
Établissement d'un Value Proposition Canvas et d'un Business Model Canvas pour une usine de production de batteries

Auteur : Vanherck, Rémy

Promoteur(s) : Ooms, Frédéric

Faculté : HEC-Ecole de gestion de l'Université de Liège

Diplôme : Master en sciences de gestion, à finalité spécialisée en management général (Horaire décalé)

Année académique : 2022-2023

URI/URL : <http://hdl.handle.net/2268.2/19018>

Avertissement à l'attention des usagers :

Tous les documents placés en accès ouvert sur le site le site MatheO sont protégés par le droit d'auteur. Conformément aux principes énoncés par la "Budapest Open Access Initiative"(BOAI, 2002), l'utilisateur du site peut lire, télécharger, copier, transmettre, imprimer, chercher ou faire un lien vers le texte intégral de ces documents, les disséquer pour les indexer, s'en servir de données pour un logiciel, ou s'en servir à toute autre fin légale (ou prévue par la réglementation relative au droit d'auteur). Toute utilisation du document à des fins commerciales est strictement interdite.

Par ailleurs, l'utilisateur s'engage à respecter les droits moraux de l'auteur, principalement le droit à l'intégrité de l'oeuvre et le droit de paternité et ce dans toute utilisation que l'utilisateur entreprend. Ainsi, à titre d'exemple, lorsqu'il reproduira un document par extrait ou dans son intégralité, l'utilisateur citera de manière complète les sources telles que mentionnées ci-dessus. Toute utilisation non explicitement autorisée ci-avant (telle que par exemple, la modification du document ou son résumé) nécessite l'autorisation préalable et expresse des auteurs ou de leurs ayants droit.

The new European Battery Regulation

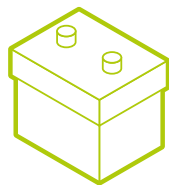
The European Commission has drawn up a draft Battery Regulation that will probably come into effect at the beginning of July 2023, of which EPR (extended producer responsibility) part or the future take-back rules will come into effect in mid-2025.

This overview details about the **most important new obligations for you as a producer, importer or seller of batteries on the Belgian market (individual sales of batteries themselves, as well as in appliances, equipment and means of transport).**

5 new battery categories

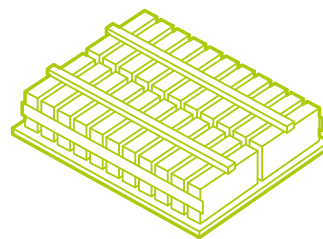
1

SLI battery or automotive battery (lead starter battery)



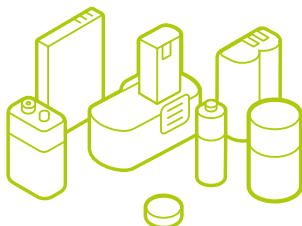
2

Electric Vehicle (EV) battery



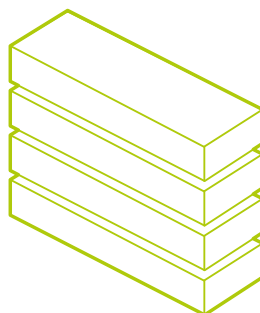
3

Portable battery ≤ 5 kg



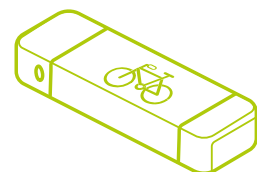
4

Industrial battery



5

Light means of transport battery (usually 2/3 wheel and ≤ 25 kg)



What are your new obligations?

