

Energy Efficiency Act

ENERGY EFFICIENCY STANDARDS REGULATION

Note: Check the Cumulative Regulation Bulletin 2015 and 2016
for any non-consolidated amendments to this regulation that may be in effect.

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Part 1 — General Provisions

Definitions

1 In this regulation:

"Act" means the Energy Efficiency Act;

"applicable efficiency standard", in relation to an energy device, means each efficiency standard that applies to the energy device under section 7 [prescribed efficiency standards] or, if applicable, section 8 [early adoption of future efficiency standards];

"ASTM" means the American Society for Testing and Materials International;

"ASTM C518-04" means ASTM standard ASTM C518-04 entitled Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus;

"ASTM C518-10" means ASTM standard ASTM C518-10 entitled Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus;

"BTU/h" means British Thermal Units per hour;

"CSA" means the Canadian Standards Association;

"designated tester", in relation to an energy device, means a person, agency or organization that, under section 4 [designated testers], is designated and authorized to verify the energy device;

"efficiency standards table" means a table referred to in section 2 [prescribed energy devices];

"federal Act" means the Energy Efficiency Act (Canada);

"federal minister" has the same meaning as "Minister" in the federal Act;

"federal regulation" means the Energy Efficiency Regulations made under the federal Act;

"label" means a printed decal, stamped plate or other permanent marking;

"manufactured fenestration product" means an energy device referred to in column 1 of the efficiency standards table in section 27 [efficiency standards for manufactured fenestration products];

"NFRC" means the National Fenestration Rating Council;

"RSI" means an R-value expressed in SI units of metre squared Kelvin per watt, or m^2K/W ;

"verify" means applying a testing procedure to determine whether an energy device meets an applicable efficiency standard.

Prescribed energy devices

2 For the purpose of the definition of "energy device" in section 1 of the Act, the products referred to in column 1 of the following tables are prescribed:

- (a) the table in section 15 [efficiency standards for consumer electronic products];
- (b) the table in section 27 [efficiency standards for manufactured fenestration products];
- (c) the table in section 30 [efficiency standards for household appliances];
- (d) the table in section 34 [efficiency standards for heating, ventilation and air conditioning products];
- (e) the table in section 38 [efficiency standards for water heaters];
- (f) the table in section 41 [efficiency standards for lighting products];
- (g) the table in section 47 [efficiency standards for general purpose electric motors].

Prescribed date

3 For the purpose of section 2 (3) (a) [exemption from section 2 (1) of Act] of the Act, the prescribed date for an energy device referred to in column 1 in an item of an efficiency standards table is the date set out in column 2 opposite the energy device.

Designated testers

4 (1) In this section, "certification program" means a program of verification using standard testing procedures.

(2) For the purposes of verifying an energy device, the following persons, agencies or organizations are designated, and authorized as indicated, to make the verification:

- (a) inspectors designated under section 3 (1) [inspection and testing] of the Act are authorized to verify any energy device;
- (b) persons or organizations accredited by the Standards Council of Canada as certification bodies are authorized to verify any energy device to which the certification relates;
- (c) agencies accredited by the NFRC as independent certification and inspection agencies are authorized to verify any manufactured fenestration product;
- (d) professional engineers, and architects authorized to practise in British Columbia, are authorized to verify the following:
 - (i) door slabs referred to in column 1 in item 1 of the efficiency standards table in section 27 [efficiency standards for manufactured fenestration products];
 - (ii) glazing products referred to in column 1 in item 2 of the efficiency standards table in section 27;
 - (iii) manufactured fenestration products, other than door slabs and glazing products referred to in subparagraphs (i) and (ii) of this paragraph, that
 - (A) are designed for a specific building, or
 - (B) fall outside the scope of a certification program.

(3) Professional engineers and architects referred to in subsection (2) (d) must

- (a) verify manufactured fenestration products referred to in subsection (2) (d) (iii) (A) of this section in the manner described in section 25 [efficiency standard exemption for manufactured fenestration products designed for specific buildings], and

(b) verify manufactured fenestration products referred to in subsection (2) (d) (iii) (B) of this section in the manner described in section 26 [calculation of U-value for atypical manufactured fenestration products].

Labels

5 (1) For the purpose of section 2 (1) (b) [prescribed label] of the Act, every energy device, other than an exempted energy device referred to in subsection (2) of this section, must have affixed to it a label that indicates, by way of a registered trademark, wordmark or symbol of a designated tester, that the designated tester has

(a) verified the energy device, and

(b) determined that the energy device meets the applicable efficiency standards.

(2) For the purposes of subsection (1), an exempted energy device is an energy device in respect of which one of the following sections of this regulation applies:

(a) section 13 [label exemption for compact audio products, televisions and video products compliant with federal Act];

(b) section 14 [label exemption for consumer battery charging systems with California label];

(c) section 24 [label exemption for manufactured fenestration products designed for specific buildings];

(d) section 29 [label exemption for clothes washers, dishwashers, refrigerators, combination refrigerator-freezers and freezers compliant with federal Act];

(e) section 32 [label exemption for gas furnaces compliant with federal Act];

(f) section 36 [label exemption for water heaters compliant with federal Act].

Placement of label

6 (1) A person placing a label on an energy device must affix the label so that the label is easily and readily seen without the need to remove any covering.

(2) The manufacturer of an energy device made in British Columbia, and the importer of an energy device not made in British Columbia, must affix the following to the shipping carton containing the energy device:

(a) the manufacturer's name or identification;

(b) the date of manufacture or a date code.

Prescribed efficiency standards

7 (1) For an energy device referred to in column 1 in an item of an efficiency standards table,

(a) the efficiency standards for the energy device are the applicable standards set out or referred to in column 4 opposite that energy device,

(b) the testing procedures that must be used to determine whether the energy device meets an efficiency standard referred to in paragraph (a) are the applicable testing procedures set out or referred to in column 5 opposite the efficiency standard, and

(c) subject to section 8 [early adoption of future efficiency standards], an efficiency standard referred to in paragraph (a) of this subsection and the corresponding testing procedure referred to in paragraph (b) of this subsection apply to the energy device if the energy device is manufactured during the period set out in column 3 opposite that energy device.

(2) Despite subsection (1),

(a) the efficiency standard for a manufactured fenestration product referred to in section 25 [efficiency standard exemption for manufactured fenestration products designed for specific buildings] may be met by the method set out in that section,

(b) the efficiency standard for a manufactured fenestration product referred to in section 26 [calculation of U-value for atypical manufactured fenestration products] may be met by the method set out in that section, and

(c) in addition to meeting the efficiency standards referred to in subsection (1) (a) of this section, a fluorescent lamp ballast to which section 40 [additional efficiency standard for fluorescent lamp ballasts] applies must meet the efficiency standard referred to in subsection (2) of that section.

Early adoption of future efficiency standards

8 For the purposes of section 2 [efficiency standards of energy devices] of the Act, if 2 or more items in an efficiency standards table refer to the same energy devices in column 1 and

(a) one of the items in the efficiency standards table sets out an efficiency standard in column 4 and a corresponding testing procedure in column 5 that apply to the energy devices if they are manufactured during the period set out in column 3 opposite the energy devices, and

(b) one or more of the other items in that efficiency standards table set out an efficiency standard in column 4 and a corresponding testing procedure in column 5 that would apply to the energy devices if they were manufactured after the period referred to in paragraph (a) of this section, the efficiency standard for the energy devices referred to in paragraph (a) of this section may be met by meeting an efficiency standard referred to in paragraph (b) of this section.

Verification report

9 (1) In this section, "verification report" means a report issued by a designated tester indicating that the designated tester has

(a) verified an energy device, and

(b) determined that the energy device meets the applicable efficiency standards.

(2) A verification report is evidence that an energy device meets the applicable efficiency standards.

Exemption from Act and regulation

10 The Act and this regulation do not apply to

(a) a person who manufactures an energy device in British Columbia, or

(b) a person who manufactures any thing in British Columbia that incorporates into it an energy device, if that energy device or thing is manufactured for export from British Columbia.

