

Electric Motors

and the *Energy Efficiency Regulations*

WHO IS A “DEALER”?

A “dealer” is a person whose business:

- a. manufactures energy-using products in Canada; or
- b. imports energy-using products into Canada; or
- c. sells or leases energy-using products that are obtained, directly or indirectly, from a person who manufactures energy-using products in Canada or imports them into Canada.

The *Energy Efficiency Act* and the *Energy Efficiency Regulations* establish minimum energy performance levels for specified products and set out the responsibilities of dealers for these products. Dealers of electric motors from 1 to 200 HP (0.746 to 150 kW) must ensure that the motors meet the energy efficiency standard quoted in the Regulations and must comply with a number of other requirements in order to import these products or ship them interprovincially for sale or lease in Canada.

What motors are regulated?

Certain National Electrical Manufacturers Association (NEMA) motors have been regulated since February 3, 1995. Effective November 27, 1997, the *Energy Efficiency Regulations* were amended to include International Electrotechnical Commission (IEC) motors. This amendment also increased the minimum energy performance levels that motors must meet.

For explosion-proof motors and motors contained within an integral gear assembly, the effective date of the Regulations is November 27, 1999.

A complete definition of the types of motors covered by the Regulations is provided on the following page.

What is the energy efficiency standard quoted in the Regulations?

Regulated electric motors being imported into Canada or shipped between provinces must meet the minimum nominal efficiency values prescribed in Schedule I, Parts 2 and 3, of the Regulations.

If a motor has a power rating that falls between two ratings in Part 2 or 3, the standard for the next lowest power rating must be met.

DEFINITION OF REGULATED MOTORS

NEMA MOTORS	IEC MOTORS
Continuous duty	Maximum continuous rating, duty type S1
Open or enclosed IP Code 00 to 66	Open or enclosed IP code 00 to 66
Polyphase	Three-phase
Squirrel cage	Cage
NEMA design A or B	IEC design N
Single speed	Single speed
2, 4 or 6 poles	2, 4 or 6 poles
Rated voltage \leq 600 volts	Rated voltage \leq 600 volts
Rated frequency 60 hz or 50/60 hz	Rated frequency 60 hz or 50/60 hz
1 to 200 HP	0.746 to 150 kW
T frame	Frame 90 and above
Standard, R and S shaft	
Foot-mounted, type C face-mounted or type D flange-mounted	Foot- or flange-mounted

What if a regulated electric motor is being imported or shipped interprovincially as a component of another product?

The Regulations apply to stand-alone motors and to motors that have been incorporated into another product before being imported into Canada or shipped between provinces. **Dealers should ensure that manufacturers of products that incorporate a regulated motor are aware that the motor must meet the regulatory requirements.**

WHAT IS A UMI?

The UMI replaces the motor's model number when reporting information in an energy efficiency report or on a customs release document.

The UMI is a combination of the manufacturer's name and the motor rating. In other words, it comprises the following information, in this sequence:

- the name of the manufacturer;
- the power of the motor (indicated in HP for NEMA motors and in kW for IEC motors);
- the number of poles; and
- whether the motor is open or enclosed.



Is an energy efficiency verification mark required, and who is responsible for applying the mark?

Before a motor or shipment of motors leaves the dealer's possession (or the possession of a consignee), the dealer must ensure that a verification mark is affixed to the exterior of the motors. This mark indicates that the motors have been verified to meet the regulated energy efficiency standards. The mark must be authorized by a Standards Council of Canada (SCC) accredited certification organization that administers an energy performance verification program for motors. For additional information, please contact the SCC at the address provided under "For more information" at the end of this fact sheet.

What information is required in an energy efficiency report for electric motors?

Section 5 of the *Energy Efficiency Act* requires dealers to submit an energy efficiency report to NRCan before importing a regulated product or shipping it between provinces. The report must describe the product and provide information on its energy performance (for more information, refer to Fact Sheet 1 – "Energy Efficiency Reports Under Section 5 of the *Energy Efficiency Act*"). For electric motors, this energy efficiency report must include:

- the product name (electric motor from 1 to 200 HP/ 0.75 to 150 kW);
- the brand name;
- the product's "unique motor identifier," or UMI (see sidebar);
- the manufacturer's name;
- the name of the organization that carried out the product verification and authorized the energy efficiency verification mark that will be affixed to the product; and
- the nominal efficiency value for the least efficient model of the particular motor rating or UMI (i.e., only one report need be filed for all motors that have the same UMI).

