



PRINCE EDWARD ISLAND  
ÎLE-DU-PRINCE-ÉDOUARD

# **POWER ENGINEERS ACT REGULATIONS**

## PLEASE NOTE

This document, prepared by the *Legislative Counsel Office*, is an office consolidation of this regulation, current to December 26, 2015. It is intended for information and reference purposes only.

This document is *not* the official version of these regulations. The regulations and the amendments printed in the *Royal Gazette* should be consulted on the Prince Edward Island Government web site to determine the authoritative text of these regulations.

For more information concerning the history of these regulations, please see the *Table of Regulations* on the Prince Edward Island Government web site ([www.princeedwardisland.ca](http://www.princeedwardisland.ca)).

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**POWER ENGINEERS ACT**  
**Chapter P-15**  
**REGULATIONS**

Pursuant to section 18 of the *Power Engineers Act* R.S.P.E.I. 1988, Cap. P-15, Council made the following regulations:

**1. Definitions**

- (1) In these regulations,
- (a) “**accident**” means an accident that results in damage to property or injury to or death of a person, brought about by the failure or malfunction of any plant component;
  - (b) “**Act**” means the *Power Engineers Act* R.S.P.E.I. 1988, Cap. P-15;
  - (c) “**Analysis**” means the Analysis of the Power Engineers trade issued by the Department of Human Resources and Skills Development Canada;
  - (d) “**assistant engineer**” means the holder of a valid power engineer license who assists the regular shift engineer and is under the shift engineer’s direction;
  - (e) “**chief engineer**” means a person who holds a power engineer license of the appropriate classification and is designated by the employer as having charge of a plant;
  - (e.1) “**Class T machinery room**” means a Class T machinery room as defined in CSA standard CSA B-52-13 Mechanical Refrigeration Code, adopted under section 3.01 of the *Boilers and Pressure Vessels Act* Regulations (EC234/85);
  - (f) “**continuous supervision**” in relation to a boiler, means that an engineer is present in the boiler room at all times;
  - (f.1) “**direct system**” means a refrigeration system in which an evaporator or condenser is in direct contact with air or other substances being cooled or heated;
  - (g) “**duties**” means the duties of employers and employees;
  - (h) “**examiner**” means a person appointed as an examiner under the Act;
  - (h.1) “**guarded plant**” means a heating or power plant in which each boiler is provided with automatic controls and devices that are effective to ensure that the boiler operates safely in the absence of the personnel responsible for the operation of the plant;
  - (i) “**log book**” means a record book of plant operations and maintenance;
  - (j) “**low-pressure biomass boiler**” means a low-pressure biomass boiler approved and registered by the chief inspector under the *Boilers and Pressure Vessels Act*;

- (j.1) “**low-pressure biomass boiler operator**” means an operator at a plant who has been trained in the operation of a low-pressure biomass boiler through an industry-based training program approved by the board of examiners under subsection 12(1);
- (k) “**maintain**” includes cleaning, lubricating, correcting and adjusting equipment to ensure safe and efficient operation;
- (k.1) “**minimum supervision**”, in respect of a plant, means an inspection of the plant by a certified refrigeration operator or a certified power engineer once in every 24-hour period while the plant is in operation;
- (l) “**overall capacity**” means the total kilowatt rating (therm hour rating) of all the boilers connected to a plant system or all the refrigeration compressors in a refrigeration plant;
- (l.1) “**periodic supervision**”, in respect of a plant, means that a certified refrigeration operator or a certified power engineer is acting as shift engineer and is present on the site of the plant for at least 8 hours a day while the plant is in operation;
- (m) “**plant superintendent**” means a person who is employed to supervise the operation of a plant and who holds a valid license of a class appropriate for the operation of that plant or, in relation to a group of plants, of the class appropriate for the operation of the largest of the plants;
- (n) “**prime mover**” means an initial source of motive power and includes an internal combustion engine, a steam engine, a steam or gas turbine, and an electric motor;
- (o) “**repair**” means the process necessary to restore equipment to required operational or physical condition by adjustment, replacement of parts, and overhaul of specific parts, including disassembly, reassembly, removal, and replacement;
- (p) “**shift engineer**” means the holder of a valid power engineer license, who is under the direction of the chief engineer and who is in immediate charge of a shift;
- (q) “**solid fuel**” means any fuel that is burned on a bed or grate rather than in suspension;
- (r) “**standardized examination**” means an examination accepted by the Committee for the Standardization of Power Engineers Examinations in Canada;
- (s) “**unsupervised plant**” means a heating, power or refrigeration plant that has been registered as a plant under section 2 but that, when maintained and operated in accordance with the manufacturer’s recommendations and the requirements of subsection 24.2, is not required to be staffed or supervised while in operation.

### One plant system

- (2) Where more than one plant system is installed on the same premises, the systems shall for the purposes of these regulations be considered as a one-plant system. *(EC588/12;786/15)*

## PLANT REGISTRATION

### 2. Application and fee

- (1) The owner of a plant before placing it in operation shall complete an application for registration of the plant in a form approved by the board and pay the fee set out in the Schedule.

