November 1st, 2018

UPCOMING ENERGY EFFICIENCY REQUIREMENTS FOR BATTERY CHARGERS

Yesterday, Amendment 14 to the Energy Efficiency Regulations was published in Canada Gazette Part II. Amendment 14 includes new requirements for battery chargers. Below you will find a summary of the regulations for battery chargers with a list of what you need to do to meet the requirements.

Note: These requirements apply only to battery chargers manufactured on or after **June 13, 2019**.

REGULATORY DEFINITION

These regulatory requirements apply to products that fall under the following regulatory definition:
A device that charges the battery of an end-use product. It does not include:

- A device that charges the battery of a vehicle other than a wheelchair, golf cart or low-speed vehicle;
- A device that charges the battery of a medical device;
- A wireless battery charger, other than a wireless battery charger that is inductive and designed for wet environments.

If your product does not fall within the scope of this definition, then it is not considered a regulated product and does not need to meet the requirements of the Regulations.

FOUR STEPS TO MEETING THE REQUIREMENTS:

There are four regulatory requirements that apply to battery chargers. The Guide to Canada's Energy Efficiency Regulations provides additional information for each requirement. It also provides a summary page for each regulated product. When the requirements for battery chargers comes into force, there will be a page for battery chargers with the information below.

1. ENERGY EFFICIENCY STANDARD

The following table provides the minimum energy efficiency levels for battery chargers and can be found in Table C.1 of CSA C381.2-17:

Minimum efficiency levels for battery chargers other than UPS

Battery chargers shall have a unit energy consumption (UEC) less than or equal to the "maximum UEC" requirement in Table C.1 when using the equations for the appropriate product class and corresponding rated battery energy as shown in Table C.1.

Table C.1
Maximum UEC

Product class	Product class description	Rated battery energy (*Ebatt*†)	Special characteristic or battery voltage	Maximum UEC (kWh/yr) (as a function of *Ebatt*†)
1	Low-energy	≤5 Wh	Inductive connection*	3.04
2	Low-energy, low-voltage	<100 Wh	<4 V	0.1440 * *Ebatt* + 2.95
3	Low-energy, medium-voltage	<100 Wh	4-10 V	For *Ebatt* <10 Wh, 1.42 kWh/y *Ebatt* ≥10 Wh, 0.0255 * *Ebatt* + 1.16
4	Low-energy, high- voltage	<100 Wh	>10 V	0.11 * *Ebatt* + 3.18
5	Medium-energy, low-voltage	100-3000 Wh	<20 V	0.0257 * *Ebatt* + .815
6	Medium-energy, high-voltage	100-3000 Wh	≥20 V	0.0778 * *Ebatt* + 2.4
7	High-energy	>3000 Wh		0.0502 * *Ebatt* + 4.53

* *Inductive connection and designed for use in a wet environment (e.g. electric toothbrushes).*

† E_{batt} *(rated battery energy) used in this Table is the sample mean of the measured battery discharge energy.*

Applicable Standards:

The following two test standards can be used to calculate the energy performance for battery chargers: CSA C381.2-17 or 10 C.F.R Appendix Y.

2. ENERGY EFFICIENCY VERIFICATION MARK

Regulated energy-using products must bear an energy efficiency verification mark from a certification body accredited for energy efficiency verification/certification by the Standards Council of Canada. This mark indicates that the energy performance of the product has been verified. It is a certification mark that is authorized for use by the certification body and signals the product's compliance with Canada's energy efficiency requirements.

In consultation with certification bodies and the Standards Council of Canada, NRCan developed a cost-effective alternate Energy Efficiency Verification Scheme for certification bodies to use to certify battery chargers. Also note that, for battery chargers, the energy efficiency verification mark can be placed on the packaging instead of on the product.

3. ENERGY EFFICIENCY REPORT

The Regulations only require one energy efficiency report to be filed per model. If a model has already been reported to NRCan and is compliant with the Regulations, the model information will be available on our Searchable Products List.

NRCan creates report templates for each product that it regulates. The templates include all the information that needs to be reported to NRCan. For Battery Chargers, the following information will be collected: brand name, model number, manufacturer, the name of the certification body whose verification mark will be on the product or its package, information that indicates whether a mathematical model was used to generate any of the information, product class, rated battery energy, unit energy consumption, power in active mode, maintenance mode, and standby mode, and, if an external power supply was used to test the battery charge, the power supply's model number and the name of its manufacturer. **Energy Efficiency Report Templates** can be downloaded from our website. When the requirements for battery chargers come into force, the final template will be available online. For more information regarding energy efficiency reports, please visit our FAQs – energy efficiency report.

4. IMPORT REPORTING

Import reporting only applies to those battery chargers that are being imported as stand-alone products. For battery chargers that are imported as components of another end-use product, this requirement does not apply. This is a new exception that came into effect with Amendment 14.

For the importation of stand-alone battery chargers, the following information must be provided to the Canada Border Services Agency (CBSA) on the customs release document.

- name of product
- model number
- brand name, if any
- address of the dealer who is importing the product
- the purpose for which the product is being imported
    - for sale or lease in Canada without modification
    - for sale or lease in Canada after being modified to comply with the prescribed energy efficiency standard or
    - for use as a component in a product being exported from Canada

For more information on import reporting, please visit our Importer's Corner.

CONTACT INFORMATION

For more information regarding complying with the requirements of the Regulations, you can contact:

Mandace Montgomery
Mandace.montgomery@canada.ca
613-992-3900

Stephanie Macdonald
Stephanie.macdonald@canada.ca
613-995-3746