ELECTRIC MOBILITY CANADA
ACCELERATING ELECTRIC TRANSPORTATION

MOBILITÉ ÉLECTRIQUE CANADA
ACCÉLÉRER L'ÉLECTRIFICATION DES TRANSPORTS

LARGE BATTERIES EXTENDED PRODUCER RESPONSIBILITY

Regulatory Recommendations
Submitted by EMC's Battery Working Group
APRIL 2024

Preamble

Electric Mobility Canada (EMC) supports the implementation of Extended Producer Responsibility (EPR) regulations and is pleased to have had the opportunity to contribute to the work of the *Groupe tactique sur la récupération et la valorisation des batteries de véhicules électriques* implemented by the *Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs*.

The content of this document is the result of EMC's participation in the above-mentioned tactical group, as well as in public consultations in Quebec and British Columbia. EMC's Battery Working Group is composed of members representing numerous industry stakeholders across Canada. The aim of our comments and recommendations is to ensure that the regulations adopted will facilitate and encourage the development of a circular economy in which the life cycle of traction batteries is optimized.

About Electric Mobility Canada

Founded in 2006, Electric Mobility Canada (EMC) is a national industry association dedicated exclusively to promoting electric mobility as a means of combating climate change and air pollution while supporting the Canadian economy.

EMC has a wide range of member organizations, including utilities, manufacturers of light-, medium-, heavy- and off-road vehicles, infrastructure providers, technology companies, mining companies, research centres, government departments and agencies, municipalities, universities, fleet managers, unions, environmental NGOs, and EV owner groups.

EMC's mission is to facilitate and accelerate the transition to sustainable electric mobility in Canada through advocacy, collaboration, education and thought leadership, with the goal of creating a cleaner, healthier and more prosperous future for all Canadians.

Electric Mobility Canada is the unifying and authoritative voice for the transition to electric mobility across Canada.

Contact information

For more information, please contact:

Daniel Breton,
President and CEO
daniel.breton@emc-mec.ca
514 883-9247

Louise Lévesque, Senior Policy Director
louise.levesque@emc-mec.ca
418 264-5575

TABLE OF CONTENTS

1. INTRODUCTION

EMC objectives for end-of-life management regulations for traction batteries:

- Ensure that 100% of large batteries, especially traction batteries, are treated in a responsible and environmentally friendly way when they are no longer wanted by the market.
- Include provisions promoting the development of a circular economy to capture the full economic value of large batteries while respecting the environment.

EMC also believes that a well-designed EPR framework:

- Builds on traditional EPR and includes appropriate performance measures.
- Requires producers to recover batteries when they are no longer desired by the market.
- Enables producers to meet EPR obligations individually and collectively.
- Promotes activities that extend battery life, including reuse, repurposing, and reconditioning.
- Includes a requirement to identify batteries, to effectively trace the producer responsible for their management.
- Includes a liability transfer mechanism for batteries that have been modified (repurposed or reconditioned).
- Requires reporting, enabling the government and the public to verify whether producers have complied with the take-back obligation.

2. EMC'S RECOMMENDATIONS ON EPR BATTERY REGULATIONS

2.1. Specific regulations for large batteries: traditional EPR, but adapted

ELECTRIC MOBILITY CANADA recommends that the government create regulations inspired by traditional Extended Producer Responsibility (EPR), adapted and specific to large batteries, including vehicle traction batteries and non-industrial stationary storage batteries.

The main advantage of traditional EPR is to ensure fairness between the regulated parties, including vehicle manufacturers and other players in the value chain. The regulation will establish clear responsibilities for everyone. Several other jurisdictions are moving towards EPR-type regulations to ensure the sound management of end-of-life electric vehicle batteries, including the European Union (EPR adopted), New Jersey (EPR adopted), Hawaii, California, Washington State and British Columbia. The adoption of an adapted traditional EPR would promote harmonization with other jurisdictions that have already ruled on the subject, and facilitate stakeholder buy-in and implementation.

A well-designed traditional EPR framework, adapted to large batteries, enables the aftermarket to achieve optimal results, while ensuring the producer takes charge of and recycles batteries that have not found a market.

For the purposes of this regulation, the definition of large batteries should include traction batteries for all-electric, plug-in hybrid, conventional hybrid, and fuel cell vehicles in all categories: light-, medium- and heavy-duty; on-road and off-road. The definition of large batteries should also cover

stationary storage batteries and other batteries derived from the repurposing of vehicle traction batteries. Appendix A provides a list of other definitions to be applied under EPR regulations.

2.2. Producer's take-back obligation

ELECTRIC MOBILITY CANADA recommends that producers be required to take back 100% of unwanted batteries.

To reduce the carbon impact of large batteries, and to prevent batteries from being prematurely withdrawn from the second-life market, the recovery obligation should specifically target large batteries that are unwanted by any third party for re-use, reconditioning, re-purposing, or recycling. For these unwanted batteries, the producer should then be obliged to manage their product in an environmentally and logistically responsible way.