#### Re- registration

- (2) Where the ownership or the overall capacity of a plant has permanently changed since the registration or the last renewal of registration of the plant, the owner of the plant shall as soon



as practicable complete an application for *re*-registration of the plant in a form approved by the board and pay the fee set out in the Schedule.

#### Exceptions

- (3) The requirements of subsection (2) relating to a change in overall capacity do not apply to a plant
- (a) that is temporarily de-rated in accordance with subsection 24.1(7); or
  - (b) that is returned to ordinary service in accordance with subsection 25.1(6). (*EC588/12; 786/15*)

### 3. Certificate of plant registration

- (1) Upon approval of the application, the board shall issue a certificate of plant registration to the plant owner that shows
- (a) the name of the plant owner and the address of the plant;
  - (b) the plant classification;
  - (c) the kilowatt rating of the plant;
  - (d) the class of license required to be held by the chief engineer;
  - (e) the class of license required to be held by the shift engineer.
  - (f) the class of operator required; and
  - (g) the date on which the certificate of plant registration will expire.

#### Expiry of certificate

- (2) A certificate of registration expires 5 years after the date on which it was issued. (*EC588/12; 786/15*)

### 4. Installed - prior to October 1, 2012

- (1) All plants and boilers installed prior to October 1, 2012, shall be rated by the chief inspector in accordance with this section.

#### Formulas

- (2) The therm hour rating of a plant shall be determined by means of one of the following formulas, as determined by the chief inspector:

- (a) Formula 1:  

$$\frac{X}{100,000}$$
 where X equals the manufacturer's maximum output rating in British Thermal Units per hour;

- (b) Formula 2:  

$$\frac{W \times CV \times E}{100,000}$$
 where
- (i) W equals the maximum weight of fuel burned per hour,
  - (ii) CV equals the calorific value of the fuel in British Thermal Units per pound, and
  - (iii) E equals the maximum efficiency of the boiler.

#### Measurement for Formula 2

- (3) Where the chief inspector determines that Formula 2 shall be used, the owner shall provide and install a flow meter or similar device that is approved by the chief inspector to accurately measure the units of fuel passing through the nozzle during a maximum firing condition.

**Kilowatt rating of plant**

- (4) The kilowatt rating of a plant shall be determined by multiplying the results of the calculation of Formula 1 or Formula 2 by 100,000 and then dividing the result by 3,413.

**Heating plant or power plant, rating**

- (5) The kilowatt rating (therm hour rating) of a heating plant or power plant is the overall capacity, as determined by the chief inspector, of the boilers that are located on the site.  
(EC588/12)

**5. Installed - after Oct. 1, 2012**

- (1) All plants and boilers installed after October 1, 2012, shall be rated by the chief inspector in accordance with this section.

**Definitions**

- (2) In this section, “**Section I**” and “**Section IV**” mean, respectively, the sections of the ASME Boiler and Pressure Vessel Code 2015 dealing with power boilers and heating boilers, adopted under section 3.01 of the *Boilers and Pressure Vessels Regulations*.

**Section I power boilers**

- (3) The chief inspector shall determine the rating by converting
- (a) for Section I power boilers, the manufacturer’s maximum design steaming capacity measured in pounds per hour or kilograms per hour; and
  - (b) for Section I high temperature water boilers, the manufacturer’s maximum designed output in British Thermal Units per hour,

to kilowatts in accordance with the appropriate conversion factor set out in subsection (5).

**Section IV heating boilers**

- (4) The chief inspector shall determine the rating for Section IV heating boilers by converting the manufacturer’s minimum relief valve capacity
- (a) measured in pounds per hour or kilograms per hour for steam boilers; and
  - (b) measured in BTU/hr for hot water boilers,

in accordance with the appropriate conversion factor set out in subsection (5).

**Conversion factors**

- (5) The conversion factors for the purposes of this section are as follows:

1 kilowatt = 1 pound per hour x 0.284

1 kilowatt = 1 kilogram per hour x 0.625

1 kilowatt = 1 British Thermal Units per hour x 0.000293

1 kilowatt = 1 square foot of heating surface

1 kilowatt = 1 square metre of heating surface x 10.0

**Exception**

- (6) Notwithstanding section 4(1), with respect to a Section I power boiler manufactured prior to 1994 where
- (a) the manufacturer’s rating is expressed in square feet of heating surface; and
  - (b) the boiler has not been modified to operate at a lower capacity than originally designed,



the chief inspector may determine the rating of the boiler in accordance with this section.  
(EC588/12; 786/15)

**6. Prime mover, rating**

- (1) For a prime mover in a refrigeration plant, the kilowatt rating is the maximum brake horsepower for its normal continuous operation, as determined by its manufacturer, multiplied by 0.7457.

**Refrigeration plant, rating**

- (2) The kilowatt rating of a refrigeration plant is the total kilowatt ratings of all the prime movers used to drive the refrigeration machinery. (EC588/12; 786/15)

**7. Electric boiler, rating**

For an electric boiler, the kilowatt rating is the kilowatt rating indicated by its manufacturer.  
(EC588/12;786/15)

**8. Boiler, isolated**

- (1) An inspector may require a boiler to be isolated from a plant system if the overall capacity of the plant system, when that boiler is connected to the plant system, would result in a kilowatt rating that would require
- (a) supervision of the plant by a power engineer, where the plant system would not otherwise require such supervision; or
  - (b) supervision of the plant by a power engineer who holds a higher class of license than the plant system would otherwise require.

