Vol. 140, No. 18 — May 6, 2006

Regulations Amending the Energy Efficiency Regulations

Statutory authority

Energy Efficiency Act

Sponsoring department

Department of Natural Resources

REGULATORY IMPACT ANALYSIS STATEMENT

(*This statement is not part of the Regulations.*)

Description

The *Regulations Amending the Energy Efficiency Regulations* (the "amendment") will address recommendations raised by the Standing Joint Committee for the Scrutiny of Regulations pertaining to various sections of the *Energy Efficiency Regulations*. It will also address issues raised by the Department of Justice on section 11, *Verification Mark*, of the Regulations.

The amendment will introduce regulatory requirements for beverage vending machines and commercial reach-in refrigeration.

The amendment will increase the stringency of existing minimum performance requirements for three types of air conditioners used in the commercial/institutional sector. Packaged terminal air conditioners and heat pumps are heating and cooling assemblies mounted through the wall and are often found in motel and hotel rooms. Large air conditioners and heat pumps and internal water-loop heat pumps are used for heating and cooling of large commercial buildings.

The amendment will update the test method and increase the stringency of energy performance requirements for central air conditioners and heat pumps less than 19 kW (65 000 Btu/h). There are about 250 000 central air conditioners and heat pumps of this size sold in Canada per year.

This amendment introduces requirements for two new types of appliances: chest freezers with automatic defrost, Type 10A and automatic defrost refrigerator-freezer, with bottom mounted freezer and through-the-door-ice service, Type 5A. The amendment also modifies the definition of automatic defrost system to include the normal compressor cycle as automatic defrost. The amendment will ensure that minimum standard requirements and labelling are harmonized in Canada and the United States for these products.

The amendment will repeal the effective date for internally lighted exit signs. This change will broaden the coverage of the requirement to include all exit signs regardless of the date of manufacture.

The amendment will also repeal the effective date for fluorescent lamp ballasts and introduce ballasts efficacy factors for energy saving lamps. It will also modify specific exclusion criteria for certain ballasts, such as ambient temperature of operation and dimming capabilities. The amendment will also allow for ballasts that operate a small subset of F32T8 lamps to operate at a lower power factor than specified in the current Regulations.

In this amendment, Natural Resources Canada (NRCan) proposes to eliminate the tap range exemption for dry-type transformers.

This amendment will also update the Regulations by adding references to the newly available French version of certain CSA standards, as well as updating the reference of the test method for dishwashers. The amendment will update the numbering system of items included in Part I of Schedule I of the Regulations.

The *Energy Efficiency Regulations* help Canada meet its commitments under the National Action Program on Climate Change. The measures established under this program encourage the efficient use of energy on an economic basis. They contribute to the competitiveness of Canada's economy while helping to achieve Canada's greenhouse gas (GHG) emissions limitation targets.

Concentrations of GHGs are increasing in the earth's atmosphere. The accumulation of these gases cause a rise in the average temperature of the lower atmosphere, resulting in climate change. Although uncertainty remains as to the extent, timing and effects of global climate change, evidence collected to date and the potential environmental threat support the implementation of precautionary measures. Therefore, the Government of Canada has committed to reducing Canada's GHG emissions by 6% below 1990 levels between 2008 and 2012. Furthermore, in December 2002, the Government of Canada ratified the Kyoto Protocol.

Carbon dioxide (CO_2), a by-product of fossil fuel consumption, has been identified as the most significant GHG. Due to greater demand for fossil fuel because of expanding human

activities involving energy use, emissions of CO_2 have increased. Because there is limited short-term prospect for switching from fossil fuels to alternative energy sources, the main approach to limiting CO_2 emissions resulting from fossil fuel consumption is to improve energy efficiency.

Alternatives

Maintaining the status quo

If the amendment is not implemented, Canada will lose an opportunity to address its GHG emissions targets. This would lead to lower efficiency requirements in Canada as compared to the United States. Canadian households and businesses would miss out on future savings in energy which are known to be cost effective.

Without the national standards contained in the amendment and complementary provincial requirements where authorized under provincial legislation, inefficient energy-using equipment could be dumped into provinces or territories that do not have performance requirements. This would hinder the federal government's objectives of reducing CO_2 emissions and achieving cost savings for energy users.

Voluntary program

Without the amendment, co-operation from all industry members could not be guaranteed, especially in the case of imported goods which come from a variety of foreign sources.

In order to manufacture products that meet the performance levels of the standard, firms will have to make substantial investments in their production facilities. Product markets are increasingly global in nature, and profit margins are often claimed to be small. Consequently, firms generally support the use of standards in these cases so that there is a level playing field.

NRCan utilizes voluntary high efficiency programs such as ENERGY STAR to transform the market toward energy efficient equipment. As efficient products increase their market share, minimum energy performance standards can effectively eliminate the least efficient products.

Benefits and costs

The benefits and costs of increasing the minimum energy performance standards for reach-in refrigeration, vending machines, large air conditioning equipment, water-source heat pumps and ground source heat pumps, packaged terminal air conditioners and packaged terminal heat pumps, and residential air conditioners are evaluated in two parts:

(*a*) Benefits and costs to society — a quantitative analysis measuring the economic attractiveness to society was conducted for the products specified in the amendment to the Regulations; and

(*b*) Energy/GHG analysis — a description of the analysis of aggregate energy savings and associated reductions in GHG emissions, resulting from the amendment to the Regulations.

Benefits and costs to society

A quantitative analysis of the net benefits to society was undertaken to determine the economic attractiveness of improving the energy efficiency of reach-in refrigeration, vending machines, large air conditioning equipment, water-source heat pumps and ground-source heat pumps, packaged terminal air conditioners and packaged terminal heat pumps, and residential air conditioners. The analysis was conducted for units that would not meet the proposed minimum energy performance standard and that are considered to be the least efficient of their class.

Methodology and assumptions

The economic attractiveness of the minimum energy performance standards was analyzed within a cost-benefit analysis framework, using the incremental cost and energy savings data associated with the different technologies that increase the energy efficiency of the benchmark products. Benchmark products are often characterized as the least efficient products available for sale in Canada.

Using a cost-benefit analysis framework allows for the net present value of a stream of costs and benefits to be the indicator of economic attractiveness. The net present value is calculated by subtracting the present value of incremental costs from the present value of incremental benefits, over the useful life of the product. The incremental costs are differentials between a benchmark product price and the cost of that product with levels of efficiency that meet or exceed those proposed for federal regulation. The incremental benefits are the present value of energy savings associated with the efficiency improvement.

A negative net present value indicates that the efficiency improvement is not economically attractive (costs exceed benefits), whereas a net present value greater than zero indicates that the efficiency improvement is economically attractive (benefits exceed costs). A net present value equal to zero indicates that society would be indifferent.

Assumptions for base case analysis

The economic analysis involved a base case analysis and a sensitivity analysis. The key assumptions for the base case scenario include the following:

Analytical assumptions

- Benefits and costs are measured in real year 2000 dollars;
- A 7% real discount rate;
- Canadian average energy prices, based on the National Energy Board (Canada's Energy Future 2003); and

- Valuation of the GHG emissions where incorporated in the analysis at $15/ton.

Product-specific assumptions

Reach-in refrigeration

- Reach-in refrigerators are assumed to have a service life of 8.5 years;

- Reach-in freezers and reach-in refrigerator-freezers have a useful life of 9 years;

- The 2007 baseline models used in the analysis were a two-door refrigerator solid door (48 cu. ft.) consuming 4 321 kWh per year, a one-door freezer solid door (24 cu. ft.) consuming 5 198 kWh per year and one-door beverage merchandiser (24 cu. ft.) consuming 3 923 kWh per year. The 2008 baseline models used in the analysis were a two-door refrigerator solid door (48 cu. ft.) consuming 3 649 kWh per year, a one-door freezer solid door (24 cu. ft.) consuming 4 367 kWh per year and a one-door beverage merchandiser (24 cu. ft.) consuming 3 588 kWh per year; and

- A cross-over effect of 37% was assumed for all reach-in appliances.

Vending machines

- Vending machines are assumed to have a service life of 10 years;

- The proposed standard in 2006 will have a proposed energy consumption standard and a technology standard (low power mode). Models will be tested on the energy consumption standard without the low power mode operating;

- 99% of the models on the market exceed the proposed energy consumption standard in 2006. No analysis was performed on this proposed standard;

- The baseline used for the 2006 proposed technology standard was a Type A1 600-can capacity vending machine consuming 1 953 kWh per year for 2006-2007 and 1 550 kWh per year for 2008 onwards;

- The baseline model used for the proposed standard in 2008 was a Type A1 600-can capacity vending machine consuming 1 953 kWh per year.

Large air conditioning equipment

- Air-cooled unitary conditioners, water-cooled unitary air conditioners, air-cooled unitary heat pumps are assumed to have a service life of 15 years;

- Air-cooled condensing units are assumed to have a useful life of 20 years;

- The baseline models used in the analysis were

- Air-cooled unitary air conditioners
    - with a capacity of 8.0 tons and an energy efficiency ratio (EER) of 8.9,
    - with a capacity of 15.0 tons and an EER of 8.5 for Table I and 9.0 for Table II;
- Water-cooled unitary air conditioners
    - with a capacity of 8.0 tons with an EER of 10.6,
    - with a capacity of 15.0 tons and an EER of 10.0;
- Air-cooled unitary heat pumps
    - with a capacity of 8.0 tons and an EER of 8.9,
    - with a capacity of 15.0 tons and an EER of 8.5; and
- Air-cooled condensing units
    - with a capacity of 8.0 tons and an EER of 11.3,
    - with a capacity of 15.0 tons and an EER of 9.9.

Water-source heat pumps and ground-source heat pumps

- Water-source heat pumps—water loop, ground-loop, groundwater—are assumed to have a service life of 19 years;
- The baseline models used in the analysis were
    - Water loop heat pumps
        - with a capacity of 12 000 Btu/h and an EER of 10/COP 3.2 for Table I,
        - with a capacity of 12 000 Btu/h and an EER of 11/COP 3.9 for Table II,
        - with a capacity of 36 000 Btu/h and an EER of 10.4/COP 3.2 for Table I,
        - with a capacity of 36 000 Btu/h and an EER of 11/COP 3.9 for Table II,
        - with a capacity of 65 000 Btu/h and an EER of 10.8/COP 3.2 for Table I,
        - with a capacity of 65 000 Btu/h and an EER of 11.8/COP 3.9 for Table II;

- Ground-loop heat pump
    - with a capacity of 36 000 Btu/h and an EER of 10.8/COP 2.7 for Table I,
    - with a capacity of 36 000 Btu/h and an EER of 13.3/COP 3 for Table II; and
- Groundwater heat pumps
    - with a capacity of 36 000 Btu/h and an EER of 12.2/COP 3.1 for Table I,
    - with a capacity of 36 000 Btu/h and an EER of 16.0/COP 3.4 for Table II.

Packaged terminal air conditioners and packaged terminal heat pumps

• Packaged terminal air conditioners and packaged terminal heat pumps are assumed to have a service life of 10 years;

• The baseline models used in the analysis were

- Packaged terminal heat pumps
    - with a capacity of 9 000 Btu/h and an EER of 9.5,
    - with a capacity of 12 000 Btu/h and an EER of 9.10; and
- Packaged terminal air conditioners
    - with a capacity of 9 000 Btu/h and an EER of 9.80,
    - with a capacity of 10 100 Btu/h and an EER of 8.90,
    - with a capacity of 12 000 Btu/h and an EER of 9.20,
    - with a capacity of 14 000 Btu/h and an EER of 8.90.

Residential air conditioners (less than 65 000 Btu/h)

• Split-system air conditioners, single package air conditioners, split-system heat pumps and single package heat pumps are assumed to have service life of 18.4 years;

• The baseline models used in the analysis were

- Split-system air conditioners
    - with a capacity of 2 tons and a seasonal energy efficiency ratio (SEER) of

10 for Table I,

- with a capacity of 2 tons and SEER 12 for Table II,
- with a capacity of 3 tons and SEER 10 for Table I,
- with a capacity of 3 tons and SEER 12 for Table II,
- with a capacity of 4 tons and SEER 10 for Table I,
- with a capacity of 4 tons and SEER 10.5 for Table II;

- Single package air conditioners
  - with a capacity of 2 tons and SEER 9.7 for Table I,
  - with a capacity of 2 tons and SEER 10 for Table II,
  - with a capacity of 3 tons and SEER 9.7 for Table I,
  - with a capacity of 3 tons and SEER 10 for Table II,
  - with a capacity of 5 tons and SEER 9.7 for Table I,
  - with a capacity of 5 tons and SEER 10 for Table II;
- Split-system heat pumps
  - with a capacity of 2 tons and SEER 10 for Table I,
  - with a capacity of 2 tons and SEER 12 for Table II,
  - with a capacity of 3 tons and SEER 10 for Table I,
  - with a capacity of 3 tons and SEER 11 for Table II,
  - with a capacity of 4 tons and SEER 10 for Table I,
  - with a capacity of 4 tons and SEER 11 for Table II; and
- Single package heat pumps
  - with a capacity of 2 tons and SEER 10 for Table I,
  - with a capacity of 2 tons and SEER 12 for Table II,

- with a capacity of 3 tons and SEER 10 for Table I,
- with a capacity of 3 tons and SEER 12 for Table II,
- with a capacity of 5 tons and SEER 10 for Table I,
- with a capacity of 5 tons and SEER 12 for Table II.

Assumptions for sensitivity analysis

In addition to the base case analysis, sensitivity analyses were carried out on the discount rate, energy prices and combinations of the two. All sensitivity analyses were calculated from the base case.

- For the discount rate sensitivity, the base case was re-evaluated using a real discount rates of 5% and 10%; (see footnote 1)

- For the energy price sensitivity analysis, Canadian average prices were substituted with high and low regional energy prices, according to the National Energy Board. (Canada's Energy Future 2003);

- In the combined energy price-discount rate sensitivity analysis, the base case was re-evaluated under two scenarios. The first scenario combined high energy prices with the low discount rate (5%). The second scenario combined low energy prices with the high discount rate (10%). This approach broadens the range of economic attractiveness presented in the discount rate sensitivity analysis and the energy price sensitivity analysis.