The original manufacturer should not be held responsible for a battery that is no longer in its original condition internally because it has been modified by a third-party company. On the contrary, in these cases, responsibility should be transferred to the company that conducted the modifications and sold the battery in its second life.

Performance measurement should be based on the number of batteries available for recovery. EMC recommends that EPR regulations require the take-back of all (100%) unwanted batteries, at the explicit request of the owner, and specify a standard timeframe for the collection and management of unwanted batteries. For example: collection and return no later than 90 days after receipt of a notice of availability for recovery.

2.3. Enable individual or collective management through a recognized management organization

ELECTRIC MOBILITY CANADA recommends allowing producers to comply either individually or collectively through a Recognized Management Organization (RMO) to manage their batteries responsibly and transparently.

This will enable producers who do not have their own end-of-life battery management system to join with other companies to collectively manage the costs associated with logistics and recycling of their products. Traditional EPR-type regulation is the approach that will allow regulated parties to choose collective management through a recognized management organization, or to manage their products individually if this makes more sense for their operations.

2.4. Promote reuse, repurposing, and reconditioning activities

ELECTRIC MOBILITY CANADA recommends encouraging the reuse, repurposing, and reconditioning of batteries by establishing a principle of transfer of responsibility.

The manufacture of batteries and their recycling at the end of their life have a significant environmental footprint. It is therefore particularly important to encourage solutions that extend the life of batteries, including reuse, reconditioning, and repurposing when these options are safe, to optimize the environmental benefits of transport electrification.

Before being sent to recycling centres, traction batteries that have been removed from vehicles can be resold as spare parts to be reused, reconditioned or repurposed, whether to extend the life of an electric vehicle, to convert a gasoline-powered vehicle into an electric one, for stationary energy storage to provide off-grid electricity, or to manage excess capacity for utilities. Circular economy activities giving a second life to electric vehicle batteries should be supported and encouraged, as they help to extend the life of electric vehicles and reduce greenhouse gas emissions.

EPR regulations should therefore allow for the recovery of large batteries by third parties for re-use, re-purposing, or reconditioning, and provide channels for the transfer of responsibility to these third parties. A clear definition of the term "producer" should include companies that recondition and remarket modified traction batteries. The original producer of the battery should not remain responsible for a product that has been modified by a third party (i.e., modified configuration, performance management or reuse in a new application). Thus, any party that refurbishes, repurposes, or reconditions batteries becomes the responsible producer. In such cases, responsibility is transferred from the original producer to the new producer. Appendix B presents a table showing the several ways in which producer responsibility can be transferred after the initial marketing of the battery.

Recycling must be the final destination for all batteries, to maximize their recovery. However, as the lifetime of a battery is a complex concept, the EPR regulation should not impose a time factor on this lifetime, nor impose a rate of re-use, reconditioning, and re-purposing. Only qualified people with the necessary skills can diagnose a battery's physical condition and state of health, and the possibilities for safe reuse. As recommended above, a 100% recovery rate for batteries available for recovery (offered by the owner) is the only suitable indicator for this market.

2.5. Battery identification

ELECTRIC MOBILITY CANADA recommends that the concept of battery identification be integrated into EPR regulations.

The concept of battery identification as part of EPR should have the exclusive aim of identifying the main characteristics of the battery, as well as the producer responsible for the battery at end-of-life.

This concept will also ensure the transfer of responsibility, since all producers will have to identify their product, including producers of refurbished, reconditioned, or repurposed batteries, thus freeing the original producer from any management responsibility.

The battery identification system should be developed in line with international standards and include, for example, information on the producer, battery chemistry, voltage, and capacity, as well as a digital identifier to access the producer's battery directory.

2.6. Accountability

MOBILITÉ ÉLECTRIQUE CANADA recommends implementing a reporting mechanism harmonized with existing regulations and EPRs in other North American jurisdictions, to measure the results of EPR while minimizing the administrative impact for the companies subject to it.

Compliance with the obligation to take back batteries available for recovery must of course be measured, and this implies accountability on the part of the parties subject to it. That said, it is important that the EPR accountability mechanism be designed to minimize administrative processes. To this end, we advocate harmonization with existing regulations, such as the Hazardous Materials Regulation,[1] which already requires companies to draw up a management plan for residual (end-of-life) batteries and a register specifying the number of batteries that have been stored, disposed of, processed or used. The traditional EPR mechanism also requires companies to submit an annual report to the *Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs*, setting out the management plan for recovered products. The obligation to submit such a report should apply to producers of large batteries (see definition in Appendix A), i.e. original equipment manufacturers and producers who recycle used batteries and put them back on the market.

The annual report required under traditional EPR adapted to large batteries, obliging producers to take back 100% of batteries available for recovery, should include the following data:

a) The number of requests received for recovery.
b) Number of batteries recovered.
c) Number of batteries refused and reasons for refusal.
d) Mechanisms put in place to collect and recycle batteries; in accordance with environmentally friendly practices that promote the full life cycle of batteries.