Part 2 — Consumer Electronic Products

Definitions

11 In this Part:

"CAN/CSA C381.2-14" means CSA standard CAN/CSA C381.2-14 entitled Test method for determining the energy efficiency of battery-charging systems;

"CAN/CSA C62301-07" means CSA standard CAN/CSA C62301-07 entitled Household Electrical Appliances — Measurement of Standby Power;

"compact audio product" has the same meaning as in the federal regulation;

"consumer battery charging system" means a battery charging system, including a battery charging system built into another product, that

(a) has an input capacity of less than 2 kW, and

(b) is distributed primarily for personal use by individuals,

but does not include a battery charging system excluded under section 12;

"E24", in relation to a consumer battery charging system, means the energy consumption of the consumer battery charging system, in watt-hours, over a 24 hour period when the consumer battery charging system is charging or maintaining the batteries;

"Eb", in relation to a consumer battery charging system, means the total capacity, in watt-hours, of all the batteries in the system;

"N", in relation to a consumer battery charging system, means the number of charger ports;

"PM", in relation to a consumer battery charging system, means power usage in maintenance mode, which is the state the consumer battery charging system is in when

(a) the consumer battery charging system is connected to the main electricity supply, and

(b) the battery is fully charged, but is still connected to the consumer battery charging system;

"PO", in relation to a consumer battery charging system, means power usage in no-battery mode, which is the state the consumer battery charging system is in when

- (a) the consumer battery charging system is connected to the main electricity supply,
- (b) the consumer battery charging system is not connected to the battery, and
- (c) each manual on-off switch, if any, is turned on;

"video product" has the same meaning as in the federal regulation.

Excluded consumer battery charging systems

12 For the purpose of the definition of "consumer battery charging system" in section 11, the following are excluded:

- (a) an inductive battery charging system that uses
 - (i) less than one watt in maintenance mode,
 - (ii) less than one watt in no-battery mode, and
 - (iii) an average of one watt or less over the duration of the charge and maintenance mode test as determined under section 5.8 of CAN/CSA C381.2-14;
- (b) a battery charging system incorporated into an uninterruptible power supply system that uses no more than $0.8 + 0.0021 \times E_b$ watts in maintenance mode;
- (c) a battery analyzer or battery charging system for use in medical devices and exit signs;
- (d) a battery charging system built into another product, if the other product is an energy device;
- (e) a battery charging system that relies on solar energy or winding-up as its sole source of power.

Label exemption for compact audio products, televisions and video products compliant with federal Act

13 The label prescribed under section 5 (1) of this regulation is not required for an energy device that is a compact audio product, television or video product if, in respect of the energy device,

- (a) the information required under section 5 (1) [information to be provided by dealers] of the federal Act has been provided to the federal minister, or
- (b) the manufacturer of the energy device provides a copy of the information required under section 5 (1) of the federal Act to an inspector designated under section 3 [inspection and testing] of the Act.

Label exemption for consumer battery charging systems with California label

14 The label prescribed under section 5 (1) is not required for a consumer battery charging system that has the label required for consumer battery charging systems under the Appliance Efficiency Regulations, Title 20, California Code of Regulations, Division 2, Chapter 4, Article 4, sections 1601 to 1608, as those provisions read on September 14, 2012.

Efficiency standards for consumer electronic products

15 The following efficiency standards table sets out the efficiency standards for energy devices that are consumer electronic products:

Item Column 1

Energy Device

Column 2

Prescribed Date

(s. 2 (3) (a) of Act) Column 3

Manufacturing

Period Column 4

Efficiency

Standard Column 5

Testing

Procedure

1 Compact audio products Jan 1, 2013 Products manufactured on or after Jan 2, 2013

Must be capable of entering each of the following modes that are applicable to the individual product:

- (a) a standby mode with a power consumption of ≤ 1 watt, with information or status display active;

- (b) a standby mode with a power consumption of ≤ 0.5 watts, with information or status display inactive;
- (c) a standby mode with a power consumption of ≤ 0.5 watts, without information or status display;
- (d) an off mode with a power consumption of ≤ 0.5 watts. CAN/CSA C62301-07 tested at 115 volts, regardless of the nominal voltage of the energy device

2 Televisions Jan 1, 2013 Products manufactured on or after Jan 2, 2013 Must be capable of entering each of the following modes that are applicable to the individual product:

- (a) a standby mode with a power consumption of ≤ 1 watt, with information or status display active;
- (b) a standby mode with a power consumption of ≤ 0.5 watts, with information or status display inactive;
- (c) a standby mode with a power consumption of ≤ 0.5 watts, without information or status display;
- (d) an off mode with a power consumption of ≤ 0.5 watts. CAN/CSA C62301-07, tested at 115 volts, regardless of the nominal voltage of the energy device

3 Video products Jan 1, 2013 Products manufactured on or after Jan 2, 2013 Must be capable of entering each of the following modes that are applicable to the individual product:

- (a) a standby mode with a power consumption of ≤ 1 watt, with information or status display active;
- (b) a standby mode with a power consumption of ≤ 0.5 watts, with information or status display inactive;
- (c) a standby mode with a power consumption of ≤ 0.5 watts, without information or status display;
- (d) an off mode with a power consumption of ≤ 0.5 watts. CAN/CSA C62301-07, tested at 115 volts, regardless of the nominal voltage of the energy device

4 Consumer battery charging systems with $E_b \leq 2.5$ watt-hours May 31, 2015 Products manufactured on or after June 1, 2015 E_{24} must be $\leq (16 \times N)$ watt-hours
 $PM + PO$ must be $\leq (N + 0.0021 \times E_b)$ watt-hours CAN/CSA C381.2-14
 CAN/CSA C381.2-14

5 Consumer battery charging systems with $E_b > 2.5$ watt-hours but ≤ 100 watt-hours May 31, 2015 Products manufactured on or after June 1, 2015 E_{24} must be $\leq (12 \times N + 1.6 \times E_b)$ watt-hours
 $PM + PO$ must be $\leq (N + 0.0021 \times E_b)$ watt-hours CAN/CSA C381.2-14
 CAN/CSA C381.2-14

6 Consumer battery charging systems with $E_b > 100$ watt-hours but $\leq 1\,000$ watt-hours May 31, 2015 Products manufactured on or after June 1, 2015 E_{24} must be $\leq (22 \times N + 1.5 \times E_b)$ watt-hours
 $PM + PO$ must be $\leq (N + 0.0021 \times E_b)$ watt-hours CAN/CSA C381.2-14
 CAN/CSA C381.2-14

7 Consumer battery charging systems with $E_b > 1\,000$ watt-hours May 31, 2015 Products manufactured on or after June 1, 2015 E_{24} must be $\leq (36.4 \times N + 1.486 \times E_b)$ watt-hours
 $PM + PO$ must be $\leq (N + 0.0021 \times E_b)$ watt-hours CAN/CSA C381.2-14
 CAN/CSA C381.2-14

Part 3 — Manufactured Fenestration Products

Definitions and interpretation

16 (1) In this Part:

"ASHRAE" means the American Society of Heating, Refrigeration and Air-Conditioning Engineers;

"CAN/CSA A440.2-04/A440.3-04" means CSA standard CAN/CSA A440.2-04/A440.3-04 entitled Energy Performance of Windows and Other Fenestration Systems;

"CAN/CSA A440.2-09/A440.3-09" means CSA standard CAN/CSA A440.2-09/A440.3-09 entitled Fenestration energy performance;

"designated heritage building" means a building that is

- (a) on a Provincial heritage site within the meaning of the Heritage Conservation Act or otherwise included in the Provincial heritage register under that Act,

- (b) protected through heritage designation or included in a community heritage register by a local government under the Local Government Act,
- (c) protected through heritage designation or included in the heritage register by the Council under the Vancouver Charter, or
- (d) protected through heritage designation or included in a community heritage register by the trust council or a local trust committee under the Islands Trust Act;

"energy compliant building" means a building that meets one of the following:

- (a) ASHRAE standard ASHRAE 90.1 (2010 or 2013) entitled Energy Standard for Buildings Except Low-Rise Residential Buildings;
 - (b) ASHRAE standard ASHRAE 189.1 (2011) entitled Standard for the Design of High-Performance Green Buildings;
 - (c) the National Energy Code of Canada for Buildings 2011;
- "larger building" means

- (a) a residential building with 5 or more storeys, or
 - (b) a non-residential building with floor space of more than 600 m²;
- "NFRC 100-2004" means NFRC standard NFRC 100-2004 entitled Procedure for Determining Fenestration Product U-Factors;

"NFRC 100-2010" means NFRC standard NFRC 100-2010 entitled Procedure for Determining Fenestration Product U-Factors;

"residential building" means a building with at least one residential unit;

"smaller building" means

- (a) a residential building with less than 5 storeys, or
 - (b) a non-residential building with floor space of 600 m² or less;
- "U-value" means a measure of heat transfer expressed in watts per metre squared Kelvin, or W/[m²xK].