Results

Table I summarizes the net benefits from the proposed amendment for reach-in refrigeration, vending machines, large air conditioning equipment, water-source heat pumps and ground-source heat pumps, packaged terminal air conditioners and packaged terminal heat pumps, and residential air conditioners.

Table I: Summary of Net Benefits Analysis

Products Class	**Annual Energy Savings**	**Net Present Value of Benefits (Year 2000 $)**
Reach-In Refrigerators	**(kWh/yr/unit)**	
2007 efficiency level, 2-door, 48 cu. ft.	423	191
2008 efficiency level, 2-door, 48 cu. ft.	547	147
Reach-In Freezers	**(kWh/yr/unit)**	
2007 efficiency level, 1-door, 24 cu. ft.	524	247

2008 efficiency level, 1-door, 24 cu. ft.	469	155
Reach-In Beverage Merchandisers	**(kWh/yr/unit)**	
2007 efficiency level, 1-door, 24 cu. ft.	211	91
2008 efficiency level, 1-door, 24 cu. ft.	239	85
Vending Machines	**(kWh/yr/unit)**	
2006 efficiency level, Type A1	489	68
2008 efficiency level, Type A1	403	147
Air-Cooled Unitary Air Conditioners	**(kWh/yr/unit)**	
8 tons	610	81
15 tons	1 083	24
Water-Cooled Unitary Air Conditioners	**(kWh/yr/unit)**	
8 tons	299	(301)
15 tons	678	(188)
Air-Cooled Unitary Heat Pumps	**(kWh/yr/unit)**	
8 tons	533	22
15 tons	750	(236)
Air-Cooled Condensing Units	**(kWh/yr/unit)**	
15 tons	150	7
Water-Source Heat Pumps — Water Loop	**(kWh/yr/unit)**	
12 000 Btu/h	443	297
36 000 Btu/h	1 366	952
65 000 Btu/h	2 214	1 486
Ground-Loop Heat Pumps	**(kWh/yr/unit)**	
36 000 Btu/h	984	446
Groundwater Heat Pumps	**(kWh/yr/unit)**	
36 000 Btu/h	1 092	317
Packaged Terminal Heat Pumps	**(kWh/yr/unit)**	
9 000 Btu/h	65	(3)
12 000 Btu/h	69	(1)
Packaged Terminal Air Conditioners	**(kWh/yr/unit)**	
9 000 Btu/h	54	(5)
10 100 Btu/h	127	(51)

12 000 Bth/h	78	(16)
14 000 Btu/h	82	6
Split-Systems Air Conditioners	**(kWh/yr/unit)**	
2 tons	312	(89)
3 tons	396	(46)
4 tons	473	(10)
Split-Systems Heat Pumps	**(kWh/yr/unit)**	
2 tons	1 120	623
3 tons	1 662	1 083
4 tons	2 158	1 500
Single Package Air Conditioners	**(kWh/yr/unit)**	
2 tons	625	50
3 tons	784	138
5 tons	1 145	348
Single Package Heat Pumps	**(kWh/yr/unit)**	
2 tons	1 113	464
3 tons	1 596	810
5 tons	2 526	1 473

The figures for each product in Table I reflect one design option that result in an efficiency improvement that meets the efficiency standards contained in this amendment.

In summary, the results of the analysis show that there are positive net economic benefits to Canada from adopting the minimum energy performance standards contained in this amendment. The sensitivity analysis indicates that the results are fairly robust for a wide range of assumptions. The benefits will vary by individual user depending on end-use sector, geographical location and/or operational practices.

Energy/GHG analysis

Methodology and assumptions

The energy savings impacts associated with the amendments were obtained by comparing the business-as-usual case (i.e. excluding the amendment) and the impact case (i.e. the businessas-usual scenario including the amendment). The energy savings associated with ground-source heat pump and residential air conditioners occur in the residential sector. The energy savings associated with reach-in refrigeration, large air conditioning equipment, water-source heat pumps and ground-source heat pumps, and package terminal air conditioners and package terminal heat pumps occur in the commercial sector. The analysis was conducted for units that would not meet the proposed minimum energy performance standard and that are considered to be the most popular of their class.

The reductions in GHG emissions were calculated by applying emissions factors consistent with those published by Environment Canada to the marginal fuels used to generate the electricity that would be saved through the amendment.

Results

The estimated energy savings impact of the amendment is presented in Table II. The results are presented for the years 2010, 2015, 2020, 2025 and 2030. Energy savings would begin to accrue with the implementation of the standard. Total energy savings associated with this amendment would be 1.64 petajoules annually in 2010 and would increase to 8.51 petajoules annually in 2030, as the sale of new more efficient equipment steadily replaces the pre-regulation stock.

Table II: Energy Savings (Petajoules)

	2010	**2015**	**2020**	**2025**	**2030**
Residential	0.90	2.11	3.57	4.97	6.19
Commercial	0.74	1.45	1.93	2.19	2.32
Total	**1.64**	**3.56**	**5.50**	**7.16**	**8.51**

*Numbers may not add up because of rounding.

The estimated cumulative annual reductions in GHG emissions resulting from the aggregate energy savings are presented in Table III. GHG emission reductions are estimated at approximately 0.16 megatonnes in the year 2010 and increase to approximately 0.84 megatonnes in the year 2030.

Table III: Reduction in Greenhouse Gas Emissions (Megatonnes)

	2010	**2015**	**2020**	**2025**	**2030**
Residential	0.09	0.21	0.35	0.49	0.61
Commercial	0.07	0.14	0.19	0.22	0.23
Total	**0.16**	**0.35**	**0.55**	**0.71**	**0.84**

*Numbers may not add up because of rounding.

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Consultation

Consultation on these products was accomplished with three methods:

(i) The relevant Canadian Standards Association (CSA) Technical Committees and Technical Subcommittees, assembled from stakeholders (including manufacturers, industry associations and other interested groups), provided input and reviewed and voted upon changes to the test standard. For some products, the proposed efficiency requirements have been incorporated into the test procedure standards.

(ii) Bulletins were distributed to interested stakeholders electronically. The distribution lists targeted key market channel stakeholders, key federal and provincial stakeholders, and general interest groups (advocacy groups, international regulators). Many of these individuals and organizations in turn forwarded the bulletins to provide access to a larger audience of stakeholders. Also, bulletins are posted on the Canada's Energy Efficiency Regulations Web site at http://oee.nrcan. gc.ca/regulations/home_page.cfm and are often printed for distribution at trade shows.

(iii) Workshops were held when significant issues that were best addressed as a group were raised through the bulletin process. Invitations were sent out to identified stakeholders. In other cases, bilateral discussions were held with stakeholders.

General commentary

Written comments were received from the CSA regarding NRCan's proposal to reference standards other than National Standards of Canada in the Regulations. NRCan has referenced these standards because the national standards are not current and used by the industry. It should be noted that National Standards of Canada remain frequently referenced and that it is NRCan's intention that this remain the common practice.

Standing Joint Committee for the Scrutiny of Regulations

In November 2003, counsel for the Standing Joint Committee for the Scrutiny of Regulations (SJC) raised issues concerning the *Energy Efficiency Regulations*. In January 2004, NRCan responded in writing to the items raised. Counsel for SJC replied in February 2004, raising additional questions. NRCan responded in a March 2004 letter with its intention to address all the outstanding issues through Amendment 9 of the *Energy Efficiency Regulations*. In May 2005, SJC wrote back to NRCan seeking clarification on items previously raised. NRCan responded in June 2005. In September 2005, SJC counsel reviewing the French version of the Regulations noted some inconsistencies between the French and English versions of the Regulations and requested confirmation that these would be addressed in an upcoming amendment. NRCan responded to SJC in November 2005, confirming that the noted inconsistencies

were being addressed in the current amendment of the Regulations.

The nature of the issues raised are inconsistencies in definitions and clarifications that do not require external consultation.

Section 11 of the Energy Efficiency Regulations

In March 2003, the Department of Justice raised a number of issues with respect to section 11 of the *Energy Efficiency Regulations*. It was agreed, at that time, that there would be a review of section 11 in its entirety to address the noted issues and to ensure that it is consistent with its legislative authority, the *Energy Efficiency Act*.

A number of discussions have taken place with the Department of Justice regarding their concerns and most were resolved in this amendment and did not require external consultation.

One of the items raised required a significant change, and input from stakeholders was deemed necessary. The Department of Justice is concerned that subparagraph 11(3)(*b*)(ii) is considered a transformation of the legislative power of the Governor in Council into an administrative power that is exercised by the Minister of Natural Resources. This transformation results from the fact that the Regulations do not set out the criteria to be met by an organization in order for it to receive ministerial recognition; rather, the Governor in Council confers on the Minister a discretion to determine, on a case-by-case basis, whether or not an organization is given ministerial recognition.

NRCan consulted with the Standards Council of Canada (SCC), and together both parties have determined that the SCC accreditation process alone meets NRCan's needs for energy efficiency verification. As a result of this consultation, NRCan has revised the requirements for an organization to perform energy performance verification.

A bulletin describing the proposed modifications to section 11 of the Regulations was sent electronically to stakeholders in October 2004 and posted on the NRCan regulations Web site. One written response was received from the Gas Appliance Manufacturers Association (GAMA).

GAMA is requesting that NRCan accept GAMA's product certification program. NRCan has met with GAMA to discuss their concerns. GAMA will discuss certification body accreditation requirements with the SCC.

Beverage vending machines

A bulletin describing the proposed Regulations was sent to stakeholders in October 2004 and posted on the NRCan Web site. Five written responses were received.

BC Hydro and a restaurant supported NRCan's proposed Regulations, and the New Brunswick government supported the proposed Regulations but did not think they were stringent enough. Both the soft-drink bottlers and the National Automatic Merchandising Association (NAMA) supported the proposed standard for single-package vending machines, but stated that the standard is not appropriate for "multi-package" beverage vending machines. Due to their glass fronts, it was not technically possible to meet the

new standard (testing in 32.2°C ambient air.)

NRCan held a workshop for interested stakeholder on December 8, 2004. NRCan presented the proposed Regulations and noted comments from the stakeholders.

One of the issues raised was that it was not technically possible for multi-package, glass-front vending machines to meet the energy-efficiency levels when tested in 32.2°C ambient air. As a result, NRCan has modified the proposed Regulations and put in a separate category for multi-package vending machines, allowing them to meet the energy efficiency requirements in 23.9°C ambient air. NRCan also plans to look into the development of an appropriate energy efficiency standard for glass-front vending machines.

Since 99% of the solid-door beverage vending machines already meet the proposed energy efficiency levels (ENERGY STAR Tier I), there was agreement that NRCan should move the energy efficiency levels to ENERGY STAR Tier II for solid-door units only, with an effective date of January 1, 2008. NRCan plans to look into the development of an appropriate energy-efficiency standard for glass-front vending machines. It was also agreed that NRCan should require a low-power mode for all vending machines in order to harmonize with ENERGY STAR and the California Energy Commission (CEC).

Another issue raised by a bottler and NAMA was that for solid-door machines used only indoors, NRCan should allow the energy efficiency levels to be met in 23.9°C ambient air rather than in 32.2°C ambient air. NRCan decided to leave the requirement at 32.2°C ambient air in order to harmonize with the CEC's regulations.

One manufacturer said its glass-front vending machine, which dispenses both packaged snacks and bottles, would not be able to meet NRCan's energy efficiency levels, even in 23.9°C ambient air. This type of vending machine has been put in a separate category, called "snack and refrigerated beverage vending machine," and has been given an extra year (until January 1, 2007) to comply.

In April 2005, a second bulletin, describing the revisions to the proposed Regulations, was sent by email to stakeholders and posted on the NRCan Web site. There were written responses from three manufacturers, a soft-drink bottler, and NAMA.

NAMA recommended delaying the effective date by a year to January 2007. NRCan decided on a six-month delay to June 2006. (Manufacturers already have to meet the CEC's effective date of January 2006 for similar regulations.)

One manufacturer recommended removing the low-power mode requirement for multi-package vending machines that can vend dairy and other perishable products requiring a constant low temperature, as, if the low-power mode is used, it could expose consumers to unsafe food and beverages. NRCan will leave the low-power requirement in to harmonize with California and because the energy savings are considerable. The vending machine only has to have a low-power capability—the operator is not required to use it. Machines that are vending temperature-sensitive product, such as milk, need not have the refrigeration low-power state enabled on site, thus mitigating the risk of product spoilage.

One manufacturer said the definition of snack and refrigerated beverage vending machine was too complex. NRCan has simplified the definition.

A beverage bottler said that snack and refrigerated beverage vending machines are CSA Type H and have a fixed energy threshold not tied to the number of cans held. NRCan will leave the energy-efficiency levels unchanged, as these machines are included (without giving them a separate category) in California's regulations for refrigerated canned and bottled beverage vending machines.

Commercial reach-in refrigeration

A bulletin describing the proposed Regulations was sent to stakeholders in October 2004 and posted on the NRCan Web site. Three written responses were received.

The New Brunswick government supported the proposed Regulations but did not think they were stringent enough. The American Council for an Energy-Efficient Economy (ACEEE) said that the NRCan proposal was extremely weak and would save little energy. As a minimum, the ACEEE felt that NRCan should adopt the California Energy Commission's (CEC) Tier II standard. A manufacturer felt that its two-door glass slider unit would have difficulty meeting the new requirements.

NRCan held a workshop for interested stakeholders on December 7, 2004. NRCan presented the proposed Regulations and noted comments from the stakeholders.

One manufacturer thought the effective date of January 2006 was not realistic, as the manufacturer needed more time to test its products and make the necessary modifications required to meet the new standards. NRCan has therefore extended the effective date by one year to January 2007.

The same manufacturer also felt there should be a separate category for units with sliding doors, as intuitively they would use more energy than units with hinged doors. However, U.S. tests have shown that sliding-door units use less energy than hinged-door units because of the door-opening part of the ASHRAE 117 test.

The manufacturer also felt the Regulations should exclude refrigerators and freezers that also have to meet food-safety regulations (such as a pull-down test to cool food quickly). NRCan feels that this is an issue that all manufacturers face and that the technology exists to meet both regulations, as there are units already on the market that meet both requirements.