It is also important for certain data to remain confidential, particularly those relating to contractual agreements between producers, economic operators (reusers, reconditioners, repairers) and recyclers.

3. SUPPORT RECOVERY AND RECYCLING COMPANIES

It is essential that regulations are not designed to limit the movement of batteries. The economic activities of stakeholders throughout the battery life-cycle ecosystem require access to a volume of batteries far greater than the volume of batteries in Quebec. This means that batteries and their components must be able to be imported and exported, in compliance with current standards and regulations. Setting up export barriers could lead other jurisdictions to reciprocate, limiting the ability of Quebec companies to import the materials and batteries they need for their operations.

Instead, EMC believes that we must continue to support the Quebec battery industry, as well as the recovery and recycling industry, to strengthen its competitiveness on the North American market

[1] https://www.legisquebec.gouv.qc.ca/fr/document/rc/q-2,%20r.%2032

and ensure that a greater volume of critical and strategic materials are packaged and processed in Quebec.

In addition, the government should update certain programs and regulations, including the *Écocamionnage* program, the Hazardous Materials Regulation and the Regulation respecting road vehicle recyclers, to adapt them to the new realities, to enable and facilitate the safe handling and storage as well as the reuse and repurposing of batteries by all actors involved in the battery ecosystem. Quebec needs to modernize its legislative and regulatory framework to facilitate the transportation of used and end-of-life batteries, and to encourage the recovery, reuse, repurposing, reconditioning, and recycling in Quebec of batteries from the North American market.

Appendix A - DEFINITIONS

Traction batteries / Large batteries

"Battery" or "Accumulator": any source of electrical energy generated by direct conversion of chemical energy, and consisting of one or more primary (non-rechargeable) or one or more secondary (rechargeable) cells.

"Traction battery," means a battery used or designed to provide traction power in an electric or hybrid vehicle. This excludes starter batteries and other batteries contained in vehicles.

"Battery pack": any set of batteries or accumulators interconnected and/or encapsulated in a housing to form a complete unit which the end user is not expected to dismantle or open.

"Large battery": any battery weighing 10 kg or more, or having a capacity greater than 1000 watt-hours, if its label includes the nominal energy in watt-hours. "Large battery" includes, but is not limited to, a traction battery and a stationary or mobile storage battery. "Large battery" does not include a battery used or integrated in products intended for industrial applications.

"Mobile storage battery": a device that stores electrochemical energy; is intended to power equipment, heating, and lighting; and is not attached to a structure. It can be attached to a vehicle but is not a traction battery.

"Stationary storage battery": a large rechargeable battery specifically designed to store and supply electrical energy to the power grid, or to power equipment, heating, and lighting.

"Reconditioning" or "Refurbishing": modifying or repairing a battery so that it can be reused for its original application.

"Repurposing": using a battery in a vehicle, product, or for an application for which it was not designed or intended.

"Reuse": using a battery in another vehicle of the same model, a product of the same make, or an application of the same type, thus requiring no modification of the battery.

Producer of large batteries

A producer of large batteries is one of the following:
(a) a producer who manufactures, markets, imports, or retails large batteries; or who integrates large batteries into a product application in Quebec.
(b) a producer who refurbishes, reconditions, reconverts, or modifies large batteries; or who markets, imports, retails or incorporates such batteries into a product application in Quebec.

Appendix B – Responsibility Transfer Paths

TABLE: Suggested paths for transferring producer responsibility according to different post-marketing actions.

Action	Description	Repair, modification or reconfiguration (housing opened)	Change of use (compared to original product)	OEM Approved (Service agreement)	Responsibility transfer
Reuse	Unmodified product, reused for the same application/vehicle model	NO	NO	YES	NO
				NO	NO
Repurpose	Unmodified product, reconverted for mobile, stationary, or other applications	NO	YES	YES	NO
				NO	YES
	Modified product, reconverted for mobile, stationary, or other applications	YES	YES	YES	NO
				NO	YES
Recondition or refurbish	Modified product, reused for same application/vehicle model	YES	NO	YES	NO
				NO	YES
	Product modified, reused for other purposes or vehicle model	YES	YES	YES	NO
				NO	YES

General OEM principles:

- Batteries reused "as is" in the applications and products for which they were designed (i.e. the same make or model of vehicle) are not subject to a transfer of responsibility.
- Parties who refurbish, recondition, or repurpose batteries become responsible for said batteries, resulting in a transfer of liability from the OEM to the new producer.

Approved by the OEM:

- An operation performed by the OEM or explicitly requested by the OEM (i.e. as part of a service contract).
  Examples include:
  - An OEM enters a service contract with a battery repurposing company.
  - An OEM explicitly authorizes (by contract) its service centers or a third party to conduct reconditioning operations.

  In this context, the public availability of battery manuals and diagnostic tools does not constitute authorization from the OEM to modify a battery.