(2) Door slabs referred to in column 1 in item 1 of the efficiency standards table in section 27 [efficiency standards for manufactured fenestration products]

- (a) include only those door slabs that separate heated space from non-heated space, and
- (b) do not include door slabs referred to in section 17 [excluded door slabs].

(3) Glazing products referred to in column 1 in item 2 of the efficiency standards table in section 27

- (a) include only those glazing products that
 - (i) are for installation in door slabs, sidelites or transoms, and
 - (ii) separate heated space from non-heated space, and
- (b) do not include products referred to in section 18 [excluded glazing products].

(4) Non-metal, non-wood framed windows and sliding glass doors (for smaller buildings) referred to in column 1 in item 3 of the efficiency standards table in section 27

- (a) include only those non-metal, non-wood framed windows and sliding glass doors that
 - (i) separate heated space from non-heated space, and
 - (ii) are installed in smaller buildings, and
- (b) do not include products referred to in section 19 [excluded windows, doors, curtain walls, window walls and storefront windows (for smaller buildings)].

(5) Wood framed windows and sliding glass doors (for smaller buildings) referred to in column 1 in item 4 of the efficiency standards table in section 27

- (a) include only those wood framed windows and sliding glass doors that
 - (i) separate heated space from non-heated space, and
 - (ii) are installed in smaller buildings, and
- (b) do not include products referred to in section 19.

(6) Skylights (for smaller buildings) referred to in column 1 in item 5 of the efficiency standards table in section 27

- (a) include only those skylights that

- (i) separate heated space from non-heated space, and
- (ii) are installed in smaller buildings, and
- (b) do not include skylights installed in an energy compliant building.
- (7) Metal framed windows, sliding glass doors, curtain walls, window walls and storefront windows (for smaller buildings) referred to in column 1 in items 6 and 7 of the efficiency standards table in section 27
 - (a) include only those metal framed windows, sliding glass doors, curtain walls, window walls and storefront windows that
 - (i) separate heated space from non-heated space, and
 - (ii) are installed in smaller buildings, and
 - (b) do not include products referred to in section 19.
- (8) Hinged and bi-folding doors (for smaller buildings) referred to in column 1 in item 8 of the efficiency standards table in section 27
 - (a) include only those hinged and bi-folding doors that
 - (i) are fully glazed into
 - (A) an aluminum sash construction,
 - (B) a fiberglass sash construction, or
 - (C) a steel sash construction,
 - (ii) separate heated space from non-heated space, and
 - (iii) are installed in smaller buildings, and
 - (b) do not include products referred to in section 19.
- (9) Metal framed windows, sliding glass doors, curtain walls, window walls and storefront windows (for larger buildings) referred to in column 1 in item 9 of the efficiency standards table in section 27
 - (a) include only those metal framed windows, sliding glass doors, curtain walls, window walls and storefront windows that
 - (i) separate heated space from non-heated space, and
 - (ii) are installed in larger buildings, and
 - (b) do not include products referred to in section 20 [excluded windows, doors, curtain walls, window walls and storefront windows (for larger buildings)].
- (10) Non-metal windows, sliding glass doors, curtain walls, window walls and storefront windows (for larger buildings) referred to in column 1 in item 10 of the efficiency standards table in section 27
 - (a) include only those non-metal windows, sliding glass doors, curtain walls, window walls and storefront windows that
 - (i) separate heated space from non-heated space, and
 - (ii) are installed in larger buildings, and
 - (b) do not include products referred to in section 20.

Excluded door slabs

17 For the purposes of section 16 (2) (b), door slabs referred to in column 1 in item 1 of the efficiency standards table in section 27 [efficiency standards for manufactured fenestration products] do not include any of the following:

- (a) a solid wood door slab;
- (b) a door slab in a pre-hung door assembly with a maximum U-value of 2.0 W/[m²xK], tested with NFRC 100-2004;
- (c) a door slab installed in a designated heritage building;
- (d) a door slab installed in an energy compliant building.

Excluded glazing products

18 For the purposes of section 16 (3) (b), glazing products referred to in column 1 in item 2 of the efficiency standards table in section 27 [efficiency standards for manufactured fenestration products] do not include any of the following products:

- (a) a glazing product installed in a pre-hung door assembly with a maximum U-value of 2.0 W/[m²xK], tested with NFRC 100-2004;
- (b) a decorative glazing contained in a sealed insulating glass unit that has one or more stained glass panels, iron inserts or blinds;
- (c) a glazing product installed in a designated heritage building;
- (d) a glazing product installed in an energy compliant building.

Excluded windows, doors, curtain walls, window walls and storefront windows (for smaller buildings)

19 For the purposes of section 16 (4) (b), (5) (b), (7) (b) and (8) (b), the products referred to in column 1 in items 3, 4, 6, 7 and 8 of the efficiency standards table in section 27 [efficiency standards for manufactured fenestration products] do not include any of the following products:

- (a) a decorative window contained in a sealed insulating glass unit that has one or more stained glass panels, iron inserts or blinds;
- (b) a glazing replacement in an existing sash or frame, if the U-value of the replacement glazing is less than or equal to the U-value of the original glazing;
- (c) a window installed in a designated heritage building;
- (d) a window, door, curtain wall, window wall or storefront window installed in an energy compliant building.

Excluded windows, doors, curtain walls, window walls and storefront windows (for larger buildings)

20 For the purposes of section 16 (9) (b) and (10) (b), the products referred to in column 1 in items 9 and 10 of the efficiency standards table in section 27 [efficiency standards for manufactured fenestration products] do not include any of the following products:

- (a) a glazing replacement in an existing sash or frame, if the U-value of the replacement glazing is less than or equal to the U-value of the original glazing;
- (b) a skylight;
- (c) a window, door, curtain wall, window wall or storefront window installed in a designated heritage building;
- (d) a window, door, curtain wall, window wall or storefront window installed in an energy compliant building.

Letter of assurance for energy compliant buildings

21 (1) For the purposes of sections 17 (d), 18 (d), 19 (d) and 20 (d), a letter of assurance that meets the requirements set out in subsection (2) of this section is evidence that a building is an energy compliant building.

(2) The letter of assurance referred to in subsection (1)

- (a) must be issued for the building by a registered professional of record, within the meaning of the British Columbia Building Code Regulation, B.C. Reg. 264/2012, and
- (b) may be in the form set out under, as applicable,
 - (i) Schedule C-B in section 2.2.7 of Division C of the British Columbia Building Code Regulation, or
 - (ii) the building bylaws of the City of Vancouver.

Placement of label on manufactured fenestration products

22 (1) The label prescribed under section 5 (1) must be displayed on a manufactured fenestration product, other than a door slab, in one of the following ways:

- (a) by affixing the label to the frame or spacer bar of the manufactured fenestration product so that the label is visible at all times;
- (b) by affixing the label to the frame or sash of the manufactured fenestration product so that the label is visible when the sash is open;
- (c) by affixing the label as a transparent adhesive label to the glass of the manufactured fenestration product;
- (d) by etching the label into the surface of the glass of the manufactured fenestration product.

(2) The label prescribed under section 5 (1) must be displayed on a door slab in one of the following ways:

- (a) by affixing the label to the door slab so that the label is visible at all times;
- (b) by affixing the label to the edge of the door slab so that the label is visible when the door is open.

Additional label requirement for manufactured fenestration products

23 (1) Subject to section 24, for the purposes of section 2 (1) (b) [prescribed label] of the Act, and in addition to the label required under section 5 (1) of this regulation, a removable label that meets the requirements set out in subsection (2) of this section must be affixed to all manufactured fenestration products, other than door slabs and glazing products.

(2) The removable label referred to in subsection (1) must set out the U-value, as determined by a designated tester, of a manufactured fenestration product as follows:

- (a) for a single operator type, the overall U-value of the manufactured fenestration product;
- (b) for a combination or composite manufactured fenestration product composed of 2 or more operator types, each of which has a different U-value,
 - (i) the overall U-value of the manufactured fenestration product, or
 - (ii) the individual U-value for each of the operator types in the manufactured fenestration product.

Label exemption for manufactured fenestration products designed for specific buildings

24 (1) For a manufactured fenestration product, other than a door slab or glazing product, the labels prescribed under sections 5 (1) and 23 are not required if

- (a) the manufactured fenestration product is designed for a specific building, and
- (b) a certificate meeting the requirements set out in subsection (2) of this section is posted at the specific building site.

