. BPT Findings

The BPT emission limits for the generators are based on the following:

PM/PM <sub>10</sub>	- 0.12 lb/MMBtu from 06-096 CMR 103
SO <sub>2</sub>	- combustion of diesel fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur)
NO <sub>x</sub>	- 3.34 lb/MMBtu from previous BACT (A-615-71-C-M)
CO	- 0.85 lb/MMBtu from AP-42 dated 10/96
VOC	- 0.09 lb/MMBtu from AP-42 dated 10/96
Opacity	- 06-096 CMR 101

The BPT emission limits for the generators are the following:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Generator #2	2.55	2.55	0.03	71.00	18.05	1.91
Generator #3	2.55	2.55	0.03	71.00	18.05	1.91

Visible emissions from each of the diesel emergency generators shall not exceed 30% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

Each of the generators shall be limited to 100 hours of operation a year, based on a calendar year. Emera shall keep records of the hours of operation for each unit.

2. 40 CFR Part 63, Subpart ZZZZ

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is applicable to Generators #2 & #3.

Emera uses Generators #2 & #3 to supply power to the grid as part of a financial agreement. Therefore, these engines will not meet the definition of an emergency engine per 40 CFR Part 63, Subpart ZZZZ after May 3, 2014. Generators #2 & #3 will be classified as existing, non-emergency, stationary compression ignition (CI) reciprocating internal combustion engine (RICE) at an area source of HAP.

Emera has chosen to decommission and permanently shut down Generators #2 & #3 by May 3, 2014 rather than comply with the additional requirements of Subpart ZZZZ. Should Emera wish to operate Generator #2 or #3 beyond May 3, 2014, the facility shall first amend their air emission license to address the requirements of Subpart ZZZZ.

C. Annual Emissions

1. Total Annual Emissions

Emera shall be restricted to the following annual emissions, based on a calendar year total. The tons per year limits were calculated based on 100 hrs/yr for the generators:

**Total Licensed Annual Emissions for the Facility  
Tons/year  
(used to calculate the annual license fee)**

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Generator #2	0.1	0.1	–	3.6	0.9	0.1
Generator #3	0.1	0.1	–	3.6	0.9	0.1
<b>Total TPY</b>	<b>0.2</b>	<b>0.2</b>	<b>–</b>	<b>7.2</b>	<b>1.8</b>	<b>0.2</b>

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through ‘Tailoring’ revisions made to EPA’s *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO<sub>2</sub>e).

Based on the facility’s fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, Emera is below the major source threshold of 100,000 tons of CO<sub>2</sub>e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

### III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<u>Pollutant</u>	<u>Tons/Year</u>
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	50
CO	250

The total facility licensed emissions are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

### ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-615-71-F-R/M subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

### STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples,

conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).

- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been

necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - 2. pursuant to any other requirement of this license to perform stack testing.
  - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. submit a written report to the Department within thirty (30) days from date of test completion.
- [06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- [06-096 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for

the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

**SPECIFIC CONDITIONS**

(16) **Generators #2 & #3**

- A. The generators are each limited to 100 hours per year total operation, based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [06-096 CMR 115, BPT]
- B. The diesel fuel sulfur content for Generators #2 & #3 shall be limited to 0.0015% sulfur. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BPT]
- C. Emissions shall not exceed the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>Origin and Authority</u>
Generator #2	PM	0.12	06-096 CMR 103(2)(B)(1)(a)
Generator #3	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

- D. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Generator #2	2.55	2.55	0.03	71.00	18.05	1.91
Generator #3	2.55	2.55	0.03	71.00	18.05	1.91

- E. Visible emissions from each of the generators shall not exceed 30% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period. [06-096 CMR 101]
  - F. Emera shall decommission and permanently shut down Generators #2 and #3 no later than May 3, 2014. Should Emera decide to operate either Generator #2 or #3 after May 3, 2014, they shall first amend their air emission license to address the requirements of Subpart ZZZZ. [06-096 CMR 115, BPT]
- (17) Emera shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 10 DAY OF January, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Marie Allen Robert Carre for*  
PATRICIA W. AHO, COMMISSIONER

**The term of this license shall be ten (10) years from the signature date above.**

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 MRSA §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 10/23/13

Date of application acceptance: 10/23/13

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Poland, Bureau of Air Quality.