PRODUCT STANDARDS

NEW OBLIGATION	APPLICABILITY TO NEW BATTERIES IN THESE CATEGORIES	NUMBER OF MONTHS AFTER ENTRY INTO BATTERY REGULATION
Carbon Dioxide footprint		
You provide a carbon footprint statement about the full life cycle of the battery.	<ul style="list-style-type: none"> • Electric vehicle batteries • Rechargeable industrial batteries > 2 kWh • Light means of transport batteries • Batteries for Energy Storage Systems (ESS) > 2 kWh 	18 months 30 months 60 months 84 months
Batteries are classified into carbon footprint performance classes.	<ul style="list-style-type: none"> • Electric vehicle batteries • Rechargeable industrial batteries > 2 kWh • Light means of transport batteries • Batteries for Energy Storage Systems (ESS) > 2 kWh 	36 months 48 months 78 months 102 months
There is a maximum carbon footprint threshold.	<ul style="list-style-type: none"> • Electric vehicle batteries • Rechargeable industrial batteries > 2 kWh • Light means of transport batteries • Batteries for Energy Storage Systems (ESS) > 2 kWh 	54 months 66 months 96 months 120 months
Performance & durability requirements		
Portable batteries (except button cells) for general use must meet minimum values for the electro-chemical performance and durability parameters .	<ul style="list-style-type: none"> • Portable batteries (4.5 Volt (3R12), D, C, AA, AAA, AAAA, A23, 9 Volts (PP3)) 	60 months
Establishment of these minimum values by the Commission via a delegated act	<ul style="list-style-type: none"> • Portable batteries (4.5 Volt (3R12), D, C, AA, AAA, AAAA, A23, 9 Volts (PP3)) 	48 months
Commission study on phasing out primary portable batteries in the market	<ul style="list-style-type: none"> • General purpose non-rechargeable portable batteries 	31/12/2030
You provide information about the battery performance & durability parameters (the values of these parameters are set by a delegated act in Appendix IV Part A , 30 and 42 months after entry into force of the Regulation).	<ul style="list-style-type: none"> • Rechargeable industrial batteries > 2 kWh • Light means of transport batteries > 2 kWh 	48 months 60 months
Batteries for Energy Storage System (ESS) must meet the set safety parameters .	<ul style="list-style-type: none"> • Batteries for Energy Storage Systems (ESS) 	12 months
Batteries must be accompanied by a document containing the electrochemical performance and robustness parameter values.	<ul style="list-style-type: none"> • Rechargeable industrial batteries > 2 kWh • Electric vehicle batteries • Light means of transport batteries 	12 months 12 months 12 months
Consumers must be able to remove and replace batteries from equipment.	<ul style="list-style-type: none"> • Portable batteries & light means of transport batteries 	42 months

PRODUCT STANDARDS

NEW OBLIGATION

APPLICABILITY TO NEW BATTERIES IN THESE CATEGORIES

NUMBER OF MONTHS AFTER ENTRY INTO BATTERY REGULATION

Due diligence obligation

There is a “duty of care” or “due diligence” for:

- suppliers of cobalt, natural graphite, lithium, nickel; as well as for
- respecting human rights, environmental considerations, health and safety (with supervision by a notified body).

- All types of batteries

24 months

A **QR code**, identification and/or serial number, and a physical label is to be placed on every battery. The date of manufacture and entry on to the market are also to be stated (possibly on the packaging or in separate documentation).

- All types of batteries

42 months

A Battery Management System (**BMS**) is to be provided with accessible data about the parameters related to battery ageing and lifespan.

- Batteries for Energy Storage Systems (ESS)
- Electric vehicle batteries
- Light means of transport batteries

12 months

12 months

12 months

Conformity declaration and a **CE marking** is to be placed on the battery (if not possible, on the packaging/documentation).

- All types of batteries

36 months

Batteries are to have a **battery passport** that is accessible via an access code and which details technical information, percentage of recycled materials and CO2 footprint.

- Rechargeable industrial batteries
- Electric vehicle batteries
- Light means of transport batteries

42 months

42 months

42 months

ENVIRONMENTAL OBLIGATIONS

NEW OBLIGATION	APPLICABILITY TO NEW BATTERIES IN THESE CATEGORIES	NUMBER OF MONTHS AFTER ENTRY INTO BATTERY REGULATION
Batteries are to be accompanied by documentation that states how much recycled cobalt, lead or nickel they contain.	<ul style="list-style-type: none"> Industrial batteries > 2 kWh Electric vehicle batteries Light means of transport batteries SLI batteries 	60 months 60 months 120 months 60 months
Batteries are to be made with a minimum proportion of recycled materials: Phase 1: cobalt (16%), lead (85%), lithium (6%) and nickel (6%)	<ul style="list-style-type: none"> Electric vehicle batteries Industrial batteries > 2 kWh SLI batteries 	96 months 96 months 96 months
Phase 2: cobalt (26%), lead (85%), lithium (12%) and nickel (15%)	<ul style="list-style-type: none"> Electric vehicle batteries Industrial batteries > 2 kWh Light means of transport batteries SLI batteries 	156 months 156 months 156 months 156 months
You are to register as a producer so that compliance with the management of waste batteries can be monitored.	<ul style="list-style-type: none"> All types of batteries 	On entry
Minimum recovery and recycling efficiency for end-of-life batteries is to be ensured.	<ul style="list-style-type: none"> All types of batteries 	On entry
Phase 1: 90% cobalt, 90% copper, 90% lead, 50% lithium and 90% nickel	<ul style="list-style-type: none"> All types of batteries 	31/12/2027
Phase 2: 95% cobalt, 95% copper, 95% lead, 80% lithium and 95% nickel	<ul style="list-style-type: none"> All types of batteries 	31/12/2031
Minimum recycling efficiency expressed in average weight. <ul style="list-style-type: none"> 75% for lead batteries, 65% for lithium batteries, 80% for nickel cadmium batteries, 50% for other waste batteries 	<ul style="list-style-type: none"> All types of batteries 	31/12/2025
<ul style="list-style-type: none"> 80% for lead batteries, 70% for lithium batteries 	<ul style="list-style-type: none"> All types of batteries 	31/12/2030

Collection targets for European Member States

