Implementation of the B.C. Extended Producer Responsibility (EPR) Five-Year Action Plan 2021-2023

Comments and Recommendations on EV Battery EPR Regulation Submitted to British Columbia (B.C.) Ministry of Environment and Climate Change Strategy By Electric Mobility Canada

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About Electric Mobility Canada

Founded in 2006, Electric Mobility Canada is a national industry association that works to advance electric transportation to support the Canadian economy while fighting climate change and air pollution. With more than 170 member organizations, EMC includes light-, medium-, heavy-duty, and off-road vehicle manufacturers; utilities; infrastructure providers; technology companies; mining companies; research centres; cities; governments; universities; unions; environmental organizations and electric vehicle owners' groups. The EMC team helps develop electric mobility policies, programs and projects that apply to all types of EVs, from bikes to cars, from buses to boats, from trucks to trains.

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Preamble

Electric Mobility Canada (EMC) applauds the B.C. government's efforts in supporting communities and protecting the environment with comprehensive Extended Producer Responsibility (EPR) regulations that require producers to collect and manage their products for efficient diversion and recycling. We are pleased to participate in the stakeholder consultations on the implementation of the EPR Five-Year Action Plan 2021-2023, more specifically on the addition of new product categories that will be added to the Recycling Regulation in 2023. The comments and recommendations in this communication, prepared and approved by EMC members representing multiple industry stakeholders across Canada, are focused on Electric Vehicle (EV) Batteries. We would appreciate the opportunity to discuss these comments with your team if necessary.

1 Introduction

EMC objectives for regulations pertaining to EV Battery end-of-life management

- Ensure that EV batteries are managed in an environmentally sustainable manner.
- Include provisions that enable the development of a circular economy for EV batteries.

EMC also believes that a well-designed EPR framework must respect:

- The rights and interests of consumers;
- The unique characteristics of EV batteries, such as their size, weight, market value, diverse chemical composition, and lifespan;
- The innovation curve of the battery manufacturing industry, which means that batteries are and will be increasingly durable;
    - A mechanism to address new and evolving concerns may be necessary to mitigate any potential unintended consequences;
- Solutions that extend battery life through reuse to meet the 3RV-E hierarchy (source reduction, repurposing, recycling, recovery, and disposal), can be a superior option to battery recycling from environmental and vehicle ownership cost perspectives;
- The imperatives related to the fight against climate change by favoring sustainable and exemplary solutions;
- The basic principles of circular economy to limit the need for mineral extraction for tomorrow's electric vehicle batteries;
- The economic interest of B.C. and of Canada, which is investing significant sums in the electrification of the light- medium- and heavy-duty transportation.

In this document, EMC addresses the following areas in relation to EV Battery EPR regulations:

- Creating a schedule specific to large batteries, which includes EV batteries.
- Maximising Electric vehicle battery (EVB) lifespan *before* recycling.
- Measuring recovery based on products available for recycling.

2 Comments

2.1 Creating a product schedule specific to "large batteries"

Creating a new schedule for large batteries is a superior approach to including those batteries in the existing Electronic and Electrical Product Category, as it allows for the development and application of performance measures and requirements that are specifically designed for large batteries.

The small products that are part of the expansion of battery types to be regulated, e.g., pet collars, e-cigarettes/vapes, decorations and other products with pocket-size or otherwise portable batteries, need sorting, and therefore the use of big box retailers, collectors and stewardship programs works great to facilitate and encourage collection for recycling. On the other hand, large batteries follow a different end-of-life route.

Large batteries cannot simply be deposited in a box at a retail store or even at a centralized collection depot. Their size, weight, content, and value – even at end of life - are such that they are not at much risk of being discarded irresponsibly by consumers but also that safe handling procedures need to be clearly defined to ensure that they will be removed from communities and recycled in an efficient and timely way. These products are usually recovered by existing network within the automotive industry, such as automobile dismantlers and, when a battery replacement is needed, dealerships or other repair shops. While traditional performance metrics such as a 75% recovery rate based on volume placed on market are not appropriate for large batteries, it is important for British Columbia's recycling regulation to set clear performance requirements to ensure that no battery is left behind.