Are there any other reporting requirements?

Under Part VI of the Regulations, dealers who are importing a regulated motor or a product that contains a regulated motor are required to include the following information on the customs release document (customs/commercial invoice, bill of lading, etc.):

- a statement that the product being imported is a motor;
- the unique motor identifier (UMI) for the motor;
- the brand of the motor;
- the address of the dealer who is importing the motor; and
- the purpose for which the dealer is importing the motor. This must be one of the following:
 - 1) for sale or lease in Canada without modification;
 - 2) for sale or lease in Canada after being modified to comply with the prescribed energy efficiency standard; or
 - 3) for use as a component in a product being exported from Canada.

A copy of the completed customs release document is to be provided to Revenue Canada. If any of this information is incomplete, the shipment may be detained until such information is provided. **Note: the imported product information must match the information previously provided in the energy efficiency report.**

Are there any exemptions from the Regulations?

Under certain circumstances, dealers of regulated products may be exempt from ensuring that the product meets the prescribed energy efficiency standard or from filing an energy efficiency report with NRCAN (for details, see Fact Sheet 4 – “Exemptions from the *Energy Efficiency Regulations*”).

Specifically, non-compliant motors may be imported into Canada or shipped between provinces if the motors are to be incorporated into another product that will be exported from Canada. However, the dealer must keep a record of:

- the name and address of the person from whom the product was obtained;
- the quantity and description of the product;

- the date the product was received by the dealer;
- the date the dealer sold the product; and
- the name and address of the purchaser.

Information concerning a non-compliant motor must be provided to NRCan on request. As well, dealers may not sell at the retail level in Canada or lease in Canada a non-compliant motor or a product that contains a non-compliant motor.

For more information

For the names of certification organizations that are accredited by the SCC, contact:

Standards Council of Canada
45 O'Connor Street, Suite 1200
Ottawa, ON K1P 6N7
Tel.: (613) 238-3222
Fax: (613) 995-4564

Additional information

Copies of the *Energy Efficiency Act* (*Statutes of Canada 1992*, Chapter 36) and the *Energy Efficiency Regulations* (*Canada Gazette*, Part II, Volume 128, Number 22, November 2, 1994; Volume 129, Number 24, November 29, 1995; Volume 131, Number 25, December 10, 1997; and Volume 133, Number 1, January 6, 1999) are available in most public and university libraries and may be purchased in some bookstores.

This document is one of seven fact sheets providing information on the *Energy Efficiency Act* and the *Energy Efficiency Regulations*.

Fact Sheet 1 – “Energy Efficiency Reports Under Section 5 of the *Energy Efficiency Act*”

Fact Sheet 2 – “Importing an Energy-Using Product into Canada”

Fact Sheet 3 – “Verification Marks for Energy Efficiency”

Fact Sheet 4 – “Exemptions from the *Energy Efficiency Regulations*”

Fact Sheet 5 – “EnerGuide Labels for Energy-Using Products”

Fact Sheet 6 – “Electric Motors and the *Energy Efficiency Regulations*”

Fact Sheet 7 – “Lighting Products and the *Energy Efficiency Regulations*”

To obtain more information or to receive other fact sheets, contact:

Housing, Buildings and Regulations Division
Office of Energy Efficiency
Natural Resources Canada
580 Booth Street, 18th Floor
Ottawa, ON K1A 0E4
Fax: (613) 947-0373

Helpful web sites

- *Energy Efficiency Regulations*: <http://regulations.nrcan.gc.ca>
- Office of Energy Efficiency: <http://oee.nrcan.gc.ca>

*Cette fiche est également disponible en français sous le titre
«Les moteurs électriques et le Règlement sur l'efficacité énergétique».*