**Boiler, isolated**

- (2) Where a boiler is required to be isolated from a plant system, a section shall be removed from the boiler outlet piping at or near the boiler.

**Isolated boiler placed into service**

- (3) If a boiler that has been isolated is placed into service, the owner shall ensure that an inspector is notified prior to the boiler being put into service and that a power engineer who holds a license of the required class is in attendance. (EC588/12)

**9. Low-pressure biomass boiler**

- (1) Notwithstanding subsection 8(1), where a building is primarily heated by means of a low-pressure biomass boiler, and the overall capacity of the plant system when the standby boiler is connected to the plant system exceeds the kilowatt rating that would require supervision of the plant by a power engineer, the standby boiler may remain connected to the plant system and be set to operate automatically when the low-pressure biomass boiler shuts down for any reason and the hot water heating system has fallen to a temperature of 75 degrees C, if the controls to operate the standby boiler are equipped with a monitoring and control system approved by the chief inspector to notify trained personnel of the shutdown of the low-pressure biomass boiler and the automatic operation of the standby boiler.

**Standby status**

- (2) The operator shall ensure that

- (a) the low-pressure biomass boiler is returned to operation as the primary heat source for the plant heating system as quickly as is consistent with standard operating procedures for the boiler; and
- (b) the standby boiler is shut down as soon as the low-pressure biomass boiler resumes operating as the primary heat source in accordance with clause (a). (EC588/12)

## 10. Plants classified

- (1) On and after January 1, 2016, the following ratings apply to power plants with the corresponding overall capacities:

First Class	over 30,000 kilowatts
Second Class	above 12,001 kilowatts but not over 30,000 kilowatts
Third Class	above 7,001 kilowatts but not over 12,000 kilowatts
Fourth Class	above 4,001 kilowatts but not over 7,000 kilowatts
Fourth Class (8hrs/day)	above 2,001 kilowatts but not over 4,000 kilowatts
Fourth Class (1 insp./24 hrs)	above 439.5 kilowatts but not over 2,000 kilowatts
Unattended	300 kilowatts but not over 439.5 kilowatts

### *Idem*

- (2) On and after January 1, 2016, the following ratings apply to heating plants with the corresponding overall capacities:

Second Class	over 30,000 kilowatts
Third Class	above 12,001 kilowatts but not over 30,000 kilowatts
Fourth Class	above 7,001 kilowatts but not over 12,000 kilowatts
Fourth Class (8hrs/day)	above 4,001 kilowatts but not over 7,000 kilowatts
Fourth Class (1 insp./24 hrs)	above 1,465 kilowatts but not over 4,000 kilowatts
Unattended	above 601 kilowatts but not over 1,465 kilowatts
Low-pressure Biomass Boiler	low-pressure biomass boiler below 1,464 kilowatts (50 therm hours)

### *Idem*

- (3) On and after January 1, 2016, the following ratings apply to refrigeration plants with the corresponding overall capacities:

Continuous Supervision	
Class A or Second Class	over 895 kilowatts
Class B or Third Class	above 597 kilowatts but not over 895 kilowatts
Class B or Fourth Class	above 74.6 kilowatts but not over 597 kilowatts

Periodic Supervision (indirect systems only)	
Class B or Fourth Class	298 kilowatts but not over 597 kilowatts

Minimum Supervision (indirect systems only)	
Class B or Fourth Class	74.6 kilowatts but not over 298 kilowatts
Unattended	below 74.6 kilowatts
(EC588/12; 786/15)	





**11. Change in plant classification**

Revoked by EC786/15. (EC588/12; 786/15)

**BOARD OF EXAMINERS****12. Board**

(1) The board of examiners shall

- (a) hold meetings at such times as the chairman may determine or at the request of the Minister;
- (b) review applications received for examination for licenses and decide if the applicants have the qualifications required by these regulations;
- (c) notify the applicant of the time and place of the examination;
- (d) select examination papers for all classes of licenses;
- (e) when necessary, assist the examiner in the conducting of examinations;
- (f) assess the marks obtained in an examination;
- (g) determine the appropriate class of license to be issued to a successful candidate;
- (h) review all applications for certificates of plant registration and determine the classification and kilowatt rating of plants;
- (i) review all applications for transfer of licenses issued in any other jurisdiction;
- (j) review all applications for enrollment in full-time and part-time courses for upgrading power engineering qualifications;
- (k) review and approve industry-based training programs for the training of personnel in the operation of low-pressure biomass boilers.

**Suspension or cancellation**

- (2) The board may suspend or cancel a license or a certificate of plant registration where, on reasonable grounds,
- (a) the board believes; or
  - (b) the chief inspector advises the board that the chief inspector believes
- that a contravention of the Act or these regulations has occurred or is occurring.