(2) For the purposes of subsection (1) (b), the requirements for the certificate are as follows:

(a) the certificate must set out

(i) the U-value, as determined by a designated tester, for each manufactured fenestration product provided for the specific building, or

(ii) for manufactured fenestration products to which section 25 applies, the average U-value, as determined by a designated tester, for each type of manufactured fenestration product provided for the specific building;

(b) the certificate must be issued by a designated tester;

(c) the certificate must be posted in plain view at the specific building site for a period of at least 120 days after the last of the manufactured fenestration products is installed in that specific building.

Efficiency standard exemption for manufactured fenestration products designed for specific buildings

25 For manufactured fenestration products, other than door slabs and glazing products, that are designed for a specific building, if 2 or more of the same type of manufactured fenestration products are installed in the specific building, the applicable efficiency standard for each manufactured fenestration product of that type may be met by demonstrating that the average U-value, as determined by a designated tester, of those manufactured fenestration products meets the applicable efficiency standard.

Calculation of U-value for atypical manufactured fenestration products

26 For a manufactured fenestration product, other than a door slab or glazing product, for which the U-value, by reason of its atypical shape, size or other feature, cannot be determined by a designated tester using standard testing procedures, the actual size of the manufactured fenestration product may be used for calculating the U-value of that manufactured fenestration product.

Efficiency standards for manufactured fenestration products

27 The following efficiency standards table sets out the efficiency standards for energy devices that are manufactured fenestration products:

Item Column 1

Energy Device Column 2

Prescribed Date (s. 2 (3) (a) of Act) Column 3

Manufacturing Period Column 4

Efficiency Standard Column 5

Testing Procedure

1 Door slabs June 1, 2009 Products manufactured on or after June 2, 2009 The door panels must be insulated with products with an RSI

$\geq 0.875 \text{ m}^2\text{xK/W}$ ASTM C518-04 or ASTM C518-10

2 Glazing products June 1, 2009 Products manufactured on or after June 2, 2009 The glazing product

(a) must be multiple glazed with at least one low-emissivity coating between glazing,

(b) must have a 90% argon gas fill level with a compatible edge sealant system, and

(c) must have spacer bars and if the spacer bars are aluminum box spacer bars, the aluminum box spacer bars must have a thermal break. Not applicable

3 Non-metal, non-wood framed windows and sliding glass doors (for smaller buildings) March 1, 2009 Products manufactured on or after March 2, 2009 U-value must be

$\leq 2.0 \text{ W}/[\text{m}^2\text{xK}]$ The procedure set out in one of the following:

- (a) CAN/CSA A440.2-04/A440.3-04;
- (b) CAN/CSA A440.2-09/A440.3-09;
- (c) NFRC 100-2004 or NFRC 100-2010.

4 Wood framed windows and sliding glass doors (for smaller buildings) Jan 1, 2011 Products manufactured on or after Jan 2, 2011 U-value must be $\leq 2.0 \text{ W}/[\text{m}^2\text{xK}]$ The procedure set out in one of the following:

- (a) CAN/CSA A440.2-04/A440.3-04;
- (b) CAN/CSA A440.2-09/A440.3-09;
- (c) NFRC 100-2004 or NFRC 100-2010.

5 Skylights (for smaller buildings) March 1, 2009 Products manufactured on or after March 2, 2009 U-value must be $\leq 3.10 \text{ W}/[\text{m}^2\text{xK}]$ The procedure set out in one of the following:

- (a) CAN/CSA A440.2-04/A440.3-04;
- (b) CAN/CSA A440.2-09/A440.3-09;
- (c) NFRC 100-2004 or NFRC 100-2010.

6

7 Metal framed windows, sliding glass doors, curtain walls, window walls and storefront windows (for smaller buildings)

Metal framed windows, sliding glass doors, curtain walls, window walls and storefront windows (for smaller buildings) June 1, 2009

Jan 1, 2011 Products manufactured between June 2, 2009 and Jan 1, 2011

Products manufactured on or after Jan 2, 2011 U-value must be $\leq 2.57 \text{ W}/[\text{m}^2\text{xK}]$

U-value must be $\leq 2.0 \text{ W}/[\text{m}^2\text{xK}]$ The procedure set out in one of the following:

- (a) CAN/CSA A440.2-04/A440.3-04;
- (b) CAN/CSA A440.2-09/A440.3-09;
- (c) NFRC 100-2004 or NFRC 100-2010.

The procedure set out in one of the following:

- (a) CAN/CSA A440.2-04/A440.3-04;
- (b) CAN/CSA A440.2-09/A440.3-09;
- (c) NFRC 100-2004 or NFRC 100-2010.

8 Hinged and bi-folding doors (for smaller buildings) Jan 1, 2012 Products manufactured on or after Jan 2, 2012 U-value must be $\leq 2.0 \text{ W}/[\text{m}^2\text{xK}]$ The procedure set out in one of the following:

- (a) CAN/CSA A440.2-04/A440.3-04;
- (b) CAN/CSA A440.2-09/A440.3-09;
- (c) NFRC 100-2004 or NFRC 100-2010.

9 Metal framed windows, sliding glass doors, curtain walls, window walls and storefront windows (for larger buildings) Jan 1, 2011 Products manufactured on or after Jan 2, 2011 U-value must be $\leq 2.57 \text{ W}/[\text{m}^2\text{xK}]$ The procedure set out in one of the following:

- (a) CAN/CSA A440.2-04/A440.3-04;
- (b) CAN/CSA A440.2-09/A440.3-09;
- (c) NFRC 100-2004 or NFRC 100-2010.

10 Non-metal windows, sliding glass doors, curtain walls, window walls and storefront windows (for larger buildings) Jan 1, 2011 Products manufactured on or after Jan 2, 2011 U-value must be $\leq 2.0 \text{ W}/[\text{m}^2\text{xK}]$ The procedure set out in one of the following:

- (a) CAN/CSA A440.2-04/A440.3-04;
- (b) CAN/CSA A440.2-09/A440.3-09;
- (c) NFRC 100-2004 or NFRC 100-2010.

Part 4 — Household Appliances

Definitions

28 In this Part:

"CAN/CSA C300-M91" means CSA standard CAN/CSA C300-M91 entitled Capacity Measurement and Energy Consumption Test Methods for Refrigerators, Combination Refrigerator-Freezers and Freezers;

"CAN/CSA C360-13" means CSA standard CAN/CSA C360-13 entitled Energy performance, water consumption and capacity of household clothes washers;

"CAN/CSA C373-14" means CSA standard CAN/CSA C373-14 entitled Energy performance and water consumption of household dishwashers;

"clothes washer" means a household automatic clothes washer that is electrically operated;

"combination refrigerator-freezer" means a household combination refrigerator-freezer that has a capacity of up to 1 100 litres, but does not include a combination refrigerator-freezer that uses an absorption refrigeration system;

"compact clothes washer" means a clothes washer that has a capacity of less than 1.6 ft³;

"compact dishwasher" means a dishwasher that has the capacity to hold up to 8 place settings;

"dishwasher" means a household automatic dishwasher that is electrically operated, but does not include a commercial, industrial or institutional dishwasher;

"freezer" means a household freezer that has a capacity of up to 850 litres, but does not include a freezer that uses an absorption refrigeration system;

"refrigerator" means a household refrigerator that has a capacity of up to 1 100 litres, but does not include a refrigerator that uses an absorption refrigeration system;

"standard capacity clothes washer" means a clothes washer that has a capacity of 1.6 ft³ or more;

"standard capacity dishwasher" means a dishwasher that has the capacity to hold more than 8 place settings.

Label exemption for clothes washers, dishwashers, refrigerators, combination refrigerator-freezers and freezers compliant with federal Act

29 The label prescribed under section 5 (1) of this regulation is not required for an energy device that is a clothes washer, dishwasher, refrigerator, combination refrigerator-freezer or freezer if, in respect of the energy device,

(a) the information required under section 5 (1) [information to be provided by dealers] of the federal Act has been provided to the federal minister, or

(b) the manufacturer of the energy device provides a copy of the information required under section 5 (1) of the federal Act to an inspector designated under section 3 [inspection and testing] of the Act.

