Objective of this document

This document is intended as a **brief summary of the DPP-related content** of the Battery Regulation proposal, the first approved DPP-related regulatory text for a particular product group[1]. This summary is proposed, for information, to the wider DPP stakeholder community as it may serve as a guideline for future product categories that will be covered by delegated acts of the Ecodesign for Sustainable Products Regulation

Summary of "Proposal for a Regulation of the European Parliament and of the Council concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) No 2019/1020 (2020/0353(COD))"

Batteries are expected to play an important strategic role, given the EU's focus on transforming the Union into a competitive economy where sustainability goals are met. "It is necessary to create a harmonised regulatory framework for dealing with the entire lifecycle of batteries" placed on the market, to "ensure a safe, circular and sustainable battery value chain for all batteries". This regulation "set out rules on sustainability parameters, performance, safety, collection recycling and second life of batteries as well as on information about batteries for end-users and economic operators".

In addition, this regulation contains detailed information on the **battery passport**. "From 42 months after entry into force of the Regulation each LMT[2] battery, each industrial battery with a capacity above 2 kWh and each electric vehicle battery placed on the market or put into service shall have an electronic record ("battery passport")." (Article 65) The "technical design, data requirements and operation of the battery passport should adhere to a set of essential technical requirements. Such requirements should be developed hand-in-hand with those for **digital product passports** required by other Union legislation concerning eco-design for sustainable products." (pg. 66) (94a)

Objective of the Battery Passport

(pg. 64) (93): "it is necessary to provide for a battery passport that maximises the exchange of information, enabling tracking and tracing of batteries, provides information about the carbon intensity of their manufacturing processes as well as the origin of the materials used and whether renewable material such as graphite produced from lignin is used, their composition, including raw materials and hazardous chemicals, repair, repurposing and dismantling operations and possibilities, and the treatment, recycling and recovery processes to which the battery could be subject to at the end of their life. The battery passport should provide the public with information about batteries placed on the market and their sustainability requirements. It should provide remanufacturers,

1. The Battery Regulation proposal was approved by European Council and Parliament in December 2022. The sections refer to the proposal text: https://data.consilium.europa.eu/doc/document/ST-5469-2023-INIT/en/pdf

2. LMT : light means of transport

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second-life operators and recyclers with up-to-date information for their handling of batteries and specific actors with tailored information such as on the state of health of batteries. It may support market surveillance authorities in carrying out their tasks under this Regulation but does not replace or modify the responsibilities of the market surveillance authorities, who should, in line with Regulation (EU) 2019/1020, carry out checks of the information contained in battery passports."

Lifecycle of the Battery Passport: issuing, access rights, usage rights, information update, re-issuing, destruction

"The responsibility of compliance with the provisions for the battery passport should lie with the **economic operator that places the battery on the market**." (pg. 65) (94) "The economic operator placing the battery on the market shall ensure that the information in the battery passport is accurate, complete and up to date. It may authorise an operator to act on their behalf." (Article 65, 4)

"Certain information in the battery passport **should not be public** as they concern sensitive commercial information that is only needed by a limited number of persons with a legitimate interest. This applies to dismantling information, including safety, and detailed composition which is essential for repairers, remanufacturers, second-life operators and recyclers. It also applies to information concerning individual batteries, which is essential to those who have purchased the battery or parties acting on their behalf for the purpose of making the battery available to independent energy aggregators or energy market participants, evaluating the residual value or remaining lifetime for further use, and facilitating the preparing for re-use, preparing for repurpose, or repurposing or remanufacturing of the battery. Results of test reports should only be accessible to notified bodies, market surveillance authorities and the Commission." (pg. 65) (93a)

By 36 months after entry into force of the Regulation, the Commission shall adopt implementing acts specifying to what information each actor shall have access, and to what extent they can **download, share, publish and reuse** that information. Criteria for specifying these actors "shall be the **necessity** of having such information in order to evaluate the status and residual value of the battery and its capability for further use, for the purpose of preparation for re-use, preparation for repurposing, repurposing, remanufacturing or recycling of the battery, or for choosing between those activities and the need to ensure that the accessing and the processing of, commercially sensitive information is limited to the minimum necessary…"

Once a battery "is placed on the market, it may in certain cases be more practical for another legal person to **update** information in the passport, such as a vehicle manufacturer. The economic operator that places the battery on the market should therefore be allowed to authorise in written form another operator to act on its behalf." (pg. 65) (94)

"For a battery that has been subject to **preparation for re-use, preparation for repurposing, repurposing, or remanufacturing**, the responsibility for the fulfilment of the obligations with respect to the battery passport … shall be transferred to the economic operator that has placed that battery on the market or has put it into service. The battery shall have a **new battery passport linked to the battery passport or passports of the original battery or batteries**. When there is a change in the status of a battery to a **waste battery**, the responsibility for the fulfilment of the obligations with respect to the battery passport … shall be transferred either to the producer or … producer responsibility organisations acting on their behalf, or waste management operator…" (Article 65, 6a)

"A battery passport shall cease to exist after the battery has been recycled." (Article 65, Paragraph 6b, pg. 238)

Requirements for the Battery Passport system

"Battery passports shall be fully **interoperable with other digital product passports** required by Union legislation concerning eco-design in relation to the technical, semantic and organisational aspects of end-to-end communication and data transfer;" (Article 65a, (a))

"Consumers, economic operators and other relevant actors shall have access to the battery passport **free of charge** and based on their respective access rights" (Article 65a, (b))

"The battery passport shall be accessible through the QR code … linking to a unique identifier that the economic operator placing the battery on the market shall attribute to it.[3]" (Article 65) The QR code shall be "printed or engraved on all batteries." (pg. 27) (28) " "Unique identifier" means a unique string of characters for the identification of batteries that also enables a web link to the battery passport." (pg. 90) (55a, pg. 90):