**Report to Minister**

- (3) The chair of the board shall, following a board meeting, submit to the Minister a report on the subjects dealt with and the decisions made by the board. (EC588/12)

**EXAMINATIONS****13. Examination papers**

- (1) The examination papers for all classes of licenses shall be those that have been accepted by the Committee for the Standardization of Power Engineers Examinations in Canada as meeting national standards, and are in use in the standardization program.

**Approval of board**

- (2) Examination papers for refrigeration licenses shall be approved by the board.

**Candidate requirements**

- (3) A candidate shall, at least 15 days before the date fixed for examination, submit
- (a) an application in a form approved by the Minister;
  - (b) the appropriate fee set out in the Schedule; and
  - (c) copies of testimonials or other evidence respecting the candidate's experience.

**Experience qualification**

- (4) The qualifications of a candidate relating to his experience in the installation, operation, and repairing of boilers, pressure vessels, pressure piping and related equipment, may be proved by testimonials signed by the employer or chief engineer of the plant in which he was employed or by statutory declarations made by responsible persons who have personal knowledge of the facts that are to be established.

**Educational qualification**

- (5) Educational qualifications shall be vouched for by documents issued by the institution in which the candidate received his training. *(EC588/12)*

**ISSUE OF LICENSES TO PERSONS QUALIFIED IN ANOTHER PROVINCE****14. License to person qualified in another province**

- (1) A person who has obtained a power engineer's license by successfully passing the standardized examination in any other Canadian province shall be issued a license under these regulations if
- (a) the person
    - (i) completes and files with the board an application for transfer in a form approved by the board, and
    - (ii) pays the appropriate fee set out in the Schedule; and
  - (b) the board obtains confirmation of the issue of the person's license from the issuing authority.

**Conditions**

- (2) A person who holds a license issued by the appropriate authority in any jurisdiction which did not use a standardized examination to determine the person's competency may be granted a license under these regulations if
- (a) the person
    - (i) completes and files with the board an application for transfer in a form approved by the board, and
    - (ii) pays the appropriate fee set out in the Schedule; and
  - (b) the board
    - (i) obtains confirmation of the issue of the person's license from the issuing authority, and
    - (ii) determines that the license held by the person is equivalent to a license issued under these regulations.

**Temporary license**

- (3) The chief inspector may issue a temporary license to a person who meets the requirements of clause (1)(a) for a term to be determined by the chief inspector. *(EC588/12)*



## POWER OF BOARD TO ISSUE DISPENSATION

### 15. Chief engineer

- (1) If a person is employed as chief engineer in a plant where during the course of the person's employment as chief engineer the plant has expanded, with the result that the plant's rating now requires the chief engineer to hold a higher class of license, the board may, on the recommendation of the chief inspector, grant the person a dispensation from the requirement to hold that higher class of license and permit the person to continue to act as chief engineer in that plant.

### Shift engineer

- (2) If a person
- (a) has been employed as a shift engineer in a plant for the last three years;
  - (b) holds a class of license one class lower than the class required for the operation of the plant; and
  - (c) is actively engaged, in accordance with the direction of the board, in obtaining the class of license required for the operation of the plant,

the board may, on the request of the employer and the recommendation of the chief inspector, permit the person to act as chief engineer while holding a class of license one class lower than required for the operation of the plant.

### Dispensation for certain positions

- (3) Notwithstanding subsection (1), the chief engineer in a plant may apply to the board for a dispensation from the requirements of clauses 19(3)(b) and (c) and (4)(b) and (c) with respect to the class of license required for certain shift engineer or assistant engineer positions in that plant.

### Application for dispensation

- (4) An application under subsection (3) shall be in writing and shall
- (a) state the name, certification level and experience of the engineer in respect of whom the dispensation is sought; and
  - (b) include documents verifying that the engineer is engaged or enrolled in an upgrading course in power engineering to attain the required level of certification.

### Grant subject to conditions

- (5) The board may grant a temporary dispensation reducing the class of license required for the position by one level of class and may impose such conditions as it considers appropriate.  
(EC588/12)

## LICENSES

### 16. Classes of licenses

- (1) Power engineer licenses shall be classified as follows:
- Power Engineer Fourth Class
  - Power Engineer Third Class
  - Power Engineer Second Class
  - Power Engineer First Class

Power Engineer Refrigeration B  
 Power Engineer Refrigeration A  
 Low-pressure Biomass Boiler Operator

**Form**

- (2) Licenses shall be issued in a form approved by the board.

**Expiry**

- (3) Licenses shall expire on the date indicated in the license and may be renewed on payment of the renewal fee set out in the Schedule.

**Composition**

- (4) A license shall contain the following information:
- (a) classification;
  - (b) whether the license is standardized or provincial;
  - (c) the positions that the holder of the license may be employed to fill;
  - (d) the date the license was first issued and the date of expiry. *(EC588/12; 786/15)*

## QUALIFICATIONS FOR CANDIDACY

**17. Fourth class**

- (1) Any person may be a candidate for a fourth-class license who
- (a) has
    - (i) not less than 12 months' experience in installation, operation and repair of boilers, pressure vessels, pressure piping and related equipment, and
    - (ii) completed an upgrading course in power engineering fourth class as required by the board; and
  - (b) has completed, at any recognized trade school or university, a full-time course in power engineering fourth class.