The manufacturer also noted that California has gone to Tier II energy efficiency levels and felt that Canada should follow so that Canadian manufacturers were not at a disadvantage. ACEEE also felt that the Canadian proposal, to go to CEC Tier I levels, was weak. NRCan therefore proposes going to CEC Tier II energy efficiency levels on January 1, 2008, one year after going to CEC Tier I.

The manufacturer questioned the wisdom of requiring the refrigerator or freezer volume to be measured using AHAM (Association of Home Appliance Manufacturers) standard HRF-1, which was written for household units. NRCan needs a way of measuring volume that is consistent with what other organizations are using, and AHAM HRF-1 is called up

by both the CSA in its standard and by CEC.

Another issue concerned "no-door" refrigerators. These were to be covered under the CEC regulations, but not Canada's. In order to harmonize with CEC, NRCan proposed that "no-door" refrigerators should meet the same efficiency levels as glass-door units.

In April 2005, a second bulletin describing the revisions to the proposed Regulations was sent electronically to stakeholders and posted on the NRCan Web site. Written responses were received from three manufacturers, an individual, and the Air-Conditioning and Refrigeration Institute (ARI).

There were many comments saying that the efficiency levels proposed for no-door units for bottled or canned beverages are unattainable and that California had dropped regulating no-door units at the last minute. One manufacturer questioned why only no-door units that sold bottled or canned beverages were covered and not units that sold refrigerated food. NRCan agrees that more information is required regarding the energy efficiency levels of no-door units currently in the market. NRCan will harmonize with the CEC and require manufacturers to report and verify the energy efficiency levels of their no-door beverage merchandisers, but their energy efficiency levels will not be regulated at this time. NRCan will extend this reporting to cover all self-contained, no-door refrigerators and freezers. NRCan will also initiate a test program on some no-door units.

A manufacturer asked if the Regulations covered preparation tables (which have a refrigerator under the counter and cool the food on the top back with cool air). NRCan decided not to cover preparation tables, as they cannot be tested to ASHRAE 117. The manufacturer also asked if buffet tables (which have an open top) were covered. NRCan will also exempt buffet tables, as they are not intended for long-term storage of food and cannot be tested with ASHRAE 117.

Packaged terminal air conditioners and heat pumps

A bulletin was sent to stakeholders in March 2003 and posted on the NRCan Office of Energy Efficiency Regulations Web site. The proposed efficiency levels were the same as those in ASHRAE 90.1, with the addition of minimum efficiency levels for replacement units. Vertically oriented packaged terminal air conditioners and heat pumps (PTAC/HP) were also included initially. Comments were received from the industry that the proposed minimum efficiency levels for vertical PTAC/HP equipment were too stringent. NRCan has removed the vertical units and expects to address this equipment at a later date. In addition, the industry supported having separate efficiency levels for replacement equipment.

During 2003, the CSA subcommittee developing the test method was active, with the result that a harmonized test method CSA C744-04 was jointly published by CSA and the U.S. ARI.

A second bulletin was distributed in September 2004, addressing only horizontally oriented PTAC/HP equipment for both new and replacement applications. No additional comments were received.

Large air conditioners and heat pumps

Large air conditioners and heat pumps are used for heating and cooling larger commercial buildings. NRCan posted a bulletin on the Energy Efficiency Regulations Web site and distributed it to stakeholders in August 2004.

The proposed minimum efficiency requirements were initially taken from CSA C746-98, which were similar to ASHRAE 90.1-1999 levels. A number of comments were received pointing out minor differences between CSA C746-98 and ASHRAE 90.1 and encouraging NRCan to specify the requirements of ASHRAE 90.1. Those changes were made.

ARI commented that performance at -8.3°C for heat pumps should not be required since U.S. regulations do not specify this value. NRCan has retained this rating point, since efficiency for heating at lower temperatures is an important factor in Canada, and ASHRAE 90.1 specifies this rating point.

Ground-source heat pumps and internal water loop heat pumps

Water loop heat pumps are used to heat and cool commercial buildings. This equipment allows simultaneous heating and cooling of different spaces within a building. Ground-source heat pumps use a buried or submerged heat exchanger loop, and when installed this way are called closed loop. These heat pumps can also be used with well or surface water in an open system.

In 2003, NRCan undertook a study to assess the economics and technical feasibility of higher minimum energy performance standards. Efficiency levels proposed initially were taken from CAN/CSA C13256-1, except that higher efficiency requirements for closed loop systems were evaluated and found to be cost-effective. The proposed effective date was September 2005.

A bulletin was posted and distributed in August 2004 outlining the proposed amendments. In late September 2004, the Earth Energy Association of Canada organized a conference call meeting to discuss the proposed changes. Though participation was limited, the following comments were received.

A Canadian company noted that additional time was required for design, construction and testing in order to make efficiency changes to their line for ground source heat pumps. This company did not recommend a higher efficiency level in Canada for closed loop ground source heat pumps. This comment, against higher efficiency, was also made by a U.S. company which stated that it would not produce a higher efficiency model only for Canada. This company does produce a higher efficiency, higher-priced model, but the representative argued that the technology is more expensive, and this would hurt the ability to compete against less efficient alternatives such as air source heat pumps.

No comments were received regarding the proposed minimum efficiency levels and implementation date for equipment used in internal water loop systems.

The implementation date for ground source heat pumps will be delayed until June 1, 2006, to allow sufficient time to upgrade and test higher efficiency equipment. The implementation date for internal water loop heat pumps will remain September 1, 2005.

NRCan's proposal to increase the minimum efficiency above the level of CAN/CSA C13256 and ASHRAE 90.1 for closed ground-source heat pump will be delayed until a later date.

Central air conditioners and heat pumps less than 19 kW (65 000 Btu/h)

There are about 250 000 central air conditioners and heat pumps less than 19 kW (65 000 Btu/h) in size sold in Canada per year. About 60% are sold in Ontario. Sales of heat pumps have increased significantly in areas where no natural gas is available.

During 2003 and 2004, the CSA subcommittee has been active in combining previously separate standards for single- and 3-phase equipment into a single test method, CSA C656-04. The new test method incorporates the latest U.S. Department of Energy (DOE) Appendix M test method.

The Heating, Refrigeration and Air-conditioning Institute of Canada (HRAI), representing the air conditioning industry in Canada, submitted a letter to NRCan supporting harmonization of efficiency levels with the levels approved in the United States for January 23, 2006.

NRCan distributed and posted a bulletin in July 2004 in which the same minimum efficiency levels as in the United States were proposed. Speciality equipment, including "space-constrained" and "small diameter high velocity" were also to have the same minimum efficiency levels as required in the United States.

Air conditioners are not typically used for extended periods during the summer in Canada. However, air conditioners contribute directly to the need for new electricity generation and therefore result in higher rates for electricity customers. To address this problem, NRCan proposed mandatory reporting of energy efficiency ratio (EER) at 35°C for the benefit of electricity utilities and their customers in those areas where the use of electricity is at its peak in the summertime, notably in Ontario where there is little excess generating capacity. Other provincial utilities, Manitoba Hydro and BC Hydro, responded with interest in peak demand reduction potential of more efficient air conditioners since generating capacity could be made available for future development and for export of electricity.

NRCan proposed mandatory reporting of EER at 35°C which is the recognized metric for efficiency at higher temperatures during high temperature peak demand periods. Manufacturers, through HRAI and ARI, objected to mandatory reporting of EER, citing reasons of extra cost in testing, the possibility of creating confusion for purchasers, and concern about the validity of the EER data which is presently voluntarily reported. A conference call and then a consultation workshop were held to gather more information on this issue. About 30 people attended the consultation workshop including manufacturers, HRAI, ARI and electricity utility representatives. The workshop served to illustrate the significant reduction in peak demand available with higher EER equipment.

Since Ontario utilities are still in the planning stage for demand side management (DSM) programs, and since ARI has committed to a verification process that will improve the quality of EER data, NRCan has decided to continue to have EER ratings reported on a voluntary basis. If EER ratings are not reported voluntarily and verified by ARI, mandatory reporting will be incorporated into a future amendment to the *Energy Efficiency*

Regulations. NRCan will make the EER ratings available to electrical utilities.

In the United States, air conditioners and heat pumps under 19 kW operating on 3-phase power were not addressed. NRCan has done additional research to ensure that 3-phase equipment is available and has concluded that there are no technical barriers to including 3-phase equipment. NRCan's existing *Energy Efficiency Regulations* treat single- and 3-phase equipment equally.

Chest freezer with automatic defrost system and natural compressor cycling auto-defrost system

The U.S. DOE has recently issued a product exemption for automatic defrost chest freezers and a direct final rule for compact refrigerators using compressor cycling as its automatic defrost. At this time, NRCan is proposing to amend the Regulations to harmonize with the U.S. test procedure. NRCan will also support a revision to the CSA C300-00 standard to be referenced in a future amendment to the Regulations. Also, the proposed amendment will ensure that labels are harmonized in Canada and the United States.

Chest freezers with automatic defrost (new type — Type 10A) will be labelled using the EnerGuide label for appliances as per Part III of the Regulations. For products with automatic defrost system using natural compressor cycling, no change to the labelling requirements will be introduced at this time.

A bulletin was sent to all stakeholders and posted on the Energy Efficiency Regulations Web site in November 2004. There were written responses from one manufacturer, a provincial utility, a provincial government, the CSA and CSA International, Association of Home Appliance Manufacturers (AHAM), and the consumer representative.

All comments with respect to the proposed amendment were positive and no significant issues were identified. One clarification was made to AHAM and W.C. Wood Company Limited with respect to products with compressor-cycled automatic defrost systems. The proposed modification will apply to all full-size refrigerators and combination of refrigerator-freezers that use the natural compressor cycle as the defrost system.

Combination refrigerator-freezer, with bottom mounted freezer and through-the-door-ice service with an automatic defrost system

The U.S. DOE has recently issued a product exemption for a combination refrigerator-freezer, with bottom mounted freezer and through-the-door-ice service with an automatic defrost system. At this time, NRCan is proposing to amend the regulations to ensure that labels are harmonized in Canada and the United States. NRCan will also support a revision to the CSA C300-00 standard to be referenced in a future amendment to the regulations.

Combination refrigerator-freezer, with bottom mounted freezer and through-the-door-ice service with an automatic defrost system (new type—Type 5A) will be labelled using the EnerGuide label for appliances.

In August 2005, a preliminary consultation with AHAM and the Canadian Appliance

Manufacturers Association (CAMA) was conducted in order to inform and get preliminary feedback from stakeholders most affected by this amendment. NRCan has received positive feedback from both industry associations.

Exit signs

During the consultation for the recent addition of internally lighted exit signs to the *Energy Efficiency Regulations*, industry raised a concern regarding potential "stock-piling" of inefficient products as a way of circumventing the Regulations and delaying the positive environmental impact of the higher efficiency exit signs. NRCan recognizes that this concern is substantial and has merit unique to the exit sign industry. NRCan gave notice, at that time, of its intention to propose a future amendment to the Regulations to repeal the November 1, 2004 completion date. This would be effective upon registration of the current amendment. This will have provided approximately seven to nine months for product manufactured prior to the completion date to clear the distribution chain and will require that all exit signs comply with the minimum performance standard, regardless of the date of manufacture. Industry and stakeholders have reached an agreement for this amendment and they will ensure that the savings attributable to the energy efficient exit signs are achieved within a reasonable time period.

Fluorescent lamp ballasts

On April 1, 2005, new minimum efficacy factors came into effect for fluorescent lamp ballasts. These issues have been discussed with industry stakeholders through bulletins (March and August 2005) and at Canadian Lighting Industry Collaborative meetings.

Since the publication of this amendment in the *Canada Gazette*, Part II, in April 2003, a number of issues have been raised by industry stakeholders.

NRCan is proposing to amend the exclusion for low temperature ballasts. The exclusion would only apply to ballasts that operate two 96WT12 lamps designed for temperatures of -28°C (-20°F) or lower and used in outdoor signs. This change will now be harmonized with the U.S. rule and ensure that the predicted energy savings are achieved.

NRCan is proposing to add an exclusion for ballasts with integrated dimming capability to less than 50% of their rated capacity.

Some manufacturers wanted to exclude ballasts capable of dimming with external dimming controls; however, this would allow all ballasts installed with external dimming controls to be excluded from these Regulations and would effectively bring us back to status quo in regard to the use of low efficiency magnetic ballasts. This is now essentially harmonized with the U.S. Rule, with a clarification that the dimming control be "integrated" with the ballast.

The issue of potential "stock piling" of inefficient products was raised as a way of circumventing the Regulations and delaying the positive environmental impact of the higher efficiency fluorescent lamp ballasts. NRCan is proposing to repeal the completion date (date of manufacture) for the April 1, 2005 levels. Lower efficiency products will have had 15 months to clear the distribution chain. The completion date for "replacement" ballasts remains April 1, 2010.

NRCan is proposing that ballasts used with energy saving lamps (34WT12, F96T12 and F96T12HO) be required to meet new specific ballast efficacy factors. NRCan is proposing that these new efficacy factors be in effect as of July 1, 2006. With the efficacy factors established in April 2005, there was still an opportunity for a ballast operating two 34WT12 ES lamps to meet the new levels using a magnetic ballast. The intent of the new ballasts efficacy factors was to move the market toward the more energy efficient electronic ballasts.

The U.S. DOE Energy Bill requires that the energy saving ballasts meet the same new efficacy factors; however, the U.S. DOE process imposes time constraints to a minimum of three years between the date a rule is issued and its effective date. The U.S. DOE's time line for energy saving lamps is as follows:

1. Manufactured on or after July 1, 2009;

2. Sold by the manufacturer on or after October 1, 2009;

3. Incorporated in a luminaire by a luminaire manufacturer on or after July 1, 2010; and

4. Used as a replacement ballast on or after July 1, 2010.

NRCan believes that its proposal meets the intent of the original legislation (dated April 2003) and that this is sufficient notice for implementation.

NRCan is proposing to lower the power factor of a specific group of ballasts used in residential applications from 0.9 to 0.5. This will only apply to ballasts operating F32T8 lamps, with a colour rendering index (CRI) greater than 75 and operating at 120 volts.