The battery passport "should be based on a **decentralised** data system, set up and maintained by economic operators." (94a, pg. 66) "The data included in the battery passport shall be stored by the economic operator responsible for the fulfilment of the obligations with respect to the battery passport … or by operators authorised to act on their behalf" (Article 65a, (c)) "If the data included in the battery passport is stored or otherwise processed by operators authorised to act on their behalf, those operators shall not be allowed to sell, re-use or process such data, in whole or in part, beyond what is necessary for the provision of the relevant storing or processing services." (Article 65a, (d))

"The technical design should ensure that the battery passport carries data in a secure way, respecting privacy rules." (pg. 66) (94a)

"All information included in the product passport shall be based on open standards, developed with an inter-operable format and shall be transferable through an open interoperable data exchange network without vender lock-in and shall be machine readable, structured, and searchable" (Article 65, 5)

"The product passport shall remain available after the economic operator responsible for the fulfilment of the obligations with respect to the battery passport … ceases to exist or ceases its activity in the Union." (Article 65a, (e))

3. Article 65 (pg. 237) mentions that the Commission is empowered to adopt delegated acts to amend the European or international standards with which the QR code and the unique identifier shall comply, in light of technical and scientific progress.

Appendix - Detailed information requirements to be included in the battery passport, Annex XIII (pg. 326)

1. PUBLICLY ACCESSIBLE INFORMATION RELATING TO THE BATTERY MODEL A battery passport shall include the following information relating to the battery model which shall be accessible to the public:

(a) Information specified in Part A of Annex VI[4];

(b) Material composition of the battery, including its chemistry, hazardous substances contained in the battery other than mercury, cadmium or lead, and critical raw materials contained in the battery;

(f) Carbon footprint information referred to in Articles 7(1) and 7(2)[5];

(g) Information on responsible sourcing as indicated in the report on its due diligence policies referred to in Article 45e(3)

(h) Recycled content information as contained in the documentation referred to in Article 8(1)[6];

(ha) The share of renewable content;

(i) Rated capacity (in Ah);

(j) Minimal, nominal and maximum voltage, with temperature ranges when relevant;

(k) Original power capability (in Watts) and limits, with temperature range when relevant;

(l) Expected battery lifetime expressed in cycles, and reference test used;

(m) Capacity threshold for exhaustion (only for electric vehicle batteries);

(n) Temperature range the battery can withstand when not in use (reference test);

(o) Period for which the commercial warranty for the calendar life applies;

(p) Initial round trip energy efficiency and at 50% of cycle-life;

(q) Internal battery cell and pack resistance;

(r) C-rate of relevant cycle-life test.

(s) The labelling requirements laid down in articles 13(3) and (4)[7];

(t) The EU declaration of conformity referred to in Article 18[8]; (u) The information regarding the prevention and management of waste batteries laid down in point (a) to (f) of Article 60(1)[9].

4. Part A of Annex VI (pg. 291): information on label of batteries including manufacturer's identification, battery category and identification, manufacturing place and date, weight, capacity chemistry, hazardous substances, usable extinguishing agent, critical raw materials

5. Article 7 (1) and (2) (pg. 99): carbon footprint of battery and differentiated per life cycle (see point 4 Annex II for life cycle stage definition)

6. Article 8(1) (pg. 104)

7. Article 13(3) and (4) (pg. 118): labeling requirements "separate collection" and marking symbol for metal concerned.

8. Article 18 (pg. 128)

9. Article 60(1) (pg. 222): information on prevention and management of waste batteries

2. INFORMATION RELATING TO THE BATTERY MODEL ACCESSIBLE ONLY TO INTERESTED PERSONS AND THE COMMISSION A battery passport shall include the following information relating to the battery model which shall be accessible only to interested persons and the Commission:

(a) Detailed composition, including materials used in the cathode, anode and electrolyte;

(b) Part numbers for components and contact details of sources for replacement spares;

(c) Dismantling information, including at least:

- Exploded diagrams of the battery system/pack showing the location of battery cells,
- Disassembly sequences
- Type and number of fastening techniques to be unlocked,
- Tools required for disassembly, - Warnings if risk of damaging parts exist,
- Amount of cells used and layout;

(d) Safety measures.

3. INFORMATION ACCESSIBLE ONLY TO NOTIFIED BODIES, MARKET SURVEILLANCE AUTHORITIES AND THE COMMISSION A battery passport shall include the following information relating to the battery model which shall be accessible only to notified bodies, market surveillance authorities and the Commission:

(a) Results of tests reports proving compliance with the requirements set out in this Regulation or any implementing or delegated act adopted on its basis.

4. INFORMATION AND DATA RELATING TO AN INDIVIDUAL BATTERY ACCESSIBLE ONLY TO INTERESTED PERSONS

A battery passport shall include the following specific information and data relating to an individual battery which shall be accessible only to interested persons:

(a) the values for performance and durability parameters referred to in Article 10(1)[10], when the battery is placed on the market and when it is subject to changes in its status;

(aa) information on the state of health of the battery pursuant to Article 14[11];

(b) information on the status of the battery, defined as 'original', 'repurposed', 'reused', 'remanufactured' or 'waste';

(c) information and data as a result of its use, including the number of charging and discharging cycles and negative events, such as accidents, as well as periodically recorded information on the operating environmental conditions, including temperature, and on the state of charge.

10. Article 10(1) (pg. 108): details on required document containing value for the electrochemical performance and durability parameters (parameters details are in part A and B, Annex IV, pg. 284 and 285)

11. Article 14 (pg. 121): information on the state of health and expected lifetime of batteries using a battery management system (also see Annex VII (pg. 293) for parameter details)