**Third class**

- (2) Any person may be a candidate for a third-class license who is the holder of a valid fourth-class license and, since the issue of that license,
- (a) has completed an upgrading course in power engineering third class as required by the board; and
  - (b) has
    - (i) for a period of one year,
      - (A) operated as chief engineer or shift engineer in a fourth-class heating plant or power plant that requires a minimum of 8 hours' supervision in a 24-hour period,
      - (B) operated as assistant shift engineer in a fourth-class heating plant or power plant that requires a minimum of 8 hours' supervision in a 24-hour period, or
      - (C) operated two or more fourth-class plants that required one visit every 24 hours for one year; or
    - (ii) for a period of three years,



- (A) operated one fourth-class plant that required one visit every 24 hours,
- (B) operated a refrigeration plant, and has 520 hours' experience operating a heating or power plant as a fourth-class engineer,
- (C) operated a 50 Mw gas turbine plant, and has 520 hours' experience as a fourth-class engineer in a heating or power plant, or
- (D) worked as a boiler and pressure vessel inspector, and has 520 hours' experience operating a heating or power plant as a fourth-class engineer.

**Second class**

- (3) Any person may be a candidate for a second-class license who is the holder of a valid third-class license and has, since the issue of that license, not less than 24 months' experience in aggregate in the following capacities or any combination of them:
  - (a) chief engineer or shift engineer in a registered power plant having a rating greater than 4,000 kilowatts;
  - (b) shift engineer or assistant engineer in a registered power plant having a rating greater than 7,000 kilowatts;
  - (c) has for a period of not less than 24 months operated as an assistant shift engineer in a registered power plant having a rating greater than 30,000 kilowatts.

**First class**

- (4) Any person may be a candidate for a first-class license who is the holder of a valid second-class license and has since the issue of that license not less than 24 months' experience in aggregate in the following capacities or any combination of them:
  - (a) chief engineer or shift engineer in a registered power plant having a rating greater than 12,000 kilowatts;
  - (b) shift engineer or assistant engineer in a registered power plant having a rating greater than 30,000 kilowatts;
  - (c) has for a period of 12 months been employed as plant supervisor in a registered power plant having a rating greater than 12,000 kilowatts.

**Refrigeration class B**

- (5) Any person may be a candidate for a refrigeration class B license who has
  - (a) not less than 12 months' experience (at least 3 of which are in operation) in the installation, operation and repair of industrial refrigeration systems; or
  - (b) not less than 6 months' experience in the operation of an industrial refrigeration plant having a kilowatt rating greater than 74.5 kilowatts.

**Refrigeration class A**

- (6) Any person may be a candidate for a refrigeration class A license who is the holder of a valid class B license and has, since the issue of that license, not less than 12 months' experience in the following capacities or any combination of them:
  - (a) chief engineer or shift engineer in a registered refrigeration plant having a rating greater than 74.5 kilowatts;
  - (b) shift engineer or assistant engineer in a registered refrigeration plant having a rating greater than 895 kilowatts.

**Low-pressure biomass**

- (6.1) Any person may be a candidate for a low-pressure biomass operator license who has successfully completed an industry-based training program approved by the board of examiners under subsection 12(1) for the operation and maintenance of low-pressure biomass boilers.

**Site specific**

- (6.2) A low-pressure biomass operator license is specific to the low-pressure biomass boiler to be operated by the operator to whom the license is issued.

**Unsuccessful candidate**

- (7) If a candidate fails an examination, 90 days shall elapse before the candidate is eligible to rewrite that examination.

**Pass marks**

- (8) Pass marks for all examinations shall be 65%.

**Exception**

- (9) If a candidate achieves a mark in an examination that is greater than 49% but less than 65%, the candidate may rewrite the examination on a date determined by the chief inspector that is earlier than the date required under subsection (7). *(EC588/12; 786/15)*

**RECOGNITION OF EQUIVALENT TRAINING AND EXPERIENCE****18. Equivalent training**

A person having special engineering training in a recognized university or having completed a course in power engineering satisfactory to the board, or having experience in the construction or repair of boilers, may be granted such time in lieu of practical operating experience as the board deems fair and reasonable. *(EC588/12)*

**CAPACITIES IN WHICH LICENSED ENGINEERS MAY BE EMPLOYED****19. First class employment capacity**

- (1) The holder of a valid first-class license may be employed as chief engineer or shift engineer in any registered plant.

**Second class**

- (2) The holder of a valid second-class license may be employed as
- (a) chief engineer of
    - (i) any registered heating plant,
    - (ii) any registered power plant not exceeding 30,000 kilowatts,
    - (iii) any registered refrigeration plant; or
  - (b) shift engineer of
    - (i) any registered heating plant,
    - (ii) any registered power plant,
    - (iii) any registered refrigeration plant.



**Third class**

- (3) The holder of a valid third-class license may be employed as
- (a) chief engineer of
    - (i) any registered heating plant,
    - (ii) a registered power plant not exceeding 12,000 kilowatts,
    - (iii) any registered refrigeration plant not exceeding 597 kilowatts;
  - (b) shift engineer of
    - (i) any registered heating plant,
    - (ii) a registered power plant not exceeding 30,000 kilowatts,
    - (iii) any registered refrigeration plant; or
  - (c) assistant engineer in any registered plant.