Residential Light Fixtures (RLF) have been a part of the Environmental Protection Agency's Energy Star Program in the United States, but have not yet been adopted in Canada. In the United States, the power factor of ballasts in residential fixtures is not regulated. The Energy Star Program in the United States has adopted a power factor of 0.5 or greater for ballasts used in RLF. In Canada, the Regulations stipulate that regulated ballasts must have a power factor equal to or greater than 0.9, independent of its applications. Concerns were expressed on the part of some utilities and provincial governments that lowering the power factor in residential applications would cause problems with higher total harmonic distortion on the system. Manufacturers were concerned that leaving in a power factor level of 0.9 for residential applications would reduce the availability of RLF in Canada, thus potentially increasing prices. Some utilities expressed the need to adopt the Energy Star Program for high energy efficient RLFs in Canada, in order to allow for a greater variety of fixture models to be available to the consumer and to influence market transformation.

Dry-type transformers

On January 1, 2005, minimum energy performance standards came into effect for dry-type transformers. Transformers with tap ranges greater than 10% are specifically excluded from the Regulations and are harmonized with the reference test procedure CAN/CSA C802.2 "Minimum Efficiency Values for Dry-Type Transformers." The tap

range is the difference (in percentage) between the highest voltage tap and the lowest voltage tap, compared to the nominal voltage. Stakeholders have alerted NRCan that it could be possible to take advantage of the exemption thereby reducing the energy savings impact of the standard.

In June 2005, NRCan held a workshop with interested stakeholders, particularly the manufacturers, to discuss removing the tap range exemption altogether. There were 20 attendees, including representatives from 8 manufacturers. The manufacturers agreed that there was no market for transformers with a tap range greater than 15% and that NRCan could eliminate the tap range exemption completely. The manufacturers also agreed to modify the definition of a dry-type transformer to strike out the line ". . . and has a secondary voltage of 600 volts or less." In addition, the manufacturers agreed to remove the exemption for drive (isolation) transformers that have a single output winding. Drive transformers with two or more output windings remain excluded from the Regulations.

Compliance and enforcement

It is expected that the compliance and enforcement procedures already in place for all products regulated under the *Energy Efficiency Regulations* will continue to serve will for these products. The main features of this system are described below.

Customs monitoring

NRCan's procedures for commercial imports of prescribed products will apply to products prescribed under the amendment. This involves cross-checking data received from custom release documents with the Energy Efficiency Reports which dealers must submit to NRCan as specified in Part V and Schedule IV of the *Energy Efficiency Regulations*. This cross-checking ensures that NRCan can verify the efficiency of imports clearing customs.

North American manufacturers' support for the amendment will contribute to the effectiveness of these border monitoring activities. Since these manufacturers will provide the information required in the Energy Efficiency Report in a timely fashion, NRCan will have an effective basis for cross-checking with the customs release documents.

Verification marking

For products prescribed under the *Energy Efficiency Regulations*, NRCan employs a third-party verification system using the services of certification organizations accredited by the Standards Council of Canada.

Direct fieldwork — Market survey and product testing

NRCan will conduct product testing on a complaint driven basis. The market is highly competitive and suppliers are cognizant of performance claims made by their competitors. Challenges by which performance claims can be questioned exist in all verification programs.

Conclusion

An appropriate level of compliance with the amendment will result from support by North American manufacturers, third-party verification, customs monitoring, co-operation with regulating provinces, communication activities, market surveys, and product testing as required.

Contact

John Cockburn, Senior Chief, Standards and Labelling, Office of Energy Efficiency, Natural Resources Canada, 1 Observatory Crescent, 2nd Floor, Ottawa, Ontario K1A 0E4, (613) 996-4359 (telephone), (613) 947-5286 (fax), equipment@nrcan.gc.ca (email).

PROPOSED REGULATORY TEXT

Notice is hereby given, pursuant to subsection 26(1) of the *Energy Efficiency Act* (see footnote a), that the Governor in Council, pursuant to sections 20 and 25 of that Act, proposes to make the annexed *Regulations Amending the Energy Efficiency Regulations*.

Interested persons may make representations with respect to the proposed Regulations within 75 days after the date of publication of this notice. All such representations must cite the *Canada Gazette*, Part I, and the date of publication of this notice, and be addressed to John Cockburn, Senior Chief, Standards and Labelling, Office of Energy Efficiency, Natural Resources Canada, Sir William Logan Building, 580 Booth Street, Ottawa, Ontario K1A 0E4 (tel.: (613) 996-4359; e-mail: equipment@nrcan.gc.ca).

Persons making representations should identify any of those representations the disclosure of which should be refused under the *Access to Information Act*, in particular under sections 19 and 20 of that Act, and should indicate the reasons why and the period during which the representations should not be disclosed. They should also identify any representations for which there is consent to disclosure for the purposes of that Act.

Ottawa, April 27, 2006

DIANE LABELLE
Acting Assistant Clerk of the Privy Council

REGULATIONS AMENDING THE ENERGY EFFICIENCY REGULATIONS

AMENDMENTS

1. (1) The definitions "CSA C273.3", "CSA C373", "CSA C656", "refrigerator or combination refrigerator-freezer", "10 CFR Appendix C", "10 CFR 430.23" and "wall-mounted" in subsection 2(1) of the *Energy Efficiency Regulations* (see footnote 2) **are repealed.**

(2) The definitions "CSA C300-00", "dishwasher", "dry-type transformer", "electric water heater", "fluorescent lamp ballast", "large air-conditioner", "large condensing unit", "large heat pump" and "sealed transformer" in subsection 2(1)

of the Regulations are replaced by the following:

"CSA C300-00" means the CSA standard CAN/CSA-C300-00 entitled *Energy Performance and Capacity of Household Refrigerators, Refrigerator-Freezers, and Freezers*; (*CSA C300-00*)

"dishwasher" means an electrically operated automatic household dishwasher; (*lave-vaisselle*)

"dry-type transformer"

(*a*) means a transformer, including one that is incorporated into any other product, in which the core and windings are in a gaseous or dry compound insulating medium and that

(i) is either single-phase with a nominal power of 15 to 833 kVA or three-phase with a nominal power of 15 to 7 500 kVA,

(ii) has a nominal frequency of 60 Hz, and

(iii) has a high voltage winding of 35 kV or less,

but

(*b*) does not include

(i) an autotransformer,

(ii) a drive (isolation) transformer with two or more output windings or a nominal low-voltage line current greater than 1 500 A,

(iii) an instrument transformer,

(iv) a rectifier transformer,

(v) a sealed transformer,

(vi) a non-ventilated transformer,

(vii) a testing transformer,

(viii) a furnace transformer,

(ix) a welding transformer, or

(x) a transformer with a nominal low-voltage line current of 4 000 A or more;

(*transformateur à sec*)

"electric water heater" means a stationary electric storage tank water heater with a capacity of not less than 50 L (11 imperial gallons) and not more than 454 L (100 imperial gallons) that is intended for use on a pressure system; (*chauffe-eau électrique*)

"fluorescent lamp ballast"

(*a*) means a device that is

(i) used to start and operate fluorescent lamps by

(A) providing starting voltage and current,

(B) limiting the current during normal operation, and

(C) if necessary to facilitate lamp operation, providing cathode heating,

(ii) designed for input of 120, 227 or 347 volts, and

(iii) designed to operate with an F32T8, F34T12, F40T10 or F40T12 rapid start fluorescent lamp or an F96T12ES, F96T12IS, F96T12HO or F96T12HO ES fluorescent lamp,

but

(*b*) does not include

(i) a ballast that is designed to be used in an outdoor sign and that is capable of operating with an F96T12HO fluorescent lamp in ambient temperatures at or below -28.9°C, or

(ii) a ballast that, by means of an integrated dimming capability, can reduce the output of the fluorescent lamp by 50% or more; (*ballast pour lampe fluorescente*)

"large air-conditioner" means a commercial or industrial unitary air-conditioner with a cooling capacity of at least 19kW (65 000 Btu/h) but no greater than 70 kW (240 000 Btu/h); (*climatiseur de grande puissance*)

"large condensing unit" means a commercial or industrial condensing unit intended for air-conditioning applications with a cooling capacity of at least 19 kW (65 000 Btu/h) but no greater than 70 kW (240 000 Btu/h); (*groupe compresseur-condenseur de grande puissance*)

"large heat pump" means a commercial or industrial unitary heat pump intended for air-conditioning and space-heating applications with a cooling capacity of at least 19 kW (65 000 Btu/h) but no greater than 70 kW (240 000 Btu/h); (*thermopompe de grande puissance*)

"sealed transformer" means a transformer that is designed to remain hermetically sealed in a gas under specified conditions of temperature and pressure; (*transformateur hermétique*)

(3) The definitions "climatiseur individuel", "climatiseur terminal autonome", "CSA C361", "CSA C802.2", "intégré", "laveuse", "laveuse-sécheuse", "non encastré", "ordinaire" and "thermopompe terminale autonome" in subsection 2(1) of the French version of the Regulations are replaced by the following:

« climatiseur individuel » Climatiseur individuel à alimentation électrique monophasée, à l'exception de tout climatiseur terminal autonome, dont la capacité de refroidissement n'excède pas 10,55 kW (36 000 Btu/h). (*room air-conditioner*)

« climatiseur terminal autonome » Climatiseur terminal autonome assemblé en usine qui, selon le cas :

a) est constitué d'un manchon mural et d'un dispositif de refroidissement distinct non contenu dans un boîtier et est destiné à refroidir une seule pièce ou zone;

b) est constitué d'un manchon et d'une combinaison distincte de dispositifs de chauffage et de refroidissement non contenus dans un boîtier et est destiné à chauffer et à refroidir une seule pièce ou zone. (*packaged terminal air-conditioner*)

« CSA C361 » La norme CAN/CSA-C361-92 de la CSA intitulée *Détermination de la capacité du tambour et méthodes d'essai de la consommation d'énergie des sécheuses électrodomestiques à séchage par culbutage*. (*CSA C361*)

« CSA C802.2 » La norme CAN/CSA-C802.2-00 de la CSA intitulée *Valeurs minimales de rendement pour les transformateurs à sec*. (*CSA C802.2*)

« intégré » Se dit de ce qui est soutenu par un plan de travail horizontal. (*counter-mounted*)

« laveuse » Laveuse à linge domestique alimentée à l'électricité, de modèle ordinaire ou compact, à chargement vertical ou frontal, comportant un système interne de commande qui règle la température de l'eau sans que l'utilisateur ait à intervenir après la mise en marche de l'appareil. (*clothes washer*)

« laveuse-sécheuse » Appareil domestique qui consiste en une laveuse et une sécheuse superposées ou côte à côte, alimentées par une seule source d'alimentation, et dont le panneau de commande est monté sur l'une des deux. Les laveuses-sécheuses combinées sont visées par la présente définition. (*integrated clothes washer-dryer*)

« non encastré » Se dit de ce qui n'est pas soutenu par de la menuiserie, par un ou plusieurs murs ou par d'autres constructions semblables. (*freestanding*)

« ordinaire » S'entend, lorsqu'il s'agit de la catégorie de grosseur :

a) dans le cas des sécheuses, de celles dont le tambour a une capacité d'au moins 125 L (4,4 pieds cubes);

b) dans le cas des laveuses, de celles dont la cuve a une capacité d'au moins 45 L (1,6 pied cube);

c) dans le cas des lave-vaisselle, de ceux ayant une capacité d'au moins huit couverts plus six pièces de service, au sens de la norme ANSI/AHAM DW-1;

d) dans le cas des laveuses-sécheuses, autres que des laveuses-sécheuses combinées, de celles dont le tambour de la sécheuse a une capacité d'au moins 125 L (4,4 pieds cubes) et dont la cuve de la laveuse a une capacité d'au moins 45 L (1,6 pied cube);

e) dans le cas des laveuses-sécheuses combinées, de celles dont le tambour a une capacité d'au moins 45 L (1,6 pied cube). (*standard*)

« thermopompe terminale autonome » Thermopompe terminale autonome assemblée en usine, qui est constituée d'un système frigorifique distinct non contenu dans un boîtier et qui fait appel à un cycle de réfrigération inversé comme source de chaleur primaire. (*packaged terminal heat pump*)

(4) Paragraph (*a*) of the definition "annual energy consumption" in subsection 2(1) of the Regulations is replaced by the following:

(*a*) dishwashers, the estimated annual energy use as calculated in accordance with CSA C373-04,

(5) Subparagraph (*d*)(ii) of the definition "type" in subsection 2(1) of the Regulations is replaced by the following:

(ii) on or after July 1, 2001, one described in any of the product types (8) to (10) and (16) to (18) of Table 1 to CSA C300-00 or a Type 10A chest freezer,

(6) Subparagraph (*e*)(ii) of the definition "type" in subsection 2(1) of the Regulations is replaced by the following:

(ii) on or after July 1, 2001, one described in any of the product types (1) to (7) and (11) to (15) of Table 1 to CSA C300-00 or a Type 5A combination refrigerator-freezer,

(7) The definition "V" in subsection 2(1) of the Regulations is amended by striking out the word "and" at the end of paragraph (*f*), by adding the word "and" to the end of paragraph (*g*) and by adding the following after paragraph (*g*):

(*h*) self-contained commercial refrigerators and self-contained commercial freezers, the volume of the refrigerator compartment or freezer compartment, as the case may be, in litres as calculated in accordance with sections 4 and 5 of the AHAM standard ANSI/AHAM HRF-1-2004 entitled *Energy Performance and Capacity of Household Refrigerators, Refrigerator-Freezers and Freezers*; (*V*)

(8) The portion of the definition "cuisinière électrique" in subsection 2(1) of the French version of the Regulations before paragraph (*a*) is replaced by the following:

« cuisinière électrique » Cuisinière domestique alimentée à l'électricité, de l'un des types suivants :

(9) Paragraph (*b*) of the definition "encastré" in subsection 2(1) of the French version of the Regulations is replaced by the following:

b) dans le cas d'une cuisinière électrique ou à gaz, de celle qui est soutenue par de la menuiserie, par un ou plusieurs murs ou par d'autres constructions semblables. (*built-in*)

(10) Paragraph (*a*) of the definition "lampe-réflecteur à incandescence standard" in subsection 2(1) of the French version of the Regulations is replaced by the following:

a) la forme d'une ampoule de type R ou PAR ou d'une ampoule semblable qui n'est pas de type ER ou BR, selon la description prévue à la norme ANSI C79.1;

(11) The portion of the definition "laveuse-sécheuse combinée" in subsection 2(1) of the French version of the Regulations before paragraph (*a*) is replaced by the following:

« laveuse-sécheuse combinée » Appareil domestique doté :

(12) Subsection 2(1) of the Regulations is amended by adding the following in alphabetical order:

"ASHRAE" means the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.; (*ASHRAE*)

"ASHRAE 32.1" means the ASHRAE standard 32.1-2004 entitled *Methods of Testing for Rating Vending Machines for Bottled, Canned, and Other Sealed Beverages*; (*ASHRAE 32.1*)

"ASHRAE 72" means the ANSI/ASHRAE standard 72-1998 entitled *Methods of Testing Open Refrigerators*; (*ASHRAE 72*)

"ASHRAE 117" means the ANSI/ASHRAE standard 1171992 entitled *Method of Testing Closed Refrigerators*; (*ASHRAE 117*)

"AV" means, with respect to self-contained commercial refrigerator-freezers, the adjusted volume of the product in litres calculated as follows:

AV = the refrigerator volume in litres + 1.63 × the freezer volume in litres; (*VC*)

"compressor-cycled automatic defrost system" means a defrost system in which the defrosting action for refrigerated surfaces occurs using the natural warming of the evaporator when the compressor is cycled on and that is initiated and terminated automatically; (*dispositif de dégivrage automatique à cycle du compresseur*)

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

"CSA C373-04" means the CSA standard CAN/CSA C373-04 entitled *Energy Consumption Test Methods and Limits for Household Dishwashers*; (*CSA C373-04*)

"CSA C656-05" means the CSA standard CAN/CSA C656-05 entitled *Performance Standard for Split-System and Single Package Central Air-Conditioners and Heat Pumps*; (*CSA C656-05*)

"CSA C744-04" means the joint CSA and Air-Conditioning and Refrigeration Institute standard ARI 310/380-2004/CSA C744-04 entitled *Standard for Packaged Terminal Air-Conditioners and Heat Pumps*; (*CSA C744-04*)

"CSA C13256-1" means the CSA standard CAN/CSA-C13256-1-01 entitled *Water-Source Heat Pumps — Testing and Rating for Performance — Part 1: Water-to-Air and Brine-to-Air Heat Pumps*; (*CSA C13256-1*)

"E_{daily}" means, with respect to a product referred to in any of paragraphs 3(1)(*y*) to (*z*.3), the daily energy consumption of the product expressed in kilowatt hours per day; (E_{quot})

"furnace transformer" means a three-phase step-down transformer that is designed to be connected to an electric-arc furnace and that is equipped with a delta-wye switching arrangement and high voltage taps that change the level of low voltage supplied to the furnace; (*transformateur de fourneau*)

"low power mode" means, in respect of a beverage vending machine or a snack and refrigerated beverage vending machine, a mode — into which the machine automatically enters during a period of extended inactivity — that is capable of reducing the energy consumption of the machine by means of the following power states:

(*a*) a lighting power state in which the machine's lights are turned off,

(*b*) a refrigeration power state in which the average temperature of the refrigerated beverages is allowed to rise to 4.4°C, and

(*c*) a machine power state in which the lighting and refrigeration power states are both in operation; (*mode de veille*)

"non-ventilated transformer" means a transformer that is designed to prevent external air circulation through the windings when it operates at zero gauge pressure; (*transformateur non ventilé*)

"refrigerated beverage vending machine" means a self-contained system designed to accept consumer payments and dispense only bottled, canned or other sealed beverages; (*distributeur automatique de boissons réfrigérées*)

"refrigerated buffet table" means a commercial refrigerator that

(*a*) is designed to function as a table or counter for receiving and refrigerating food and from which persons can serve themselves, and

(*b*) uses a mechanical refrigeration system; (*table de buffet réfrigérée*)

"refrigerated preparation table" means a commercial refrigerator the top of which is a work surface on which food can be prepared, displayed and kept refrigerated at temperatures between 1°C and 5°C; (*table de préparation réfrigérée*)

"refrigerator" or "combination refrigerator-freezer" means a household refrigerator or a household combination refrigerator-freezer, as the case may be, that has a defrost system — including a compressor-cycled automatic defrost system — and a capacity of 1 100 L (39 cubic feet) or less, but does not include a household wine chiller or a refrigerator that uses an absorption refrigeration system; (*réfrigérateur ou réfrigérateur-congélateur*)

"replacement fluorescent lamp ballast" means a fluorescent lamp ballast that

(*a*) is specifically marketed for use as a replacement lamp ballast for an existing fluorescent luminaire installation,

(*b*) is marked with the words "FOR REPLACEMENT USE ONLY",

(*c*) has output leads that, when fully extended, are shorter than the length of the fluorescent lamp with which it is intended to operate, and

(*d*) is sold by a dealer in a package that contains not more than 10 ballasts; (*ballast de remplacement pour lampe fluorescente*)

"replacement unit" means, with respect to packaged terminal air-conditioners and packaged terminal heat pumps, units with wall sleeves less than 0.41 m (16 inches) high or less than 1.07 m (42 inches) wide; (*unité de remplacement*)

"self-contained commercial freezer" means a commercial freezer all the compartments of which are designed for the freezing and storage of food, beverages or ice and that has a self-contained refrigeration system that requires energy input, but does not include a walk-in commercial freezer; (*congélateur commercial autonome*)

"self-contained commercial refrigerator"

(*a*) means a commercial refrigerator that

(i) has at least one compartment for the storage of food and beverages at temperatures above 0°C,

(ii) has no more than one compartment for the freezing and storage of food and beverages and that stores those goods at temperatures between 0°C and -13.3°C, and

(iii) has a self-contained refrigeration system that requires energy input,

but

(*b*) does not include

(i) a refrigerated buffet table,

(ii) a refrigerated preparation table, or

(iii) a walk-in commercial refrigerator; (*réfrigérateur commercial autonome*)

"self-contained commercial refrigerator-freezer" means a commercial refrigerator-freezer, other than a walk-in commercial refrigerator-freezer, that

(*a*) has two or more compartments, at least one of which is for the storage of food and beverages at temperatures above 0°C and at least one other of which is for the freezing and storage of food and beverages at temperatures below -13.3°C, and

(*b*) has a self-contained refrigeration system that requires energy input; (*réfrigérateur-congélateur commercial autonome*)

"small-duct and high-velocity" means, with respect to split-system central air-conditioners and split-system heat pumps, those having an indoor blower and coil combination that

(*a*) produces at least 300 pascals (1.2 inches of water) external static pressure when operated at an air volume rate of 104-165 L/s (220 - 350 cf/m) per rated ton of cooling, and

(*b*) uses room outlets that produce velocities greater than 5 m/s (1000 f/m) and that each have less than 39 cm^2 (six square inches) of area; (*à grand débit et petits conduits*)

"snack and refrigerated beverage vending machine" means a self-contained system that

(*a*) is designed to accept consumer payments and dispense packages of solid non-refrigerated food and bottled, canned or other sealed refrigerated beverages, and

(*b*) has a vendible capacity of no more than 100 of those beverages; (*distributeur automatique de boissons réfrigérées et de collations*)

"through-the-wall" means, with respect to single-package central air-conditioners and single-package heat pumps, those with cooling capacities less than or equal to 30 000 Btu/h and that are designed to be installed through an exterior wall; (*mural*)

"Type 5A combination refrigerator-freezer" means a combination refrigerator-freezer — the manufacturing process of which is completed on or after December 31, 2005 — that is capable of dispensing ice through the cabinet door and that is equipped with a bottom-mounted freezer and an automatic defrost system; (*réfrigérateur-congélateur de type 5A*)

"Type 10A chest freezer" means a chest freezer manufactured on or after December 31, 2003 that is accessible from the top and equipped with an automatic defrost system; (*congélateur coffre de type 10A*)

"vendible capacity" means, in respect of a refrigerated beverage vending machine or a snack and refrigerated beverage vending machine, the maximum quantity of product that is recommended by the manufacturer to be dispensed from one full loading of the machine; (*capacité de vente*)

2. (1) The portion of subsection 3(1) of the Regulations before paragraph (*a*) is replaced by the following:

3. (1) Subject to subsections (2) to (18), the following products are prescribed as energy-using products:

(2) Subsection 3(1) of the Regulations is amended by striking out the word "and" at the end of paragraph (*w*) and by adding the following after paragraph (*x*):

(*y*) self-contained commercial freezers;

(*z*) self-contained commercial refrigerator-freezers;

(*z*.1) self-contained commercial refrigerators;

(*z*.2) refrigerated beverage vending machines; and

(*z*.3) snack and refrigerated beverage vending machines.

(3) Subsection 3(2) of the Regulations is replaced by the following:

(2) Subject to subsection (6), for the purposes of Parts II to V, a product referred to in any of paragraphs (1)(*a*), (*b*), (*c*) to (*g*), (*h*.1), (*i*), (*j*), (*k*), (*l*), (*m*), (*n*), (*o*) and (*p*) to (*s*) shall not be considered to be an energy-using product unless its manufacturing process is completed on or after February 3, 1995.

(4) Subsections 3(3) and (4) of the Regulations are repealed.

(5) Subsection 3(12) of the Regulations is replaced by the following:

(12) A product referred to in paragraph (1)(*h*.2) shall not be considered to be an energy-using product

(*a*) for the purposes of Part II; or

(*b*) for the purposes of Parts III to VI, unless its manufacturing process is completed on or after June 1, 2003.

(6) Subsection 3(14) of the Regulations is replaced by the following:

(14) For the purposes of Part IV, a product referred to in paragraph (1)(*x*) shall not be considered to be an energy-using product unless its manufacturing process is completed on or after November 1, 2004.

(15) For the purposes of Parts II to V, a product referred to in paragraph (1)(*y*) or (*z*) shall not be considered to be an energy-using product unless its manufacturing process is completed on or after January 1, 2007.

(16) A product referred to in paragraph (1)(*z*.1) shall not be considered to be an energy-using product

(*a*) for the purpose of Parts II and III, unless it has cabinet drawers or cabinet doors and its manufacturing process is completed on or after January 1, 2007; or

(*b*) for the purposes of Parts IV and V, unless its manufacturing process is completed on or after January 1, 2007.

(17) For the purposes of Parts II to V, a product referred to in paragraph (1)(*z*.2) shall not be considered to be an energy-using product unless its manufacturing process is completed on or after June 1, 2006.

(18) For the purposes of Parts II to V, a product referred to in paragraph (1)(*z*.3) shall not be considered to be an energy-using product unless its manufacturing process is completed on or after January 1, 2007.

3. (1) The portion of subsection 4(1) of the Regulations before paragraph (*c*) is replaced by the following:

4. (1) Subject to subsection (1.1),

(*a*) for an energy-using product referred to in any of paragraphs 3(1)(*a*) to (*h*.1), (*i*), (*j*), (*j*.3) to (*m*.3), (*n*.1) to (*s*), (*v*), (*w*) and (*y*) to (*z*.3), an energy efficiency standard set out in column III of an item of Part 1 of Schedule I applies to the product set out in column I of that item if the manufacturing process of the product is completed during the period set out in column IV of that item;

(*b*) for an energy-using product referred to in any of paragraphs 3(1)(*j*.1), (*j*.2), (*t*), (*u*) and (*x*), an energy efficiency standard set out in column III of an item of Part 1 of Schedule I

applies to the product set out in column I of that item; and

(2) Subsection 4(1.1) of the Regulations is replaced by the following:

(1.1) During the period beginning on April 1, 2005 and ending on March 31, 2010, if an energy-using product referred to in paragraph 3(1)(*f*) is a replacement fluorescent lamp ballast, and its manufacturing process is completed during that period, the energy efficiency standard applicable to the product is the following:

Power factor = 90% and CSA C654, clause 4.1, fourth column.

(3) Subsection 4(4) of the Regulations is replaced by the following:

(4) A reference to a CSA standard set out in column III of Part 1 of Schedule I shall be read as a reference to that standard as it read on December 31, 2005.

4. The Regulations are amended by adding the following after section 4:

4.1 In respect of an energy-using product referred to in any of paragraphs 3(1)(*y*) to (*z*.1), compliance with the energy efficiency standard referred to in subsection 4(1) shall be determined in accordance with the following testing procedures:

(*a*) the testing procedures established by ASHRAE 117 that are applicable to the product as defined in these Regulations;

(*b*) if the product features a roll-through or pass-through cabinet, the testing shall be conducted with the rear doors of the cabinet in the closed position; and

(*c*) testing to determine the E_{daily} of the product shall be determined with the temperature of goods in each of the product's compartments as follows, namely,

(i) the temperature of goods in each refrigerator compartment shall be 3.3°C ± 1.1°C, but if a refrigerator compartment is designed solely for the cooling and storage of wine, the temperature of goods in that compartment shall be 7.2°C ± 1.1°C, and

(ii) the temperature of goods in each freezer compartment of a product referred to in paragraph 3(1)(*y*) or (*z*) shall be -17.8°C ± 1.1°C, but if a freezer compartment is designed solely for the storage or dispensing of ice cream or similar foods, the temperature of goods in that compartment shall be -20.6°C ± 1.1°C.

4.2 In respect of an energy-using product referred to in paragraph 3(1)(*z*.2), compliance with the energy efficiency standard referred to in subsection 4(1) shall be determined in accordance with the following testing procedures:

(*a*) the testing procedures established by sections 1 to 7.2 of ASHRAE 32.1 that are applicable to the product as defined in these Regulations; and

(*b*) testing to determine the E_{daily} shall be determined at the following ambient temperatures, namely,

(i) in the case of a product that is designed to display and dispense more than 20 discrete types of beverages, at an ambient temperature of 23.9°C ± 1°C and a relative humidity of 45% ± 5%, and

(ii) in any other case, at an ambient temperature of 32.2°C ± 1°C and a relative humidity of 65% ± 5%.

4.3 In respect of an energy-using product referred to in paragraph 3(1)(*z*.3), compliance with the energy efficiency standard referred to in subsection 4(1) shall be determined in accordance with the following testing procedures:

(*a*) the procedures established by sections 1 to 7.2 of ASHRAE 32.1 that are applicable to the product as defined in these Regulations; and

(*b*) testing to determine the E_{daily} shall be conducted at an ambient temperature of 23.9°C ± 1°C and a relative humidity of 45% ± 5%.