Efficiency standards for household appliances

30 The following efficiency standards table sets out the efficiency standards for energy devices that are household appliances:

Item	Column 1	Column 2	Column 3	Column 4	Column 5
Energy Device					
Prescribed Date (s. 2 (3) (a) of Act)					
Manufacturing Period					
Efficiency Standard					
Testing Procedure					

2 Compact clothes washers that are top loading

Compact clothes washers that are top loading May 31, 2015

Dec 31, 2017 Products manufactured between June 1, 2015 and Dec 31, 2017

Products manufactured on or after Jan 1, 2018 Integrated modified energy factor must be $\geq 0.86 \text{ ft}^3/\text{kWh}/\text{cycle}$

Integrated water factor must be $\leq 14.4 \text{ gal}/\text{cycle}/\text{ft}^3$

Integrated modified energy factor must be $\geq 1.15 \text{ ft}^3/\text{kWh}/\text{cycle}$

Integrated water factor must be $\leq 12 \text{ gal}/\text{cycle}/\text{ft}^3$ CAN/CSA C360-13

CAN/CSA C360-13

CAN/CSA C360-13

CAN/CSA C360-13

3

4 Standard capacity clothes washers that are top loading

Standard capacity clothes washers that are top loading May 31, 2015

Dec 31, 2017 Products manufactured between June 1, 2015 and Dec 31, 2017

Products manufactured on or after Jan 1, 2018 Integrated modified energy factor must be

≥ 1.29 ft³/kWh/cycle

Integrated water factor must be

≤ 8.4 gal/cycle/ft³

Integrated modified energy factor must be

≥ 1.57 ft³/kWh/cycle

Integrated water factor must be

≤ 6.5 gal/cycle/ft³ CAN/CSA C360-13

CAN/CSA C360-13

CAN/CSA C360-13

CAN/CSA C360-13

5 Compact clothes washers that are front loading May 31, 2015 Products manufactured on or after

June 1, 2015 Integrated modified energy factor must be ≥ 1.13 ft³/kWh/cycle CAN/CSA C360-13

Integrated water factor must be ≤ 8.3 gal/cycle/ft³ CAN/CSA C360-13

6 Standard capacity clothes washers that are front loading Dec 31, 2017 Products manufactured on or

after Jan 1, 2018 Integrated modified energy factor must be ≥ 1.84 ft³/kWh/cycle CAN/CSA C360-13

Integrated water factor must be ≤ 4.7 gal/cycle/ft³ CAN/CSA C360-13

7 Compact dishwashers May 31, 2015 Products manufactured on or after June 1, 2015 Estimated annual energy use must be ≤ 222 kWh/yr CAN/CSA C373-14

Water consumption must be ≤ 3.5 gal/cycle CAN/CSA C373-14

8 Standard capacity dishwashers May 31, 2015 Products manufactured on or after June 1, 2015

Estimated annual energy use must be ≤ 307 kWh/yr CAN/CSA C373-14

Water consumption must be ≤ 5.0 gal/cycle CAN/CSA C373-14

9 Refrigerators, combination refrigerator-freezers and freezers Jan 1, 1994 Products manufactured on or after Jan 2, 1994 Standard set out in column 4 of CAN/CSA C300-M91 CAN/CSA C300-M91

Part 5 — Heating, Ventilation and Air Conditioning Products

Definitions

31 In this Part:

"AFUE" means annual fuel utilization efficiency;

"ANSI" means the American National Standards Institute;

"ANSI Z21.13-2004/CSA 4.9-2004" means ANSI standard ANSI Z21.13-2004/CSA 4.9-2004 entitled Gas-Fired Low Pressure Steam and Hot Water Boilers;

"boiler" means a natural gas or propane fired boiler that has an input rating of greater than 88 kW or 300 000 BTU/h;

"CAN/CSA C656-M92" means CSA standard CAN/CSA C656-M92 entitled Performance Standard for Single Package Central Air-Conditioners and Heat Pumps;

"CAN/CSA C828-06" means CSA standard CAN/CSA C828-06 entitled Performance Requirements for Thermostats Used with Individual Room Electric Space Heating Devices;

"CAN/CSA P.2-13" means CSA standard CAN/CSA P.2-13 entitled Testing method for measuring the annual fuel utilization efficiency of residential gas-fired or oil-fired furnaces and boilers;

"CAN/CSA P.4.1-02" means CSA standard CAN/CSA P.4.1-02 entitled Testing Method for Measuring Annual Fireplace Efficiency;

"GAMA BTS-2000" means GAMA BTS-2000 standard of the Hydronics Institute Division of the Air Conditioning, Heating and Refrigeration Institute (USA) entitled Method to Determine Efficiency of Commercial Space Heating Boilers;

"gas fireplace" means a gas fireplace that uses propane or natural gas, including an insert or free-standing stove;

"gas furnace" has the same meaning as in the federal regulation;

"outdoor gas furnace" means a gas furnace that uses a single-phase electric current and is for use outdoors;

"replacement gas furnace" means a gas furnace for use as a replacement furnace in a residential building;

"single package air conditioner" means an air conditioner that

- (a) is a unitary device retailed in a single package,
- (b) is an air source device or air sink device, and
- (c) is intended for air conditioning applications that are rated at a capacity of less than or equal to 19 kW or 65 000 BTU/h;

"single package heat pump" means a heat pump that

- (a) is a unitary device retailed in a single package,
- (b) is an air source device or air sink device, and
- (c) is intended for heating applications that are rated at a capacity of less than or equal to 19 kW or 65 000 BTU/h;

"thermostat" means a thermostat used for line-voltage switching of a controlled resistive heating load, including wall-mounted thermostats, built-in thermostats and two-component thermostats;

"three-phase system air conditioner" means an air conditioner that

- (a) uses a three-phase electric current,
- (b) is factory built, and
- (c) is rated at a capacity of less than or equal to 19 kW or 65 000 BTU/h;

"three-phase system heat pump" means a heat pump that

- (a) uses a three-phase electric current,
- (b) is factory built, and
- (c) is rated at a capacity of less than or equal to 19 kW or 65 000 BTU/h;

"through-the-wall gas furnace" means a through-the-wall gas furnace that uses a single-phase electric current.

Label exemption for gas furnaces compliant with federal Act

32 The label prescribed under section 5 (1) of this regulation is not required for an energy device that is a gas furnace if, in respect of the energy device,

(a) the information required under section 5 (1) [information to be provided by dealers] of the federal Act has been provided to the federal minister, or

(b) the manufacturer of the energy device provides a copy of the information required under section 5 (1) of the federal Act to an inspector designated under section 3 [inspection and testing] of the Act.

Rating requirement for gas fireplaces

33 (1) A gas fireplace must be rated according to the applicable testing procedure referred to in column 5 in item 12 of the efficiency standards table in section 34.

(2) For the purposes of section 2 (1) (b) [prescribed label] of the Act and section 5 (1) of this regulation, the label for a gas fireplace must set out the rating determined under subsection (1) of this section.

Efficiency standards for heating, ventilation and air conditioning products

34 The following efficiency standards table sets out the efficiency standards for energy devices that are heating, ventilation or air conditioning products:

Item	Column 1	Column 2	Column 3	Column 4	Column 5
Energy Device					
Prescribed Date (s. 2 (3) (a) of Act)					
Manufacturing Period					
Efficiency Standard					
Testing Procedure					

2 Gas furnaces, other than
(a) replacement gas furnaces,
(b) outdoor gas furnaces, and
(c) through-the-wall gas furnaces.