**Fourth class**

- (4) The holder of a valid fourth-class license may be employed as
- (a) chief engineer of
    - (i) a registered heating plant not exceeding 12,000 kilowatts,
    - (ii) a registered power plant not exceeding 7,000 kilowatts,
    - (iii) a registered refrigeration plant not exceeding 597 kilowatts;
  - (b) shift engineer of
    - (i) any registered heating plant,
    - (ii) a registered power plant not exceeding 12,000 kilowatts,
    - (iii) any registered refrigeration plant; or
  - (c) assistant engineer in a registered power plant not exceeding 30,000 kilowatts.

**Refrigeration class A**

- (5) The holder of a valid refrigeration class A license may be employed as chief engineer or shift engineer of any registered refrigeration plant.

**Refrigeration class B**

- (6) The holder of a valid refrigeration class B license may be employed as
- (a) chief engineer of a registered refrigeration plant not exceeding 597 kilowatts;
  - (b) shift engineer of any registered refrigeration plant. (EC588/12; 786/15)

**DUTIES OF EMPLOYERS****20. Chief engineer designated**

- (1) In a registered plant where two or more power engineers are employed to operate the plant, the employer shall designate one of them as chief engineer of the plant.

**Log book**

- (2) The employer shall provide a log book for use in the plant in a form approved by the chief inspector.

**Idem**

- (3) The employer or the employer's designate shall note the entries made in the log book for each twenty-four-hour period and shall sign or initial the log entries for each such period.

**Tools and equipment**

- (4) The employer shall supply all the necessary tools, equipment, parts and supplies to enable power engineers to operate, maintain and repair all plant components as required by the employer.

**Storage area**

- (5) The employer shall provide a suitable storage area or stock room for the retention of the tools, equipment, parts and supplies mentioned in subsection (4). (EC588/12)

**DUTIES OF CHIEF ENGINEER****21. Chief engineer**

- (1) The chief engineer shall be held accountable to the employer for the proper care and safe operation of the boilers, pressure vessels and related equipment under the chief engineer's charge.

**Casualties**

- (2) The chief engineer shall report all accidents and casualties.

**Defects**

- (3) The chief engineer shall report to the employer and to an inspector any defects that may have been discovered by or reported to the chief engineer which could endanger the safety of the boilers, pressure vessels or related equipment.

**Duties of chief engineer**

- (4) The chief engineer shall
- (a) take all measures necessary to maintain the plant in a safe operating condition and notify the employer of the measures taken;
  - (b) direct and supervise shift supervisors or shift engineers, as the case may be, in their work and duties to ensure the safe operation of the plant;
  - (c) be responsible for the safekeeping of all tools, equipment and supplies provided by the employer for the operation, maintenance and repair of the plant; and
  - (d) ensure that the engineer in charge of each shift records in the log book
    - (i) the date, number and designation of the shift and the engineer's name,
    - (ii) the completion of the applicable tasks and subtasks set out in the Analysis,
    - (iii) any change from normal operating procedures and the time at which the change occurred,
    - (iv) any special instructions which may have been given to effect the change referred to in subclause (iii), and the name of the person who gave the instructions,
    - (v) any unusual or abnormal conditions observed in the plant and the time of observation,
    - (vi) repairs to any part of the plant and the time the repairs were begun and, if completed on the engineer's shift, the time they were completed, and





- (vii) the times at which the engineer's shift began and ended. (EC588/12)

### DUTIES OF SHIFT ENGINEER

#### 22. Shift engineer duties

The shift engineer shall

- (a) under the direction of the chief engineer be responsible for
  - (i) safe operation of the plant, and
  - (ii) supervision of other employees on the shift who are under the shift engineer's control;
- (b) maintain close watch on the condition and repair of all equipment in the plant and report to the chief engineer any condition that may impair the safety of the plant;
- (c) take all measures that are necessary to prevent any immediate danger;
- (d) ensure that an accurate record of matters that may affect the safety of the plant is made and maintained at all times during the shift period; and
- (e) ensure that all maintenance and operational work performed on the plant is in accordance with safe operating procedures and accepted engineering practices. (EC588/12)

### DUTIES OF ASSISTANT SHIFT ENGINEER

#### 23. Assistant shift engineer

The assistant shift engineer shall be under the direction and supervision of the chief engineer or the shift engineer, as the case may be, and be responsible for

- (a) the safe operation of a particular section of the plant;
- (b) ensuring that an accurate record of matters that may affect the safety of that section of the plant is made and maintained at all times during the shift period; and
- (c) the performance of such maintenance and operational work on the plant as may be directed by the chief engineer or the shift engineer. (EC588/12)

### OPERATIONAL REQUIREMENTS

#### 24. Supervision of boiler

- (1) Subject to subsection (3), in any plant when the heat source of a boiler other than a low-pressure biomass boiler of a capacity less than 1464 kw is created by the burning of a solid fuel, the boiler shall be under continuous supervision.