5. The headings before section 5 of the Regulations are replaced by the following:

PART III

ENERGY EFFICIENCY LABELLING

6. The heading before section 6 of the Regulations is repealed.

7. Section 11 of the Regulations and the headings before it are replaced by the following:

PART IV

VERIFICATION MARK LABELLING

11. (1) The following definitions apply in this Part.

"certification body" means a body accredited by the Standards Council of Canada as an energy efficiency certification body in respect of any of the following classes of products or their equivalent:

(*a*) electrical or electronic products;

(*b*) fuel-burning equipment; or

(*c*) gas-fired appliances and equipment. (*organisme de certification*)

"verification mark" means, in respect of an energy-using product, a mark

(*a*) issued by a certification body to signify that, by means of an energy performance verification program, the body has

(i) determined that the product is in compliance with the energy efficiency standard for that product referred to in section 4, or

(ii) tested and verified the energy performance of the product; or

(*b*) issued by a province to signify that the energy-using product is in compliance with the province's energy efficiency standard for the product. (*marque de vérification*)

(2) Every energy-using product shipped or imported as described in subsection 4(1) of the Act shall be labelled with at least one of the following:

(*a*) a verification mark issued by a certification body that is accredited in respect of the class of products to which the product belongs; or

(*b*) a verification mark issued by a province whose provincial energy efficiency standard for the product is equivalent to or exceeds the energy efficiency standard for the product referred to in section 4.

(3) The verification mark shall be affixed to a surface of the energy-using product such that the mark is readily visible. However, in the case of an energy-using product referred to in paragraph 3(1)(*j*.1) or (*j*.2), the verification mark may be affixed to the exterior of the product's package.

8. Paragraph 12(2)(*e*) of the English version of the Regulations is replaced by the following:

(*e*) the name of the body or province whose verification mark will be affixed to the product in accordance with Part IV; and

9. (1) Subsection 16.1(1) of the Regulations is amended by striking out the word "and" at the end of paragraph (*a*) and by repealing paragraph (*b*).

(2) Subsection 16.1(3) of the Regulations is repealed.

10. Part 1 of Schedule I to the Regulations is replaced by the following:

PART 1

Item	Column I Energy-using Product	Column II Standard/ Legislative Provision	Column III Energy Efficiency Standard	Column IV Completion Period
1.	Clothes dryers	CSA C361	E = 0.3 V + 59	on or after February 3, 1995 until April 30, 1995
2.	Clothes dryers	CSA C361	CSA C361 Table 8.1	on or after May 1, 1995
3.	Clothes washers	CSA C360	E = 1.5 V + 30.5	on or after February 3, 1993 until April 30, 1995
4.	Clothes washers	CSA C360	CSA C360 clause 8.4	on or after May 1, 1995 until December 30, 1998
5.	Clothes washers	CSA C360-98	CSA C360-98 clause 7.5	on or after December 31, 1998 until December 31, 2003
6.	Clothes washers	CSA C360-03	CSA C360-03 Table 9	on or after January 1, 2004 until December 31, 2006
7.	Clothes washers	CSA C360-03	CSA C360-03 Table 10	on or after January 1, 2007
8.	Dehumidifiers	CSA C749	CSA C749 clause 4.2	on or after December 31, 1998
9.	Dishwashers	CSA C373	CSA C373 Table 7.1	on or after February 3, 1995 until December 31, 2003
10.	Dishwashers	CSA C373-04	CSA C373-04 Table 2	on or after January 1, 2004
11.	Electric ranges that are free-standing or built-in appliances with one or more surface elements and one or more ovens	CSA C358	E = 0.93 V + 14.3	on or after February 3, 1995 until December 31, 1999

12.	Electric ranges that are free-standing or built-in appliances with one or more surface elements and one or more ovens	CSA C358-95	E = 0.93 V + 14.3	on or after January 1, 2000 until July 31, 2003
13.	Electric ranges that are free-standing or built-in appliances with one or more surface elements and one or more ovens	CSA C358-03	CSA C358-03 clause 8(*a*)	on or after August 1, 2003
14.	Electric ranges that are built-in or wall-mounted appliances with one or more ovens and no surface elements	CSA C358	E = 38	on or after February 3, 1995 until December 31, 1999
15.	Electric ranges that are built-in or wall-mounted appliances with one or more ovens and no surface elements	CSA C358-95	E = 38	on or after January 1, 2000 until July 31, 2003
16.	Electric ranges that are built-in or wall-mounted appliances with one or more ovens and no surface elements	CSA C358-03	CSA C358-03 clause 8(*c*)	on or after August 1, 2003
17.	Electric ranges that are counter-mounted appliances without ovens and with one or more surface elements on a conventional cooking top	CSA C358	E = 34	on or after February 3, 1995 until December 31, 1999
18.	Electric ranges that are counter-mounted appliances without ovens and with one or more surface elements on a conventional cooking top	CSA C358-95	E = 34	on or after January 1, 2000 until July 31, 2003

19.	Electric ranges that are counter-mounted appliances without ovens and with one or more surface elements on a modular cooking top	CSA C358	E = 43	on or after February 3, 1995 until December 31, 1999
20.	Electric ranges that are counter-mounted appliances without ovens and with one or more surface elements on a modular cooking top	CSA C358-95	E = 43	on or after January 1, 2000 until July 31, 2003
21.	Electric ranges that are counter-mounted appliances without ovens and with one or more surface elements	CSA C358-03	CSA C358-03 clause 8(*b*)	on or after August 1, 2003
22.	Electric water heaters	CSA C191.1	CSA C191.1 clause 5	on or after February 3, 1995 until June 30, 2004
23.	Electric water heaters	CSA C191-04	maximum standby loss in W =	on or after July 1, 2004
			(*a*) for tanks with bottom inlet:	
			(i) 40 + 0.2 V for tanks with V ≥ 50 L and ≤ 270 L	
			(ii) 0.472 V - 33.5 for tanks with V > 270 L and ≤ 454 L	
			(*b*) for tanks with top inlet:	
			(i) 35 + 0.2 V for tanks with V ≥ 50 L and ≤ 270 L	
			(ii) 0.472 V - 38.5 for tanks with V > 270 L and ≤ 454 L	

24.	Fluorescent lamp ballasts, other than those designed to operate F34T12 rapid start fluorescent lamps or an F96T12ES or F96T12HO ES fluorescent lamp or those designed for input of 120 volts and to operate F32T8 rapid start fluorescent lamps that have a colour rendering index greater than 75	CSA C654	power factor = 0.9 and CSA C654 clause 4.1, fifth column	on or after February 3, 1995
25.	Fluorescent lamp ballasts designed for input of 120 or 277 volts and to operate one F34T12 rapid start fluorescent lamp	CSA C654	power factor = 0.9 and a ballast efficacy factor of 2.61	on or after February 3, 1995
26.	Fluorescent lamp ballasts designed for input of 347 volts and to operate one F34T12 rapid start fluorescent lamp	CSA C654	power factor = 0.9 and a ballast efficacy factor of 2.53	on or after February 3, 1995
27.	Fluorescent lamp ballasts designed for input of 120 or 277 volts and to operate two or more F34T12 rapid start fluorescent lamps	CSA C654	power factor = 0.9 and a ballast efficacy factor of 1.35	on or after February 3, 1995
28.	Fluorescent lamp ballasts designed for input of 347 volts and to operate two or more F34T12 rapid start fluorescent lamps	CSA C654	power factor = 0.9 and a ballast efficacy factor of 1.29	on or after February 3, 1995
29.	Fluorescent lamp ballasts designed for input of 120 or 277 volts and to operate two or more F96T12ES fluorescent lamps	CSA C654	power factor = 0.9 and a ballast efficacy factor of 0.77	on or after February 3, 1995

30.	Fluorescent lamp ballasts designed for input of 347 volts and to operate two or more F96T12ES fluorescent lamps	CSA C654	power factor = 0.9 and a ballast efficacy factor of 0.76	on or after February 3, 1995
31.	Fluorescent lamp ballasts designed for input of 120 or 277 volts and to operate two or more F96T12HO ES fluorescent lamps	CSA C654	power factor = 0.9 and a ballast efficacy factor of 0.42	on or after February 3, 1995
32.	Fluorescent lamp ballasts designed for input of 347 volts and to operate two or more F96T12HO ES fluorescent lamps	CSA C654	power factor = 0.9 and a ballast efficacy factor of 0.41	on or after February 3, 1995
33.	Fluorescent lamp ballasts designed for input of 120 volts and to operate F32T8 rapid start fluorescent lamps that have a colour rendering index greater than 75	CSA C654	power factor = 0.5 and CSA C654 clause 4.1, fifth column	on or after February 3, 1995
34.	Freezers	CSA C300	CSA C300 Table 9.1	on or after February 3, 1995 until June 30, 2001
35.	Freezers other than Type 10A chest freezers	CSA C300	CSA C300-00 Table 1, column B	on or after July 1, 2001
36.	Type 10A chest freezers	CSA C300	annual energy consumption = (0.52 × adjusted volume) + 211.5	on or after December 31, 2003
37.	Gas furnaces with an input rate no greater than 65.92 kW (225 000 Btu/h) that use single-phase electric current	CGA 2.3	annual fuel utilization efficiency ≥ 78%	on or after February 3, 1995 until February 28, 2003

38.	Gas furnaces with an input rate no greater than 65.92 kW (225 000 Btu/h) that use single-phase electric current	CSA 2.3	annual fuel utilization efficiency ≥ 78%	on or after March 1, 2003
39.	Gas furnaces with an input rate no greater than 65.92 kW (225 000 Btu/h) that use three-phase electric current	CGA 2.3	annual fuel utilization efficiency ≥ 78% or thermal efficiency ≥ 80%	on or after February 3, 1995 until February 28, 2003
40.	Gas furnaces with an input rate no greater than 65.92 kW (225 000 Btu/h) that use three-phase electric current	CSA 2.3	annual fuel utilization efficiency ≥ 78% or thermal efficiency ≥ 80%	on or after March 1, 2003
41.	Gas furnaces with an input rate greater than 65.92 kW (225 000 Btu/h) but not greater than 117.23 kW (400 000 Btu/h)	CGA 2.3	thermal efficiency ≥ 80%	on or after February 3, 1995 until February 28, 2003
42.	Gas furnaces with an input rate greater than 65.92 kW (225 000 Btu/h) but not greater than 117.23 kW (400 000 Btu/h)	CSA 2.3	thermal efficiency ≥ 80%	on or after March 1, 2003
43.	Gas ranges	N/A	no continuously burning pilot light	on or after February 3, 1995
44.	Gas water heaters	CGA 4.1	EF = 0.62 - 0.0005 V	on or after February 3, 1995 until June 30, 2004
45.	Gas water heaters	CSA P.3-04	EF = 0.67 - 0.0005 V	on or after July 1, 2004
46.	Gas boilers intended for low pressure steam systems	CGA P.2	annual fuel utilization efficiency ≥ 75%	on or after December 31, 1998
47.	Gas boilers intended for hot water systems	CGA P.2	annual fuel utilization efficiency ≥ 80%	on or after December 31, 1998

48.	General service fluorescent lamps that are rapid-start straight-shaped fluorescent lamps with a nominal overall length of 1 200 mm (48 inches), a medium bi-pin base and a nominal power greater than 35 W	CSA C819	average lamp efficacy ≥ 75 lm/W and average colour rendering index ≥ 69	N/A
49.	General service fluorescent lamps that are rapid-start straight-shaped fluorescent lamps with a nominal overall length of 1 200 mm (48 inches), a medium bi-pin base and a nominal power no greater than 35 W	CSA C819	average lamp efficacy ≥ 75 lm/W and average colour rendering index ≥ 45	N/A
50.	General service fluorescent lamps that are rapid-start straight-shaped fluorescent lamps with a nominal overall length of 2 400 mm (96 inches), a recessed double contact base, a nominal power greater than 100 W and a nominal current of 0.8 A	CSA C819	average lamp efficacy ≥ 80 lm/W and average colour rendering index ≥ 69	N/A
51.	General service fluorescent lamps that are rapid-start straight-shaped fluorescent lamps with a nominal overall length of 2 400 mm (96 inches), a recessed double contact base, a nominal power no greater than 100 W and a nominal current of 0.8 A	CSA C819	average lamp efficacy ≥ 80 lm/W and average colour rendering index ≥ 45	N/A

52.	General service fluorescent lamps that are rapid-start U-shaped fluorescent lamps with a nominal overall length of not less than 560 mm (22 inches) but not more than 635 mm (25 inches), a medium bi-pin base and a nominal power greater than 35 W	CSA C819	average lamp efficacy ≥ 68 lm/W and average colour rendering index ≥ 69	N/A
53.	General service fluorescent lamps that are rapid-start U-shaped fluorescent lamps with a nominal overall length of not less than 560 mm (22 inches) but not more than 635 mm (25 inches), a medium bi-pin base and a nominal power no greater than 35 W	CSA C819	average lamp efficacy ≥ 64 lm/W and average colour rendering index ≥ 45	N/A
54.	General service fluorescent lamps that are instant-start straight-shaped fluorescent lamps with a nominal overall length of 2 400 mm (96 inches), a single-pin base and a nominal power greater than 65 W	CSA C819	average lamp efficacy ≥ 80 lm/W and average colour rendering index ≥ 69	N/A
55.	General service fluorescent lamps that are instant-start straight-shaped fluorescent lamps with a nominal overall length of 2 400 mm (96 inches), a single-pin base and a nominal power no greater than 65 W	CSA C819	average lamp efficacy ≥ 80 lm/W and average colour rendering index ≥ 45	N/A
56.	ER lamps other than ER lamps with a nominal power of 50, 75 or 120 W	CSA C862-01	CSA C862-01 Table 1 second column	on or after January 1, 2003