Gas furnaces, other than
(a) replacement gas furnaces,
(b) outdoor gas furnaces, and
(c) through-the-wall gas furnaces. Jan 1, 2008

May 31, 2015 Products manufactured between Jan 2, 2008 and May 31, 2015

Products manufactured on or after June 1, 2015 AFUE must be $\geq 90\%$

AFUE must be $\geq 92\%$ CAN/CSA P.2-13

CAN/CSA P.2-13

3

4 Replacement gas furnaces other than
(a) outdoor gas furnaces, and
(b) through-the-wall gas furnaces.

Replacement gas furnaces other than
(a) outdoor gas furnaces, and

(b) through-the-wall gas furnaces. Dec 31, 2009

May 31, 2015 Products manufactured between Jan 1, 2010 and May 31, 2015

Products manufactured on or after June 1, 2015 AFUE must be $\geq 90\%$

AFUE must be $\geq 92\%$ CAN/CSA P.2-13

CAN/CSA P.2-13

5

6 Outdoor gas furnaces and through-the-wall gas furnaces, other than those with an integrated cooling component

Outdoor gas furnaces and through-the-wall gas furnaces, other than those with an integrated cooling component Dec 31, 2009

May 31, 2015 Products manufactured between Jan 1, 2010 and May 31, 2015

Products manufactured on or after June 1, 2015 AFUE must be $\geq 90\%$

AFUE must be $\geq 92\%$ CAN/CSA P.2-13

CAN/CSA P.2-13

7 Outdoor gas furnaces with an integrated cooling component Dec 31, 2009 Products manufactured on or after Jan 1, 2010 AFUE must be $\geq 78\%$ CAN/CSA P.2-13

8

9

10 Through-the-wall gas furnaces with an integrated cooling component

Through-the-wall gas furnaces with an integrated cooling component

Through-the-wall gas furnaces with an integrated cooling component Dec 31, 2009

Dec 31, 2012

May 31, 2015 Products manufactured between Jan 1, 2010 and Dec 31, 2012

Products manufactured between Jan 1, 2013 and May 31, 2015

Products manufactured on or after June 1, 2015 AFUE must be $\geq 78\%$

AFUE must be $\geq 90\%$

AFUE must be $\geq 92\%$ CAN/CSA P.2-13

CAN/CSA P.2-13

CAN/CSA P.2-13

11 Thermostats Jan 1, 2007 Products manufactured on or after Jan 2, 2007 Differential must be $\leq 0.5^\circ\text{C}$

Droop must be $\leq 2^\circ\text{C}$ CAN/CSA C828-06

12 Gas fireplaces Jan 1, 2007 Products manufactured on or after Jan 2, 2007 Not applicable (see section 33) CAN/CSA P.4.1-02

13 Boilers Jan 1, 2007 Products manufactured on or after Jan 2, 2007 Combustion efficiency must be $\geq 80\%$ The procedure set out in either of the following:

- (a) ANSI Z21.13-2004/CSA 4.9-2004;
- (b) GAMA BTS-2000.

14 Single package air conditioners and single package heat pumps April 1, 1993 Products manufactured on or after April 2, 1993 The standard set out in Clause 5.2 of CAN/CSA C656-M92
CAN/CSA C656-M92

15 Three-phase system air conditioners and three-phase system heat pumps Jan 1, 1996 Products manufactured on or after Jan 2, 1996 The standard set out in Clause 5.2 of CAN/CSA C656-M92
CAN/CSA C656-M92

Part 6 — Water Heaters

Definitions

35 In this Part:

"bottom inlet" has the same meaning as in the federal regulation;

"CAN/CSA C191-04" means CSA standard CAN/CSA C191-04 entitled Performance of Electric Storage Tank Water Heaters for Domestic Hot Water Service;

"CAN/CSA P.3-04" means CSA standard CAN/CSA P.3-04 entitled Testing Method for Measuring Energy Consumption and Determining Efficiencies of Gas-Fired Storage Water Heaters;

"electric storage-type water heater" means a water heater that has

- (a) a hot water storage tank that uses electricity to heat the water,
- (b) a top inlet or bottom inlet, and
- (c) a rated storage capacity of 50 to 454 litres;

"heat trap", in relation to an electric storage-type water heater, means a device or pipe configuration that

- (a) is integrally connected or independently attached to the water inlet or water outlet of the electric storage-type water heater, and
- (b) creates a thermal or mechanical seal to minimize the recirculation of water resulting from natural thermal convection between the hot water storage tank and the water inlet or water outlet of the hot water storage tank;

"natural gas or propane storage-type water heater" means a water heater that has

- (a) a hot water storage tank that uses natural gas or propane to heat the water,
- (b) a rated storage capacity of 76 to 380 litres, and
- (c) an input rating of less than or equal to 21.98 kW or 75 000 BTU/h;

"responsible person", in relation to an electric storage-type water heater, means

- (a) the person who installs the electric storage-type water heater, and
 - (b) the person who has control over the installation of the electric storage-type water heater in the premises;
- "V", in relation to an electric storage-type water heater or a natural gas or propane storage-type water heater, means the volume in litres of the rated storage capacity of the water heater.

Label exemption for water heaters compliant with federal Act

36 The label prescribed under section 5 (1) of this regulation is not required for an energy device that is an electric storage-type water heater or a natural gas or propane storage-type water heater if, in respect of the energy device,

- (a) the information required under section 5 (1) [information to be provided by dealers] of the federal Act has been provided to the federal minister, or
- (b) the manufacturer of the energy device provides a copy of the information required under section 5 (1) of the federal Act to an inspector designated under section 3 [inspection and testing] of the Act.

Installation of electric storage-type water heaters

37 (1) A responsible person must ensure that a functioning heat trap is installed with an electric storage-type water heater, as follows:

(a) in the case of an electric storage-type water heater with a top inlet, at the water inlet and at the water outlet;

(b) in the case of an electric storage-type water heater with a bottom inlet, at the water outlet.

(2) A responsible person must also ensure that insulation with a minimum RSI of 0.70 m²xK/W, as determined in accordance with ASTM C518-10, is installed with the heat trap required under subsection (1), as follows:

(a) in the case of a heat trap that is integrally connected to the electric storage-type water heater,

(i) on the first 3 metres of exposed water inlet piping upstream of the hot water storage tank, and

(ii) on the first 3 metres of exposed water outlet piping downstream of the hot water storage tank;

(b) in the case of a heat trap that is independently attached to the electric storage-type water heater,

(i) on the first 3 metres of exposed water inlet piping upstream of the hot water storage tank,

(ii) on the first 3 metres of exposed water outlet piping downstream of the hot water storage tank, and

(iii) on the water inlet and water outlet piping between the hot water storage tank and the heat trap.

Efficiency standards for water heaters

38 The following efficiency standards table sets out the efficiency standards for energy devices that are water heaters:

Item Column 1

Energy Device Column 2

Prescribed Date (s. 2 (3) (a) of Act) Column 3

Manufacturing Period Column 4

Efficiency Standard Column 5

Testing Procedure

1 Electric storage-type water heaters having a top inlet and a rated storage capacity of 50 to 270 litres
Sept 1, 2010 Products manufactured on or after Sept 2, 2010 Standby loss (in watts) must be $\leq 25 + (0.20 \times V)$ CAN/CSA C191-04

2 Electric storage-type water heaters having a top inlet and a rated storage capacity of 271 to 454 litres
Sept 1, 2010 Products manufactured on or after Sept 2, 2010 Standby loss (in watts) must be $\leq (0.472 \times V) - 48.5$ CAN/CSA C191-04

3 Electric storage-type water heaters having a bottom inlet and a rated storage capacity of 50 to 270 litres
Sept 1, 2010 Products manufactured on or after Sept 2, 2010 Standby loss (in watts) must be $\leq 40 + (0.20 \times V)$ CAN/CSA C191-04

4 Electric storage-type water heaters having a bottom inlet and a rated storage capacity of 271 to 454 litres
Sept 1, 2010 Products manufactured on or after Sept 2, 2010 Standby loss (in watts) must be $\leq (0.472 \times V) - 33.5$ CAN/CSA C191-04

5 Natural gas or propane storage-type water heaters Sept 1, 2010 Products manufactured on or after Sept 2, 2010 Energy factor must be $\geq 0.70 - (0.0005 \times V)$ CAN/CSA P.3-04

Part 7 — Lighting Products

Definitions

39 In this Part:

"CAN/CSA C239-94" means CSA standard CAN/CSA C239-94 entitled Performance Standard for Dusk-to-Dawn Luminaires;

"CAN/CSA C654-M91" means CSA standard CAN/CSA C654-M91 entitled Fluorescent Lamp Ballast Efficacy Measurements;

"CAN/CSA C819-95" means CSA standard CAN/CSA C819-95 entitled Performance of General Service Fluorescent Lamps;

"CAN/CSA C861-95" means CSA standard CAN/CSA C861-95 entitled Performance of Compact Fluorescent Lamps and Ballasted Adapters;

"compact fluorescent lamp" means a self-ballasted compact fluorescent lamp that incorporates a screwbase;

"CRI" means colour rendering index;

"dusk-to-dawn area luminaire" means a 120 volt input, 60 Hz luminaire that has a photocell controller and provides automatic dusk-to-dawn area illumination;

"fluorescent lamp ballast for a 120 volt input" means a fluorescent lamp ballast that is designed

(a) for a 120 volt input, and

(b) to operate F32T8 rapid-start fluorescent lamps that have a CRI of greater than 75;

"fluorescent lamp ballast other than for a 120 volt input" means a fluorescent lamp ballast in a fluorescent luminaire installed in an industrial, a commercial or a residential location, but does not include a fluorescent lamp ballast for a 120 volt input.