##### Low-pressure biomass boiler

- (2) A low-pressure biomass boiler referred to in subsection (1) shall be operated and maintained by only trained personnel.

##### Exception, automatic shut out device

- (3) Subsection (1) does not apply when the fuel is burned in a fuel cell exterior to the boiler and automatic controls will reduce the combustion air to zero in the event of an abnormal condition.

**Protective devices**

- (4) A boiler that is not required to be under continuous supervision pursuant to subsection (1) shall be provided with protective devices satisfactory to the chief inspector which may include
- (a) a high-pressure limiting device on a steam boiler or a high-temperature limiting device on a hot-water boiler, as the case may be;
  - (b) an independent low water cut out control which will shut off the fuel to the burner in the event of a low water condition;
  - (c) a prepurge and flame failure device that will automatically prevent the supply of fuel to the boiler when an abnormal condition occurs during the operation of the boiler;
  - (d) a high-water level limiting device that controls the supply of feedwater to the boiler; and
  - (e) an alarm system that is audible in any part of the premises on which the plant is situated and in which persons may be present or an electronic pager system that is approved by the chief inspector.

**Idem**

- (5) The protective devices prescribed in subsection (4) must
- (a) be manually reset after shut down; and
  - (b) maintain the warning until the abnormal condition has been corrected.

**Unattended premises**

- (6) A power plant or heating plant that is not a guarded plant but has a rating of less than 4,000 kilowatts may be left unsupervised and in operation for up to 12 hours if the premises are unoccupied and the plant is equipped with protective devices in accordance with this section.

**Idem**

- (7) Revoked by EC786/15.

**Refrigeration plant – ammonia**

- (8) Revoked by EC786/15. (EC588/12; 786/15)

**24.1 Unattended premises**

- (1) A refrigeration plant having a rating less than 597 kilowatts may be left unsupervised and in operation provided the premises are unoccupied and the plant is equipped with protective devices satisfactory to the chief inspector.

**Refrigeration systems**

- (2) All refrigeration systems using Group 1(A1) refrigerants as defined in CSA Standard CSA B-52-13, as adopted in regulations under the *Boilers and Pressure Vessels Act* R.S.P.E.I. 1988, Cap. B-5, are exempt from supervision requirements under these regulations.

**Other refrigeration systems**

- (3) Subject to subsection (4), a refrigeration system other than one referred to in subsection (2) shall be supervised at all times in accordance with these regulations.

**Exception**

- (4) A refrigeration plant that requires periodic or minimum supervision may be left unsupervised and in operation if



- (a) the plant is enclosed in a Class T machinery room; and
- (b) the plant is not a direct system.

**Prohibition**

- (5) Except in accordance with subsections (1) and (4), no operator shall leave a refrigeration plant with a rating higher than 74.6 kilowatts unsupervised.

**Required supervision**

- (6) Where the overall capacity of all refrigeration compressors in a plant using a refrigerant other than a Group 1 (A1) refrigerant as defined in CSA B-52-13 is greater than 74.6 kilowatts, the refrigeration plant shall be supervised by a power engineer or a refrigeration operator who holds the appropriate license for that overall capacity.

**Temporary de-rating of plant**

- (7) Notwithstanding subsection 2(2), the owner of a refrigeration plant may temporarily de-rate the plant's registration without applying for *re*-registration by submitting a plan for the temporary operation of the plant to the chief inspector and obtaining the chief inspector's approval for the de-rating of the registration. (EC786/15)

**24.2 Maintenance program required**

- (1) The owner of an unsupervised plant
  - (a) shall operate and maintain the plant in accordance with the manufacturer's recommendations; and
  - (b) shall establish a maintenance program for the plant that is
    - (i) designed to ensure the safe operation of boilers or compressors and their associated equipment while in unsupervised operation, and
    - (ii) acceptable to the chief inspector.

**Fee**

- (2) The fee for monitoring the maintenance program for an unsupervised plant is that set out in section 6 of the Table of Fees in the Schedule to these regulations. (EC786/15)

**25. Operation requirements**

In addition to the requirements of subsection 24(4), where the boiler is a low-pressure biomass boiler as referred to in subsection 24(1),

- (a) if the overall capacity of the low-pressure biomass boiler or boilers is greater than 500 kilowatts, the boiler or boilers and associated fuel handling equipment shall be housed in a free-standing building that is separated by a minimum of 1 metre from the building being heated;
- (b) the building or boiler room housing the low-pressure biomass boiler shall be equipped with an audible carbon monoxide alarm system;
- (c) the low-pressure biomass boiler shall be designed to shut down the fuel supply to the boiler when air flow to the boiler is inadequate for safe combustion;
- (d) the low-pressure biomass boiler shall be equipped with control systems satisfactory to the chief inspector designed to ensure that the boiler safety relief valve does not allow the pressure to rise more than 10% above the maximum operating pressure, as verified periodically by an inspector, due to heat retained in the combustion chamber when the boiler shuts down for any reason;