57.	ER lamps with a nominal power of 50, 75 or 120 W	CSA C862-01	CSA C862-01 Table 2 second column	on or after January 1, 2003
58.	BR lamps	CSA C862-01	CSA C862-01 Table 1 second column	on or after January 1, 2003
59.	General service incandescent reflector lamps	CSA C862-01	CSA C862-01 Table 1 second column	N/A
60.	Ground-source heat pumps	CSA C446	CSA C446 Table 2	on or after February 3, 1995 until December 30, 1998
61.	Ground-source heat pumps	CSA C446-94	CSA 446 Table 2	on or after December 31, 1998 until May 31, 2006
62.	Ground-source heat pumps	CSA C13256-1	CSA C13256-1 Table 10A, first row, for the open-loop system, if any and CSA C13256-1 Table 10A, second row, for the closed-loop system, if any	on or after June 1, 2006
63.	Ice-makers	CSA C742	CSA C742 Table 1	on or after December 31, 1998 until December 31, 1999
64.	Ice-makers	CSA C742-98	CSA C742-98 Table 2	on or after January 1, 2000
65.	Integrated clothes washer-dryers	CSA C360 for the clothes washer function and CSA C361 for the clothes dryer function	E = 1.5 V + 30.5 for the clothes washer function and E = 0.3 V + 59 for the clothes dryer function	on or after February 3, 1995 until April 30, 1995
66.	Integrated clothes washer-dryers	CSA C360 for the clothes washer function CSA C361 for the clothes dryer function	CSA C360, clause 8.4, for the clothes washer function and CSA C361, Table 8.1, for the clothes dryer function	on or after May 1, 1995 until December 30, 1998

67.	Integrated clothes washer-dryers	CSA C360-98 for the clothes washer function and CSA C361 for the clothes dryer function	CSA C360-98, clause 7.5, for the clothes washer function and CSA C361, Table 8.1, for the clothes dryer function	on or after December 31, 1998 until December 31, 2003
68.	Integrated clothes washer-dryers	CSA C360-03 for the clothes washer function and CSA C361 for the clothes dryer function	CSA C360-03, Table 9, for the clothes washer function and CSA C361, Table 8.1, for the clothes dryer function	on or after January 1, 2004 until December 31, 2006
69.	Integrated clothes washer-dryers	CSA C360-03 for the clothes washer function and CSA C361 for the clothes dryer function	CSA C360-03, Table 10, for the clothes washer function and CSA C361, Table 8.1, for the clothes dryer function	on or after January 1, 2007
70.	Internal water loop heat pumps	CSA C655	CSA C655 Table 2	on or after February 3, 1995 until August 31, 2005
71.	Internal water loop heat pumps with a cooling capacity < 5 kW	CSA C13256-1	cooling coefficient of performance ≥ 3.28 with 30°C inlet water and heating coefficient of performance ≥ 4.2 with 20°C inlet water	on or after September 1, 2005
72.	Internal water loop heat pumps with a cooling capacity ≥ 5 kW and ≤ 40 kW	CSA C13256-1	cooling coefficient of performance ≥ 3.52 with 30°C inlet water and heating coefficient of performance≥ 4.2 with 20°C inlet water	on or after September 1, 2005
73.	Large air-conditioners	CSA C746	CSA C746 Table 6	on or after December 31, 1998 until August 31, 2005
74.	Large air-conditioners that are cooled by air, have a cooling capacity≥ 19 kW and < 40 kW and either no heating section or an electric heating section	CSA C746	energy efficiency ratio = 10.3	on or after September 1, 2005

75.	Large air-conditioners that are cooled by air, have a cooling capacity≥ 40 kW and ≤ 70 kW and either no heating section or an electric heating section	CSA C746	energy efficiency ratio = 9.7	on or after September 1, 2005
76.	Large air-conditioners that are cooled by air, have a cooling capacity≥ 19 kW and < 40 kW and a heating section other than an electric heating section	CSA C746	energy efficiency ratio = 10.1	on or after September 1, 2005
77.	Large air-conditioners that are cooled by air, have a cooling capacity ≥ 40 kW and ≤ 70 kW and a heating section other than an electric heating section	CSA C746	energy efficiency ratio = 9.5	on or after September 1, 2005
78.	Large air-conditioners that are cooled by water or evaporation, have a cooling capacity ≥ 19 kW and < 40 kW and either no heating section or an electric heating section	CSA C746	energy efficiency ratio = 11.5	on or after September 1, 2005
79.	Large air-conditioners that are cooled by water or evaporation, have a cooling capacity ≥ 40 kW and ≤ 70 kW and either no heating section or an electric heating section	CSA C746	energy efficiency ratio = 11.0	on or after September 1, 2005

80.	Large air-conditioners that are cooled by water or evaporation, have a cooling capacity ≥ 19 kW and < 40 kW and a heating section other than an electric heating section	CSA C746	energy efficiency ratio = 11.3	on or after September 1, 2005
81.	Large air-conditioners that are cooled by water or evaporation, have a cooling capacity ≥ 40 kW and ≤ 70 kW and a heating section other than an electric heating section	CSA C746	energy efficiency ratio = 10.8	on or after September 1, 2005
82.	Large condensing units	CSA C746	CSA C746 Table 6	on or after December 31, 1998 until August 31, 2005
83.	Large condensing units that are cooled by air	CSA C746	energy efficiency ratio = 10.1	on or after September 1, 2005
84.	Large condensing units that are cooled by water or evaporation	CSA C746	energy efficiency ratio = 13.1	on or after September 1, 2005
85.	Large heat pumps	CSA C746	CSA C746 Table 6	on or after December 31, 1998 until August 31, 2005
86.	Large heat pumps that have a cooling capacity of ≥ 19 kW and < 40 kW and either no heating section or an electric heating section	CSA C746	energy efficiency ratio = 10.1, heating coefficient of performance ≥ 3.2 with 8.3°C inlet water and ≥ 2.2 with -8.3°C inlet water	on or after September 1, 2005
87.	Large heat pumps that have a cooling capacity of ≥ 40 kW and ≤ 70 kW and either no heating section or an electric heating section	CSA C746	energy efficiency ratio = 9.3, heating coefficient of performance ≥ 3.1 with 8.3°C inlet water and ≥ 2.0 with -8.3°C inlet water	on or after September 1, 2005

88.	Large heat pumps that have a cooling capacity of ≥ 19 kW and < 40 kW and a heating section other than an electric heating section	CSA C746	energy efficiency ratio = 9.9, heating coefficient of performance ≥ 3.2 with 8.3°C inlet water and ≥ 2.2 with -8.3°C inlet water	on or after September 1, 2005
89.	Large heat pumps that have a cooling capacity of ≥ 40 kW and ≤ 70 kW and a heating section other than an electric heating section	CSA C746	energy efficiency ratio = 9.1, heating coefficient of performance ≥ 3.1 with 8.3°C inlet water and ≥ 2.0 with -8.3°C inlet water	on or after September 1, 2005
90.	Oil-fired boilers	CSA B212	seasonal energy utilization efficiency ≥ 80%	on or after December 31, 1998
91.	Oil-fired furnaces	CSA B212	seasonal energy utilization efficiency ≥ 78%	on or after December 31, 1998
92.	Oil-fired water heaters	CSA B211	CSA B211, clause 7	on or after February 3, 1995 until June 30, 2004
93.	Oil-fired water heaters	CSA B211-00	EF = 0.59 - 0.0005 V	on or after July 1, 2004
94.	Packaged terminal air-conditioners	CSA C744	CSA C744 Table 2	on or after December 31, 1998 until August 31, 2005
95.	Packaged terminal air-conditioners	CSA C744-04	CSA C744-04 Table 2	on or after September 1, 2005
96.	Packaged terminal heat pumps	CSA C744	CSA C744 Table 2	on or after December 31, 1998 until August 31, 2005
97.	Packaged terminal heat pumps	CSA C744-04	CSA C744-04 Table 2	on or after September 1, 2005
98.	Refrigerators or combination refrigerator-freezers	CSA C300	CSA C300 Table 9.1	on or after February 3, 1995 until June 30, 2001

99.	Type 3 combination refrigerator-freezers with a total refrigerated volume ≥ 410.65 L and ≤ 521.10 L (≥ 14.5 cu. ft. and ≤ 18.4 cu. ft)	CSA C300	CSA C300-00 Table 1, column A	on or after July 1, 2001 until December 30, 2002
100.	Type 3 combination refrigerator-freezers with a total refrigerated volume ≥ 410.65 L and ≤ 521.10 L (≥ 14.5 cu. ft. and ≤ 18.4 cu. ft)	CSA C300	CSA C300-00 Table 1, column B	on or after December 31, 2002
101.	Type 5A combination refrigerator-freezers	CSA C300	annual energy consumption = (0.18 × adjusted volume) + 539	on or after December 31, 2005
102.	Refrigerators or combination refrigerator-freezers, other than Type 3 combination refrigerator-freezers with a total refrigerated volume ≥ 410.65 L and ≤ 521.10 L (≥ 14.5 cu. ft. and ≤ 18.4 cu. ft) or Type 5A combination refrigerator-freezers	CSA C300	CSA C300-00 Table 1, column B	on or after July 1, 2001
103.	Room air-conditioners	CSA C368.1	CSA C368.1 Table 1, third column	on or after February 3, 1995 until December 31, 2002
104.	Room air-conditioners	CSA C368.1	CSA C368.1 Table 2, second column	on or after January 1, 2003
105.	Single package central air conditioners, other than those that are through-the-wall	CSA C656-05	seasonal energy efficiency ratio ≥ 13.0	on or after February 3, 1995
106.	Single package central air-conditioners that are through-the-wall	CSA C656-05	seasonal energy efficiency ratio ≥ 10.9	on or after February 3, 1995 until January 22, 2010

107.	Single package central air-conditioners that are through-the-wall	CSA C656-05	seasonal energy efficiency ratio ≥ 12.0	on or after January 23, 2010
108.	Split-system central air-conditioners, other than those that are small-duct and high-velocity	CSA C656-05	seasonal energy efficiency ratio ≥ 13.0	N/A
109.	Split-system central air-conditioners that are small-duct and high-velocity	CSA C656-05	seasonal energy efficiency ratio ≥ 11.0	N/A
110.	Single package heat pumps, other than those that are through-the-wall	CSA C656-05	seasonal energy efficiency ratio ≥ 13.0 and heating seasonal performance factor (Region V) ≥ 6.7	on or after February 3, 1995
111.	Single package heat pumps that are through-the-wall	CSA C656-05	seasonal energy efficiency ratio ≥ 10.6 and heating seasonal performance factor (Region V) ≥ 6.1	on or after February 3, 1995 until January 22, 2010
112.	Single package heat pumps that are through-the-wall	CSA C656-05	seasonal energy efficiency ratio ≥ 12.0 and heating seasonal performance factor (Region V) ≥ 6.4	on or after January 23, 2010
113.	Split-system heat pumps, other than those that are small-duct and high-velocity	CSA C656-05	seasonal energy efficiency ratio ≥ 13.0 and heating seasonal performance factor (Region V) ≥ 6.7	N/A
114.	Split-system heat pumps that are small-duct and high-velocity	CSA C656-05	seasonal energy efficiency ratio ≥ 11.0 and heating seasonal performance factor (Region V) ≥ 5.9	N/A
115.	Dry-type transformers, single-phase, 1.2 kV class	CSA C802.2	CSA C802.2 Table 1, third column	on or after January 1, 2005
116.	Dry-type transformers, single phase, BIL 20-150 kV	CSA C802.2	CSA C802.2 Table 1, fourth column	on or after January 1, 2005
117.	Dry-type transformers, three-phase, 1.2 kV class	CSA C802.2	CSA C802.2 Table 1, seventh column	on or after January 1, 2005

118.	Dry-type transformers, three phase, BIL 20-150 kV	CSA C802.2	CSA C802.2 Table 1, eighth column	on or after January 1, 2005
119.	Chillers	CSA C743	CSA C743 Tables 9 to 15	on or after October 28, 2004
120.	Exit signs	CSA C860	maximum wattage =	N/A
			5 × (number of legends), for Type 1 and Type 2 exit signs and 5 × (number of legends) + 5, for Type 3 exit signs	
121.	Refrigerated beverage vending machines, other than those that display and dispense 20 or more discrete types of beverages	Section 4.2	E_{daily} = 55%(8.66 + 0.009 × vendible capacity) and must be capable of operating in low power mode	on or after June 1, 2006 until December 31, 2007
122.	Refrigerated beverage vending machines, other than those that display and dispense 20 or more discrete types of beverages	Section 4.2	E_{daily} = 45%(8.66 + 0.009 × vendible capacity) and must be capable of operating in low power mode	on or after January 1, 2008
123.	Refrigerated beverage vending machines that display and dispense 20 or more discrete types of beverages	Section 4.2	E_{daily} = 55%(8.66 + 0.009 × vendible capacity) and must be capable of operating in low power mode	on or after June 1, 2006
124.	Snack and refrigerated beverage vending machines	Section 4.3	E_{daily} = 55%(8.66 + 0.009 × vendible capacity) and must be capable of operating in low power mode	on or after January 1, 2007
125.	Self-contained commercial refrigerators with cabinet drawers or opaque cabinet doors	Section 4.1	E_{daily} = 0.00441 V + 4.22	on or after January 1, 2007 until December 31, 2007

126.	Self-contained commercial refrigerators with cabinet drawers or opaque cabinet doors	Section 4.1	E_{daily} = 0.00441 V + 2.76	on or after January 1, 2008
127.	Self-contained commercial refrigerators with transparent cabinet doors	Section 4.1	E_{daily} = 0.00607 V + 5.78	on or after January 1, 2007 until December 31, 2007
128.	Self-contained commercial refrigerators with transparent cabinet doors	Section 4.1	E_{daily} = 0.00607 V + 4.77	on or after January 1, 2008
129.	Self-contained commercial freezers with opaque cabinet doors	Section 4.1	E_{daily} = 0.0141 V + 2.83	on or after January 1, 2007 until December 31, 2007
130.	Self-contained commercial freezers with opaque cabinet doors	Section 4.1	E_{daily} = 0.0141 V + 2.28	on or after January 1, 2008
131.	Self-contained commercial freezers with transparent cabinet doors	Section 4.1	E_{daily} = 0.0332 V + 5.10	on or after January 1, 2007
132.	Self-contained commercial refrigerator-freezers with opaque cabinet doors	Section 4.1	E_{daily} = 0.00964 AV + 2.63	on or after January 1, 2007 until December 31, 2007
133.	Self-contained commercial refrigerator-freezers with opaque cabinet doors	Section 4.1	E_{daily} = 0.00964 AV + 1.65	on or after January 1, 2008

11. The portion of item 4.01 of Schedule IV to the Regulations in column II is replaced by the following:

Item	**Column II** **Standard/Legislative Provision**
4.01	CSA C373-04

12. Paragraph 5(*d*) of Schedule IV to the Regulations is replaced by the following:

Item	Column III Information
5.	(*d*) which of the following cooking tops the product uses: (i) conventional, or (ii) modular; and

13. Items 5.1 and 5.2 of Schedule IV to the Regulations are replaced by the following:

Item	Column I Energy-using Product	Column II Standard/Legislative Provision	Column III Information
5.1	Electric ranges that are free-standing or built-in appliances with one or more surface elements and one or more ovens, manufactured on or after January 1, 2000 and before August 1, 2003	CSA C358-95	(*a*) test group; (*b*) volume, in litres, of usable oven space; (*c*) annual energy consumption in kWh; (*d*) which of the following cooking tops the product uses: (i) conventional, or (ii) modular; and (*e*) whether the product is free-standing or built-in.
5.2	Electric ranges that are free-standing or built-in appliances with one or more surface elements and one or more ovens, manufactured on or after August 1, 2003	CSA C358-03	(*a*) test group; (*b*) volume, in litres, of usable oven space; (*c*) annual energy consumption in kWh; (*d*) whether the product features a single oven or a double oven; (*e*) whether the baking mode of the product is normal bake or normal bake with forced convection; (*f*) whether the product is free-standing or built-in; and (*g*) the annual clock energy consumption in kWh.