Additional efficiency standard for fluorescent lamp ballasts

40 (1) This section applies to a fluorescent lamp ballast for a 120 volt input, or a fluorescent lamp ballast other than for a 120 volt input, that has

(a) an application of operation set out in column 1 of the table in section 42 [minimum ballast efficacy factors for fluorescent lamp ballasts],

(b) a ballast input voltage set out in column 2 of the table in section 42, opposite the application of operation, and

(c) the total nominal lamp wattage set out in column 3 of the table in section 42, opposite the ballast input voltage.

(2) In addition to meeting the efficiency standards set out in column 4 in item 1 or 2, as applicable, of the efficiency standards table in section 41, a fluorescent lamp ballast to which this section applies must also meet or exceed the minimum ballast efficacy factor that, in the table in section 42, is set out in column 4 opposite the applicable ballast input voltage set out in column 2.

Efficiency standards for lighting products

41 The following efficiency standards table sets out the efficiency standards for energy devices that are lighting products:

Item Column 1

Energy Device Column 2

Prescribed Date (s. 2 (3) (a) of Act) Column 3

Manufacturing Period Column 4

Efficiency Standard Column 5

Testing Procedure

1 Fluorescent lamp ballasts other than for a 120 volt input Jan 1, 2009 Products manufactured on or after Jan 2, 2009 Must have a power factor ≥ 0.9 CAN/CSA C654-M91

2 Fluorescent lamp ballasts for a 120 volt input Jan 1, 2009 Products manufactured on or after Jan 2, 2009 Must have a power factor ≥ 0.5 CAN/CSA C654-M91

3 Compact fluorescent lamps April 1, 1996 Products manufactured on or after April 2, 1996 The standard set out in Clause 6.6 of CAN/CSA C861-95 CAN/CSA C861-95

4 Dusk-to-dawn area luminaires Jan 1, 1996 Products manufactured on or after Jan 2, 1996 The standard set out in CAN/CSA C239-94 CAN/CSA C239-94

5 Fluorescent lamps May 15, 1996 Products manufactured on or after May 16, 1996 The standard set out in CAN/CSA C819-95 CAN/CSA C819-95

Minimum ballast efficacy factors for fluorescent lamp ballasts

42 For the purposes of section 40 [additional efficiency standard for fluorescent lamp ballasts], the following table sets out the minimum ballast efficacy factors:

Column 1 Application of Operation	Column 2	Column 3	Column 4
Ballast Input Voltage			
Total Nominal Lamp Wattage			
Minimum Ballast Efficacy Factor			
(V)	(W)	(BEF)	
One F40T12 lamp			
Also for use on 40W/48T10/RS lamps	120	40	2.29
277	40	2.29	
347	40	2.22	
One F34T12 lamp	120	34	2.61
277	34	2.61	
347	34	2.53	
Two F40T12 lamps			
Also for use on 40W/48T10/RS lamps	120	80	1.17
277	80	1.17	
347	80	1.12	
Two F34T12 lamps	120	68	1.35
277	68	1.35	
347	68	1.29	
Two F96T12(IS) lamps			
Also for use on 60W/96T12/IS lamps	120	150	0.63
277	150	0.63	
347	150	0.62	
Two F96T12(ES) lamps	120	120	0.77
277	120	0.77	
347	120	0.76	
Two 110W F96T12HO lamps	120	220	0.390
277	220	0.390	
347	220	0.380	
Two F96T12HO(ES) lamps	120	190	0.42
277	190	0.42	
347	190	0.41	
Two F32T8 lamps	120	64	1.250
277	64	1.230	
347	64	1.200	

Part 8 — Electric Motors

Definitions

43 In this Part:

"CAN/CSA C390-98" means CSA standard CAN/CSA C390-98 entitled Energy Efficiency Test Methods for Three-Phase Induction Motors;

"electric motor" means a machine that converts electrical power into rotational mechanical power and includes any such machine that is incorporated into any other product;

"enclosed motor" means an electric motor constructed in such a manner as to prevent the free exchange of air between the inside and outside of the case, but the case is not sufficiently enclosed to be termed airtight;

"explosion-proof construction" means an electric motor

(a) for which measures have been taken to prevent the possibility of the electric motor reaching excessive temperatures or producing arcs or sparks, or

(b) that is enclosed in a case that will withstand the explosion of any flammable gas or material that may enter the case, without being damaged and without transmitting an explosion outside of the case;

"general purpose electric motor" means

- (a) an electric motor designed for usual service conditions, as described in section 44 (1), or
- (b) an electric motor designed for unusual service conditions, as described in section 44 (2);

"IEC" means the International Electrotechnical Commission;

"integral gear assembly" means a product that is comprised of an electric motor and a gear mechanism that are combined in such a manner that

- (a) the end bracket or mounting flange forms an integral part of both the electric motor and the gear mechanism, and
 - (b) if the electric motor and the gear mechanism are separated, only one of them remains intact;
- "IP code" means an alpha numeric sequence indicating the degree of protection offered by an electric motor's enclosure from foreign object insertion and water ingress, as defined in section 5.2 of MG1;

"MG1" means NEMA Standards Publication MG1-2006, Motors and Generators;

"NEMA" means the National Electrical Manufacturers Association;

"open motor" means an electric motor with ventilating openings that permit passage of external cooling air over and around the windings of the electric motor.

General purpose electric motors

44 (1) An electric motor designed for usual service conditions is an electric motor that

- (a) is designed for use under usual service conditions, as those conditions are described in MG1,
- (b) is not restricted to a particular application or type of application, and
- (c) meets both the standard operating requirements, as described in subsection (3), and the standard mechanical construction requirements, as described in subsection (4).

(2) An electric motor designed for unusual service conditions is an electric motor that

- (a) is designed for
 - (i) use under unusual service conditions, as those conditions are described in MG1, or
 - (ii) a particular application or type of application,
- (b) may be used for most general purpose applications, and
- (c) meets either the standard operating requirements, as described in subsection (3), or the standard mechanical construction requirements, as described in subsection (4).

(3) For the purposes of subsections (1) (c) and (2) (c), the standard operating requirements for an electric motor are as follows:

- (a) the electric motor is designed to standard horsepower and speed ratings in accordance with MG1 or IEC 60034-1:2004;
- (b) the electric motor is rated for continuous duty operation or duty type S1, as defined in IEC standard 60034-1:2004;
- (c) the electric motor has a rated voltage of not more than 600 volts AC;
- (d) the electric motor has a rated frequency of 50/60 Hz or 60 Hz;
- (e) the electric motor is a NEMA design A, B or C as defined by MG1, or IEC design H or N as defined in IEC standard 60034-12:2007;
- (f) the electric motor is designed to operate at a single speed.

(4) For the purposes of subsections (1) (c) and (2) (c), the standard mechanical construction requirements for an electric motor are as follows:

- (a) the electric motor is a three-phase electric induction motor of a squirrel cage or cage type design;
- (b) the electric motor has open or enclosed construction, including explosion-proof construction;
- (c) the electric motor is constructed to NEMA T frame or U frame dimensions, or to equivalent IEC dimensions;
- (d) the electric motor has a 2-, 4-, 6- or 8-pole construction;
- (e) the electric motor is of foot-mounted construction or flange-mounted construction;
- (f) the electric motor has an IP code from 00 to 66.

Type 1 general purpose electric motors

45 (1) For the purposes of the efficiency standards table in section 47 [efficiency standards for general purpose electric motors] and the table in section 48 [nominal full load efficiency for type 1 general purpose electric motors], a general purpose electric motor is a type 1 general purpose electric motor if

(a) the general purpose electric motor is one of the following electric motors:

- (i) a close-coupled pump motor;
- (ii) a vertically-mounted solid shaft normal thrust motor;
- (iii) a fire pump motor;
- (iv) a NEMA design B motor with a rated size of 201 to 500 hp, or an IEC design N motor of a size of 151 to 375 kW, or

(b) the general purpose electric motor has one or more of the following characteristics:

- (i) a U frame, or equivalent IEC dimensions;
- (ii) a NEMA design C, or IEC design H;
- (iii) a footless construction;
- (iv) an 8-pole construction;
- (v) an integral gear assembly.