Furthermore, the definition of large batteries must not be limited to batteries from light-duty vehicles but be inclusive of all types of large batteries such as batteries from buses, commercial trucks, and off-road vehicles. Traditional hybrid vehicle batteries should be included in this product category. This is important, as those batteries may be more likely to accumulate at vehicle dismantling facilities than high-capacity EV batteries, due to their lower value (no use for secondary life, materials of lower value, etc.). If the schedule does not use a definition based on weight and power rating, hybrid vehicle batteries must be clearly specified under the definition of products covered.

2.2 Designing a regulation that incents and supports the safe reuse, repurposing and reconditioning of batteries in a thriving circular economy comprised of various market stakeholders.

For environmental, strategic technological and economic considerations, any EPR regulation for large batteries should ensure that batteries collected for recycling are those that are at the end of their useful life. Manufacturing and end-of-life recycling of batteries has a significant footprint, so incenting safe reuse is especially important to optimize the environmental benefits of transportation electrification. An EPR regulation that allows for and encourages the development of markets for reuse or reconditioning of large batteries helps protect local industries from potential parts shortages or material shortages for a battery industry that is subject to geo-strategic considerations.

Government investments in transport electrification are part of a broader strategy of energy independence from fossil fuels. An EPR framework, to be aligned with government objectives, must include provisions to facilitate positive provincial and national economic benefits. EV batteries should not be viewed as a cumbersome and dangerous "consumable" waste. Rather, they are a valuable and desired resource and a potential urban mine for critical minerals.

Traction batteries can also be removed from vehicles before being sent to recycling centers and resold as spare parts for reuse or reconditioning whether for extending the life of an electric vehicle, for converting a gas vehicle to electricity or for stationary energy storage to provide off grid power, or excess capacity management for utilities. Circular economy activities that are giving a second life to EV batteries should be supported and encouraged as they contribute to extending the life of electric vehicles and reducing greenhouse gas emissions. This may require registration as «producers» for some types of businesses, e.g., those that remanufacture or repurpose large batteries.

2.3 Performance measure for Stewardship plans covering EV batteries

The EPR schedule for large batteries may include registration of large batteries sold in B.C. but to ensure that large batteries are not removed prematurely from second-life market options, recovery rates should be based on the number of batteries available for recovery. A large battery available for recovery is one which is unwanted by its current owner, and which has been offered to the producer via notification. The recovery measure should then be 100% of batteries offered to the designated producer by the current owner of the product.

3 Recommended amendments to the Recycling Regulation

To integrate the considerations discussed above, we recommend the following amendments to the Recycling Regulation of the Environmental Management Act (B.C. Reg. 449/2004, O.C. 995/2004):

<u>Part 1 – Definitions and Application</u>

Definitions 1 (1)

- Add definitions:
  - **''Alternative recovery measure'' means a measure that is determined to be reasonable to measure the annual recovery of the regulated product;**
  - **''registry'' means an on-line database used to store information on EV battery packs sold in British-Columbia and used by government to administer free-rider compliance.**

- Under «Collection facility», sub-section (c) in respect of a product with the, add:
  - **(v) large battery category**

- Under «Producer», modify sub-section (b) to read:

- (b) in respect of the producer of a product within a product category other than the beverage container product category, the tire product category, **and the large battery product category**,

- Under «Producer», add a sub-section:
  - **(c) in respect of the producer of large batteries, as defined in schedule 6,**
    - **(i) a person who manufactures, modifies, reconditions, refurbishes, or remanufactures the product and uses in a commercial enterprise, sells, offers for sale, or distributes the product in British Columbia under the manufacturer's own brand,**
    - **(ii) if subparagraph (i) does not apply, a person who is not the manufacturer of the product but is the owner or licensee of a trademark under which a product is used in a commercial enterprise, sold, offered for sale, or distributed in British Columbia, whether the trademark is registered or not, or**
    - **(iii) if subparagraphs (i) and (ii) do not apply, a person who imports the product into British Columbia for use in a commercial enterprise, sale, offer for sale or distribution in British Columbia;**