14. The portion of item 6.1 of Schedule IV to the Regulations in column I is replaced by the following:

Item	Column I Energy-using Product
6.1	Electric ranges that are built-in or wall-mounted appliances with one or more ovens and no surface elements, manufactured on or after January 1, 2000 and before August 1, 2003

15. Paragraph 7(*b*) of Schedule IV to the Regulations is replaced by the following:

Item	Column III Information
7.	(*b*) which of the following cooking tops the product uses: (i) conventional, or (ii) modular.

16. Items 7.1 and 7.2 of Schedule IV to the Regulations are replaced by the following:

Item	Column I Energy-using Product	Column II Standard/Legislative Provision	Column III Information
7.1	Electric ranges that are counter-mounted appliances with one or more surface elements and no ovens, manufactured on or after January 1, 2000 and before August 1, 2003	CSA C358-95	(*a*) annual energy consumption in kWh; and (*b*) which of the following cooking tops the product features: (i) conventional, or (ii) modular.
7.2	Electric ranges that are counter-mounted appliances with one or more surface elements and no ovens, manufactured on or after August 1, 2003	CSA C358-03	(*a*) annual energy consumption in kWh; (*b*) width, in inches; and (*c*) the annual clock energy consumption in kWh.

17. Paragraph 11(*b*) of Schedule IV to the Regulations is replaced by the following:

Item	Column III Information
11.	(*b*) annual fuel utilization efficiency; and

18. Paragraph 12(*b*) of Schedule IV to the French version of the Regulations is replaced by the following:

Article	Colonne III Renseignements
12.	*b*) efficacité de l'utilisation annuelle de combustible ou rendement thermique;

19. Items 15.1 and 15.2 of Schedule IV to the Regulations are replaced by the following:

Item	Column I Energy-using Product	Column II Standard/Legislative Provision	Column III Information
15.1	General service fluorescent lamps	CSA C819	(*a*) nominal power; (*b*) which one of the following shapes the product features: (i) straight-shape, or (ii) U-shape; (*c*) nominal overall length; (*d*) diameter; (*e*) which one of the following bases the product features: (i) a single-pin base, (ii) a medium bi-pin base, or (iii) a recessed double contact base; (*f*) abbreviation under the designation system in ANSI C78.1, Annex A; (*g*) correlated colour temperature; (*h*) average colour-rendering index; and (*i*) average lamp efficacy.

20. The portion of item 16 of Schedule IV to the Regulations in column III is replaced by the following:

Item	Column III Information
16.	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) cooling capacity in kW (Btu/h); (*c*) heating capacity in kW (Btu/h); (*d*) energy efficiency ratio; (*e*) heating coefficient of performance; and (*f*) which of the following categories applies to the product: (i) open-loop, (ii) closed-loop, or (iii) both open-loop and closed-loop.

21. Item 16.1 of Schedule IV to the Regulations is replaced by the following:

Item	Column I Energy-using Product	Column II Standard/Legislative Provision	Column III Information
16.1	Ground-source heat pumps manufactured on or after December 31, 1998 and before June 1, 2006	CSA C446-94	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) cooling capacity in kW (Btu/h); (*c*) heating capacity in kW (Btu/h); (*d*) energy efficiency ratio; (*e*) heating coefficient of performance; and (*f*) which of the following categories applies to the product: (i) open-loop, (ii) closed-loop, or (iii) both open-loop and closed-loop.

16.11	Ground-source heat pumps manufactured on or after June 1, 2006	CSA C13256-1	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) cooling capacity in kW (Btu/h); (*c*) heating capacity in kW (Btu/h); (*d*) cooling coefficient of performance; (*e*) heating coefficient of performance; (*f*) which of the following categories applies to the product: (i) open-loop, (ii) closed-loop, or (iii) both open-loop and closed-loop.

22. Items 18 to 18.3 of Schedule IV to the Regulations are replaced by the following:

Item	**Column I** **Energy-using Product**	**Column II** **Standard/Legislative Provision**	**Column III** **Information**
18.	Internal water loop heat pumps manufactured on or after February 3, 1995 and before September 1, 2005	CSA C655	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) voltage; (*c*) cooling capacity in kW (Btu/h); (*d*) heating capacity in kW (Btu/h); (*e*) energy efficiency ratio; and (*f*) heating coefficient of performance.

18.1	Internal water loop heat pumps manufactured on or after September 1, 2005	CSA C13256-1	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) voltage; (*c*) cooling capacity in kW (Btu/h); (*d*) heating capacity in kW (Btu/h); (*e*) cooling coefficient of performance with 30°C inlet water; and (*f*) heating coefficient of performance with 20°C inlet water.
18.2	Large air-conditioners manufactured on or after December 31, 1998 and before September 1, 2005	CSA C746	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) cooling capacity in kW (Btu/h); (*c*) energy efficiency ratio; and (*d*) integrated part-load value.
18.3	Large air-conditioners manufactured on or after September 1, 2005	CSA C746	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) cooling capacity in kW (Btu/h); and (*c*) energy efficiency ratio.
18.4	Large condensing units manufactured on or after December 31, 1998 and before September 1, 2005	CSA C746	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) cooling capacity in kW (Btu/h); (*c*) energy efficiency ratio; and (*d*) integrated part-load value.
18.5	Large condensing units manufactured on or after September 1, 2005	CSA C746	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) cooling capacity in kW (Btu/h); and (*c*) energy efficiency ratio.

18.6	Large heat pumps manufactured on or after December 31, 1998 and before September 1, 2005	CSA C746	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) cooling capacity in kW (Btu/h); (*c*) heating capacity in kW (Btu/h); (*d*) energy efficiency ratio; (*e*) heating coefficient of performance; and (*f*) integrated part-load value.
18.7	Large heat pumps manufactured on or after September 1, 2005	CSA C746	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) cooling capacity in kW (Btu/h); (*c*) heating capacity in kW (Btu/h); (*d*) energy efficiency ratio; (*e*) heating coefficient of performance at 8.3°C; (*f*) heating coefficient of performance at -8.3°C; and (*g*) which of the following heating sections, if any, the product features: (i) electric, or (ii) gas.

23. Items 20.1 and 20.2 of Schedule IV to the Regulations are replaced by the following:

Item	**Column I** **Energy-using Product**	**Column II** **Standard/Legislative Provision**	**Column III** **Information**
20.1	Packaged terminal air-conditioners manufactured on or after December 31, 1998 and before September 1, 2005	CSA C744	(*a*) cooling capacity in kW (Btu/h); and (*b*) energy efficiency ratio.

20.2	Packaged terminal air-conditioners manufactured on or after September 1, 2005	CSA C744-04	(*a*) whether the product is a replacement unit; (*b*) cooling capacity in kW (Btu/h); and (*c*) energy efficiency ratio.
20.3	Packaged terminal heat pumps manufactured on or after December 31, 1998 and before September 1, 2005	CSA C744	(*a*) cooling capacity in kW (Btu/h); (*b*) heating capacity in kW (Btu/h); (*c*) energy efficiency ratio; and (*d*) heating coefficient of performance.
20.4	Packaged terminal heat pumps manufactured on or after September 1, 2005	CSA C744-04	(*a*) whether the product is a replacement unit; (*b*) cooling capacity in kW (Btu/h); (*c*) energy efficiency ratio; (*d*) heating capacity in kW (Btu/h); and (*e*) heating coefficient of performance.

24. Items 23 to 26 of Schedule IV to the Regulations are replaced by the following:

Item	Column I Energy-using Product	Column II Standard/Legislative Provision	Column III Information
23.	Single package central air-conditioners	CSA C656-05	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) phase of electric current the product uses; (*c*) cooling capacity in kW (Btu/h); (*d*) whether the product is through-the-wall; and (*e*) seasonal energy efficiency ratio.

24.	Single package heat pumps	CSA C656-05	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) phase of electric current the product uses; (*c*) cooling capacity in kW (Btu/h); (*d*) heating capacity in kW (Btu/h); (*e*) whether the product is through-the-wall; (*f*) seasonal energy efficiency ratio; and (*g*) heating seasonal performance factor and the region for the factor.
25.	Split-system central air-conditioners	CSA C656-05	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) phase of electric current the product uses; (*c*) cooling capacity in kW (Btu/h); (*d*) whether the product is small-duct and high-velocity; (*e*) which kind of system the product uses: (i) mini-split, (ii) multi-split, or (iii) ducted; and (*f*) seasonal energy efficiency ratio.
26.	Split-system heat pumps	CSA C656-05	(*a*) Air-Conditioning and Refrigeration Institute classification; (*b*) phase of electric current the product uses; (*c*) cooling capacity in kW (Btu/h); (*d*) heating capacity in kW (Btu/h); (*e*) whether the product is small-duct and high-velocity; (*f*) which kind of system the product uses: (i) mini-split, (ii) multi-split, or (iii) ducted;

			(*g*) seasonal energy efficiency ratio; and (*h*) heating seasonal performance factor and the region for the factor.

25. Schedule IV to the Regulations is amended by adding the following after item 27:

Item	Column I Energy-using Product	Column II Standard/Legislative Provision	Column III Information
28.	Refrigerated beverage vending machines	Section 4.2	(*a*) which of the following uses the product is intended for: (i) indoor use, or (ii) outdoor use; (*b*) E_{daily}; (*c*) which of the following configurations the product features: (i) an opaque front, or (ii) a transparent front; (*d*) ambient E_{daily} test temperature in degrees Celsius; (*e*) the product's vendible capacity; and (*f*) the number of discrete types of beverages that can be displayed and dispensed.
29.	Snack and refrigerated beverage vending machines	Section 4.3	(*a*) which of the following uses the product is intended for: (i) indoor use, or (ii) outdoor use; (*b*) E_{daily}; (*c*) which of the following configurations the product features: (i) an opaque front, or (ii) a transparent front; (*d*) ambient E_{daily} test temperature in degrees Celsius; and

			(*e*) the product's vendible capacity.
30.	Self-contained commercial refrigerators with cabinet drawers or cabinet doors	Section 4.1	(*a*) E_{daily}; (*b*) which of the following cabinet styles the product features: (i) reach-in, (ii) pass-through, (iii) roll-through, or (iv) roll-in; (*c*) whether the product has a worktop surface; (*d*) whether the product is designed for installation under a counter; (*e*) whether the product is designed for the cooling and storage of wine; (*f*) in litres, the total refrigerated volume; and (*g*) which of the following designs the cabinet features: (i) drawers or opaque doors, or (ii) transparent doors.
31.	Self-contained commercial refrigerators without cabinet drawers or cabinet doors	ASHRAE 72	(*a*) E_{daily} of the product determined when goods in the refrigerator compartment are at a temperature of 3.3°C ± 1.1°C; (*b*) which of the following cabinet styles the product features: (i) reach-in, (ii) pass-through, (iii) roll-through, or (iv) roll-in; (*c*) whether the product has a worktop surface; (*d*) whether the product is designed for installation under a counter; and (*e*) in litres, the total refrigerated volume.

32.	Self-contained commercial freezers	Section 4.1	(*a*) E_{daily}; (*b*) which of the following cabinet styles the product features: (i) reach-in, (ii) pass-through, (iii) roll-through, or (iv) roll-in; (*c*) whether the product has a worktop surface; (*d*) whether the product is designed for installation under a counter; (*e*) whether the product is designed for the storage of ice cream or similar foods; (*f*) in litres, the total refrigerated volume; and (*g*) which of the following designs the cabinet features: (i) opaque doors, (ii) transparent doors, or (iii) no doors.
33.	Self-contained commercial refrigerator-freezers	Section 4.1	(*a*) E_{daily}; (*b*) in litres, the total refrigerated volume; (*c*) the AV of the product; and (*d*) which of the following designs the cabinet features: (i) opaque doors, (ii) transparent doors, or (iii) no doors.

26. The French version of the Regulations is amended by replacing the word "murales" with the words "fixées au mur" in the following provisions:

(*a*) the portion of item 6 of Schedule IV in column I; and

(*b*) the portion of item 6.2 of Schedule IV in column I.

27. The French version of the Regulations is amended by replacing the word "mural" with the words "fixé au mur" in the following provisions:

(*a*) paragraph (*d*) of the definition "cuisinière électrique" in subsection 2(1);

(*b*) paragraph 6(*d*) of Schedule IV;

(*c*) paragraph 6.1(*d*) of Schedule IV; and

(*d*) paragraph 6.2(*g*) of Schedule IV.

COMING INTO FORCE

28. These Regulations come into force on the day on which they are registered.

[18-1-o]

Footnote a

S.C. 1992, c. 36

Footnote 1

The Treasury Board (of Canada) recommends a cost-benefit analysis to be conducted using a 10% real social discount rate.

Footnote 2

SOR/94-651

NOTICE:
The format of the electronic version of this issue of the *Canada Gazette* was modified in order to be compatible with hypertext language (HTML). Its content is very similar except for the footnotes, the symbols and the tables.

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Updated: 2006-05-05

Important notices