(2) For the purposes of the efficiency standard referred to in column 4 in item 1 of the efficiency standards table in section 47, the applicable minimum nominal full load efficiency of a type 1 general purpose electric motor is determined by using the table in section 48, as follows:

(a) for an open motor with a rated power set out in column 1 of the table in section 48, the applicable minimum nominal full load efficiency is the motor efficiency set out in column 2

- (i) opposite the rated power of the open motor, and
- (ii) in the sub-column that corresponds to the number of poles in the open motor;

(b) for an enclosed motor with a rated power set out in column 1 of the table in section 48, the applicable minimum nominal full load efficiency is the motor efficiency set out in column 3

- (i) opposite the rated power of the enclosed motor, and
- (ii) in the sub-column that corresponds to the number of poles in the enclosed motor.

Type 2 general purpose electric motors

46 (1) For the purposes of the efficiency standards table in section 47 [efficiency standards for general purpose electric motors] and the table in section 49 [nominal full load efficiency for type 2 general purpose electric motors], a general purpose electric motor is a type 2 general purpose electric motor if the general purpose electric motor has all of the following characteristics:

- (a) a rated size of 1 to 200 hp, or an IEC design motor of a size of 0.746 to 150 kW;
- (b) a 2-, 4- or 6-pole construction;
- (c) a NEMA T frame, or IEC frame designation of 90 or above;
- (d) a NEMA design A or B, or IEC design N;
- (e) a standard shaft, R-shaft or S-shaft or an IEC equivalent.

(2) For the purposes of the efficiency standard referred to in column 4 in item 2 of the efficiency standards table in section 47, the applicable minimum nominal full load efficiency of a type 2 general purpose electric motor is determined by using the table in section 49, as follows:

(a) for an open motor with a rated power set out in column 1 of the table in section 49, the applicable minimum nominal full load efficiency is the motor efficiency set out in column 2

- (i) opposite the rated power of the open motor, and
- (ii) in the sub-column that corresponds to the number of poles in the open motor;

(b) for an enclosed motor with a rated power set out in column 1 of the table in section 49, the applicable minimum nominal full load efficiency is the motor efficiency set out in column 3

- (i) opposite the rated power of the enclosed motor, and
- (ii) in the sub-column that corresponds to the number of poles in the enclosed motor.

Efficiency standards for general purpose electric motors

47 The following efficiency standards table sets out the efficiency standards for energy devices that are general purpose electric motors:

Item	Column 1
Energy Device	Column 2

Prescribed Date (s. 2 (3) (a) of Act) Column 3
 Manufacturing Period Column 4
 Efficiency Standard Column 5
 Testing Procedure

1 Type 1 general purpose electric motors Jan 1, 2011 Products manufactured on or after Jan 2, 2011 Nominal full load efficiency must be \geq the applicable nominal full load efficiency set out in the table in section 48 of this regulation CAN/CSA C390-98

All motors must be tested in a horizontal configuration

2 Type 2 general purpose electric motors Jan 1, 2011 Products manufactured on or after Jan 2, 2011 Nominal full load efficiency must be \geq the applicable nominal full load efficiency set out in the table in section 49 of this regulation CAN/CSA C390-98

All motors must be tested in a horizontal configuration

Nominal full load efficiency for type 1 general purpose electric motors

48 For the purposes of the efficiency standard referred to in column 4 in item 1 of the efficiency standards table in section 47 [efficiency standards for general purpose electric motors], the following table sets out the nominal full load efficiency for type 1 general purpose electric motors:

Motor Efficiency (%)

Column 1

Rated Power Column 2

Open Motors Number of Poles Column 3

Enclosed Motors Number of Poles

(hp)	(kW)	2	4	6	8	2	4	6	8
1	0.75	75.5	82.5	80.0	74.0	75.5	82.5	80.0	74.0
1.5	1.1	82.5	84.0	84.0	75.5	82.5	84.0	85.5	77.0
2	1.5	84.0	84.0	85.5	85.5	84.0	84.0	86.5	82.5
3	2.2	84.0	86.5	86.5	86.5	85.5	87.5	87.5	84.0
-	3.0	84.0	86.5	86.5	86.5	85.5	87.5	87.5	84.0
5	3.7	85.5	87.5	87.5	87.5	87.5	87.5	87.5	85.5
-	4.0	85.5	87.5	87.5	87.5	87.5	87.5	87.5	85.5
7.5	5.5	87.5	88.5	88.5	88.5	88.5	89.5	89.5	85.5
10	7.5	88.5	89.5	90.2	89.5	89.5	89.5	89.5	88.5
15	11	89.5	91.0	90.2	89.5	90.2	91.0	90.2	88.5
20	15	90.2	91.0	91.0	90.2	90.2	91.0	90.2	89.5
25	19	91.0	91.7	91.7	90.2	91.0	92.4	91.7	89.5
30	22	91.0	92.4	92.4	91.0	91.0	92.4	91.7	91.0
40	30	91.7	93.0	93.0	91.0	91.7	93.0	93.0	91.0
50	37	92.4	93.0	93.0	91.7	92.4	93.0	93.0	91.7
60	45	93.0	93.6	93.6	92.4	93.0	93.6	93.6	91.7
75	55	93.0	94.1	93.6	93.6	93.0	94.1	93.6	93.0
100	75	93.0	94.1	94.1	93.6	93.6	94.5	94.1	93.0
125	90	93.6	94.5	94.1	93.6	94.5	94.5	94.1	93.6
150	110	93.6	95.0	94.5	93.6	94.5	95.0	95.0	93.6
-	132	94.5	95.0	94.5	93.6	95.0	95.0	95.0	94.1
200	150	94.5	95.0	94.5	93.6	95.0	95.0	95.0	94.1
250	185	94.5	95.4	95.4	94.5	95.4	95.0	95.0	94.5
300	225	95.0	95.4	95.4	-	95.4	95.4	95.0	-
350	260	95.0	95.4	95.4	-	95.4	95.4	95.0	-
400	300	95.4	95.4	-	-	95.4	95.4	-	-
450	335	95.8	95.8	-	-	95.4	95.4	-	-
500	375	95.8	95.8	-	-	95.4	95.8	-	-

Nominal full load efficiency for type 2 general purpose electric motors

49 For the purposes of the efficiency standard referred to in column 4 in item 2 of the efficiency standards table in section 47 [efficiency standards for general purpose electric motors], the following table sets out the nominal full load efficiency for type 2 general purpose electric motors:

Motor Efficiency (%)

Column 1

Rated Power Column 2

Open Motors Number of Poles Column 3

Enclosed Motors Number of Poles

(hp)	(kW)	2	4	6	2	4	6
1	0.75	77.0	85.5	82.5	77.0	85.5	82.5
1.5	1.1	84.0	86.5	86.5	84.0	86.5	87.5
2	1.5	85.5	86.5	87.5	85.5	86.5	88.5
3	2.2	85.5	89.5	88.5	86.5	89.5	89.5
-	3.0	86.5	89.5	89.5	88.5	89.5	89.5
5	3.7	86.5	89.5	89.5	88.5	89.5	89.5
-	4.0	86.5	89.5	89.5	88.5	89.5	89.5
7.5	5.5	88.5	91.0	90.2	89.5	91.7	91.0
10	7.5	89.5	91.7	91.7	90.2	91.7	91.0
15	11	90.2	93.0	91.7	91.0	92.4	91.7
20	15	91.0	93.0	92.4	91.0	93.0	91.7
25	19	91.7	93.6	93.0	91.7	93.6	93.0
30	22	91.7	94.1	93.6	91.7	93.6	93.0
40	30	92.4	94.1	94.1	92.4	94.1	94.1
50	37	93.0	94.5	94.1	93.0	94.5	94.1
60	45	93.6	95.0	94.5	93.6	95.0	94.5
75	55	93.6	95.0	94.5	93.6	95.4	94.5
100	75	93.6	95.4	95.0	94.1	95.4	95.0
125	90	94.1	95.4	95.0	95.0	95.4	95.0
150	110	94.1	95.8	95.4	95.0	95.8	95.8
-	132	95.0	95.8	95.4	95.4	96.2	95.8
200	150	95.0	95.8	95.4	95.4	96.2	95.8

[Provisions relevant to the enactment of this regulation: Energy Efficiency Act, R.S.B.C. 1996, c. 114, sections 2 and 6]

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