- Under «product category», add:
  - **(o) large battery category**

Duty of producer

- Add section: **(6) A producer of large batteries or its agency must:**
  - **(a) Recover 100% of the producer's battery packs that are available for collection, upon request from the current battery owner.**
    - **(i) Take-back obligation is exempt for producer's brand where a third party in a secondary market has modified, reconditioned, refurbished, or repurposed the battery pack.**
  - **(b) Set up a notification system, which is auditable by the government and allows government to mass balance – number of notifications for battery packs available for collection and producer recovery of battery pack numbers annually.**

<u>Part 2 – Extended Producer Responsibility Plans</u>

Approval of extended producer responsibility plans
- Under section 5 (1), sub-section (a), item (i), add:
  - **(C) except for products in the large battery category for which an alternate recovery measure is laid out in section 2(6).**

<u>Schedules</u>

Update schedule 2 to cover batteries weighing under 10 kg only.

Add **Schedule 6 – Large battery product category:**

Definitions 1:

"**battery**" or "**accumulator**" means any source of electrical energy generated by direct conversion of chemical energy and consisting of one or more primary battery cells (non-rechargeable) or consisting of one or more secondary battery cells (rechargeable)

"**battery pack**" means any set of batteries or accumulators that are connected and/or encapsulated within an outer casing to form a complete unit that the end-user is not intended to split up or open

"**Large battery**" means any battery that weighs 10 kg or more or has a rating of more than 1,000-watt hours, if labeled with a watt-hour rating.

"**mobile storage battery**" means a device that stores electrochemical energy, is intended to supply power for equipment, heat, and light, and is not fixed to a structure. It may be fixed to a vehicle but is not an EV battery.

"**stationary storage battery**" means a large battery that is rechargeable and is specifically designed to store and deliver electric energy into the grid or to power equipment, heat, and light.

"**Recondition**" or "**Remanufacture**": The act of modifying or repairing a battery so it can be returned in the original application.

"**Repurpose**": The act of using a battery in a vehicle, product, or application for which it was not designed or intended to be used.

"**Reuse**": Use of a battery in another vehicle, product or application of the same model, brand, and type, which does not require any modifications to the battery.

Producers:

2 (1) A producer of a large battery is one of the following:

(a) one that either manufactures, brands, imports, or retails large batteries or embeds large batteries into a product application in British Columbia

(b) one that remanufactures, reconditions, repurposes, or modifies large batteries, or brands, imports, retails or embeds such large batteries into a product application in British Columbia

Application

3 This Schedule applies to large batteries and accumulators that

(a) are offered for sale or sold in British Columbia, and

(b) are not designed to be used for industrial or utility purposes.

4 The large battery product category consists of:

(a) An electric vehicle battery or accumulator

(b) A stationary storage battery which is not designed to be used for industrial or utility purposes

(c) A mobile storage battery

(d) Any other battery that weighs 10 kg or more or has a rating of more than 1,000-watt hours, if labeled with a watt-hour rating, and includes, without limitation, batteries for road vehicles, off-road vehicles, motorcycles, recreation vehicles, marine vehicles, air transport vehicles and locomotives.

Identification

5 (1) A producer of large battery brought into British Columbia must ensure that the battery pack has an identifier label consisting of the manufacturer's brand name and a unique serial number.

Registration

6 (1) A large battery sold in British Columbia by a "producer" must be registered into a government registry of the large battery category defined in this regulation:

(a) the manufacturer or brand owner name

(b) a unique serial number

(2) A large battery defined in this regulation must contain on its outer casing:

(a) the manufacturer or brand owner name

(b) a unique serial number