- (e) the fuel supply system for the low-pressure biomass boiler shall be designed to ensure that a source of ignition cannot travel back from the combustion chamber along the fuel supply system to the fuel storage facility;
- (f) the fuel storage facility, when it is located within the building being heated, shall be equipped with a heat detection system, acceptable to the chief inspector, that admits quenching water when excessive heat is detected;
- (g) where the fuel storage facility is located outside of the building being heated, the wall located between the fuel storage facility and the building being heated shall be of non-combustible construction; and
- (h) the low-pressure biomass boiler room and any free-standing building housing a low-pressure biomass boiler and associated fuel handling equipment shall be constructed so that dust cannot readily accumulate. (EC588/12; 786/15)

## GUARDED HEATING AND POWER PLANTS

### 25.1 Guarded plants

- (1) The following sizes and classes of heating and power plants may be equipped to operate as guarded plants:
  - (a) fourth-class heating plants with an overall capacity of 1,465 to 7,000 kilowatts;
  - (b) fourth-class power plants with an overall capacity of 439.5 to 4,000 kilowatts.

#### Annual inspection

- (2) A guarded plant shall be inspected annually by an inspector for compliance with these regulations, the Act, the *Boilers and Pressure Vessels Act* and the regulations made under that Act and any applicable standards adopted by either of them.

#### Attendance by power engineer

- (3) The power engineer in charge of a guarded plant shall be in attendance during the annual inspection of the guarded plant.

#### Notification

- (4) The power engineer in charge of a guarded plant shall notify the chief inspector when the power engineer is no longer employed as the engineer in charge of the guarded plant.

#### Manual reset devices

- (5) Each individual safety device in a guarded plant, as determined by the inspector, shall be a manual reset type device.

#### Return to ordinary status

- (6) Any boiler that is isolated in order to qualify for guarded plant status may be returned to ordinary service by the power engineer in charge on notice provided to an inspector by telephone or electronic means.

#### Supervision

- (7) A plant that has been returned to ordinary service no longer qualifies for guarded plant status and the plant shall be supervised in accordance with the requirements for its rating.

#### Power engineer at more than one plant

- (8) A power engineer



- (a) may serve as the power engineer in charge of more than one fourth-class guarded plant at a time that requires one visit in each twenty-four hour period; and
- (b) shall, in respect of the supervision of each guarded plant referred to in clause (a), comply with the applicable provisions of the Act and these regulations.

**Posting information**

- (9) The owner of a guarded plant shall ensure that the following are prominently displayed in the boiler room:
  - (a) a copy of the license of the power engineer in charge of the plant;
  - (b) the contact information of the power engineer in charge of the plant.

**Use of reset switch**

- (10) The owner of a guarded plant shall ensure that the guarded plant control system is designed and installed in such a way that the boiler cannot be restarted after a shutdown unless the power engineer in charge resets the guarded plant control panel by the use of a keyed reset switch.

**Key in power engineer's possession**

- (11) The key for the reset switch shall be in the possession of the power engineer in charge at all times.

**Log entries**

- (12) The power engineer in charge of a guarded plant shall make daily entries in the log book that record the following:
  - (a) the date, the time of day, power engineer license number, and signature of the power engineer in charge;
  - (b) the specific safety controls that the power engineer verified as functional during the mandatory daily check, including
    - (i) the high pressure or high temperature limiting device,
    - (ii) the low water fuel cut-out,
    - (iii) the burner flame failure device,
    - (iv) the alarm notification system, and
    - (v) any other safety device as determined by the inspector;
  - (c) any observed anomalies in the operation of the plant.

**Idem**

- (13) The power engineer in charge of a guarded plant shall record in the log book the results of the testing of the high water limiting device on the request of an inspector during an inspection or on a periodic schedule agreed to between the power engineer in charge and the inspector.  
(EC786/15)

**OFFENCES CONCERNING LOG BOOK****26. Offences concerning log book**

- (1) No person shall deface, damage or destroy a log book.

**Removal of log book**

- (2) No person shall remove the log book from a plant without the permission of the employer.

**Access to log book**

- (3) The employer shall ensure the log book is kept accessible in the plant for at least one year after the last entry therein and shall produce the log book upon the request of an inspector.  
(EC588/12)

**27. Revocation**

The *Power Engineers Act Regulations (EC22/80)* are revoked. (EC588/12)



**SCHEDULE****TABLE OF FEES**

1.	On application for examination for a power engineer's license:	
	First Class (8 exams x \$40) .....	\$320
	Second Class (6 exams x \$40) .....	240
	Third Class (4 exams x \$40) .....	160
	Fourth Class (2 exams x \$40).....	80
	Refrigeration A (2 exams x \$40) .....	80
	Refrigeration B (1 exam x \$40) .....	40
2.	To rewrite any examination: .....	40
3.	On application for transfer of a license, for each 12-month period issued in another province .....	\$40
4.	On application for renewal of a license, for each 12-month period: .....	\$40
5.	On application for registration or renewal of registration of a plant:	
	First Class .....	\$500
	Second Class.....	400
	Third Class.....	300
	Fourth Class.....	200
	Refrigeration A.....	300
	Refrigeration B.....	200
	Low-pressure Biomass Boiler .....	200
	Unsupervised .....	100
6.	Fee for monitoring maintenance program for unsupervised plant: .....	\$100

(EC588/12; 786/15)