



Brussels, **XXX**
[...](2026) **XXX** draft

COMMISSION DELEGATED REGULATION (EU) .../...

of **XXX**

supplementing and amending Regulation (EU) 2023/1542 of the European Parliament and of the Council by laying down minimum values for the electrochemical performance and durability of rechargeable industrial batteries, technical and safety parameters, and standards concerning the battery passport

(Text with EEA relevance)

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE DELEGATED ACT

Batteries are a crucial technology for sustainable development, green mobility, clean energy and climate neutrality. The Batteries and Waste Batteries Regulation¹ ('the Regulation') introduced a harmonised regulatory framework covering the entire life cycle of batteries placed on the market in the European Union, with requirements on their electrochemical performance and durability. Under the Regulation, the Commission is required to establish minimum values for the electrochemical performance and durability parameters – as referred to in Annex IV to the Regulation – of specific categories of battery, starting with rechargeable industrial batteries with a capacity greater than 2 kWh, except those with exclusively external storage.

In addition, the Regulation empowers the Commission to amend certain parts of it in the light of technical and scientific progress. Developments in standardisation requested by the Commission have resulted in new standards for QR codes and unique identifiers that affect the battery passport. Furthermore, these developments have led to progress on certain technical and safety parameters referred to in the Regulation.

2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

As this is a technical act, it did not need to be supported by an impact assessment or an open public consultation.

The performance and durability requirements in the delegated act draw on a report by the Joint Research Centre (JRC) of the Commission entitled 'Technical support to define performance and durability minimum requirements for industrial batteries'. Stakeholders contributed to this report, including through three workshops.

The expert group on waste, consisting of experts designated by each Member State and other selected experts representing business organisations and civil society, was consulted on the draft performance and durability requirements on 9 October 2025. The same expert group was consulted on 29 April 2026 on draft amendments to certain parts of the Regulation in the light of technical and scientific progress.

The draft delegated act was opened for public feedback on the Better Regulation Portal from [...] to [...] 2026.

3. LEGAL ELEMENTS OF THE DELEGATED ACT

The delegated act is adopted pursuant to the first subparagraph of Article 10(5) of the Regulation, which empowers the Commission to adopt a delegated act establishing minimum values for the electrochemical performance and durability parameters set out in Part A of Annex IV that must be attained by rechargeable industrial batteries with a capacity greater than 2 kWh, except those with exclusively external storage. It is also adopted pursuant to Articles 10(6), 12(3), 14(4) and the third subparagraph of Article 77(3) of the Regulation,

¹ Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, amending Directive 2008/98/EC and Regulation (EU) 2019/1020 and repealing Directive 2006/66/EC (OJ L 191, 28.7.2023, p. 1, ELI: <http://data.europa.eu/eli/reg/2023/1542/oj>).

which empower the Commission to adopt delegated acts amending specific provisions and Annexes in the light of technical and scientific progress.

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, amending Directive 2008/98/EC and Regulation (EU) 2019/1020 and repealing Directive 2006/66/EC², and in particular Article 10(5), first subparagraph, Articles 10(6), 12(3), 14(4) and Article 77(3), third subparagraph, thereof,

Whereas:

- (1) Regulation (EU) 2023/1542 requires the Commission to set minimum values for the electrochemical performance and durability parameters of rechargeable industrial batteries with a capacity greater than 2 kWh, except for those with exclusively external storage. Products designed for defence purposes are excluded from Regulation (EU) 2023/1542 and this Regulation.
- (2) Minimum values for electrochemical performance and durability should be set for parameters that are independent of battery size and commonly used, and that have sufficient data to enable such thresholds to be set. Furthermore, considering the partial correlation between certain parameters, the minimum values should be limited to a few decisive parameters. Out of the parameters that are listed in Annex IV to Regulation 2023/1542 the ones that meet those prerequisites are energy roundtrip efficiency, capacity fade, expected lifetime in years and expected lifetime in cycles.
- (3) The parameters energy roundtrip efficiency and expected lifetime in cycles are only relevant for batteries subject to frequent discharge. Therefore, when setting minimum values for electrochemical performance and durability parameters, a distinction should be made between repetitive energy supply batteries and on-demand batteries that are charged and discharged sporadically or deliver back-up services.
- (4) Rechargeable industrial batteries with a capacity greater than 2 kWh are wide ranging and used in many business-to-business sectors but also by consumers in residential battery energy storage systems where they have relatively uniform operating conditions. Therefore, residential battery energy storage systems should be subject to more stringent minimum values than batteries used in industry and businesses.

² OJ L 191, 28.7.2023, p. 1., ELI: <http://data.europa.eu/eli/reg/2023/1542/oj>.

- (5) Considering the direct impact on consumers, the potential for environmental benefits and the good availability of data, residential battery energy storage systems should be subject to specific energy roundtrip efficiency minimum values. However, for batteries used in industry and businesses, the wide range of technology would make such minimum values unsuitable and ineffective.
- (6) Lead-based batteries are a key technology in many European industrial sectors. However, they often have inherently lower electrochemical performance and durability compared to other battery chemistries and can be used for applications with lower electrochemical performance and durability needs. Lead-based batteries should therefore be treated as a separate category when setting minimum values for electrochemical performance and durability parameters. In the case of residential battery energy storage systems, lead-based technology is rarely used in the Union. It is therefore unnecessary to set minimum values for this use.
- (7) Certain stationary battery energy storage systems used in commercial or office environments may be the same as those used by private, non-commercial end-users. Such stationary battery energy storage systems should therefore be included in the category of residential battery energy storage systems as they are designed for domestic uses, albeit not exclusively. Stationary battery energy storage systems that must be installed in technical rooms or enclosures equipped with dedicated safety infrastructure are typically not used by consumers and should therefore not be included in the category of residential battery energy storage systems.
- (8) The varied applications and use cases for rechargeable industrial batteries require adaptable approaches in order to ensure that requirements are effective. Differing operating conditions are the main reason why battery durability varies. The minimum values for capacity fade and expected lifetime in years and cycles should therefore be adjusted through stress factors based on operating conditions.
- (9) The re-use of batteries that had become waste and the repurposing and remanufacturing of batteries prolongs their lifespan and reduces their environmental impact. However, second-life batteries, if placed on the Union market, may not be able to meet the minimum values for electrochemical performance and durability which are intended for new batteries. For this reason, second-life batteries that previously met the electrochemical performance and durability minimum values in their first life should be deemed to meet the minimum values for electrochemical performance and durability as laid down in this Regulation. Where there is no evidence available of their prior compliance with performance and durability minimum values, the compliance of second-life batteries may be demonstrated by operational data from the preceding use phase, where appropriate with adapted minimum values, provided this data meets data quality criteria.
- (10) Developments in standardisation have resulted in new standards for QR codes and unique identifiers that affect the battery passport. Those developments have also led to progress on certain technical and safety parameters referred to in Annexes IV, V and VII to Regulation (EU) 2023/1542. In particular, as regards safety parameters, it has emerged from expert discussions that an internal short circuit is, in itself, more of a failure mode than a test and such failure is best addressed by thermal propagation protection. Furthermore, for the state of health parameter regarding the evolution of self-discharging rates, no technically feasible method has been found to exist at present for a battery management system to determine this parameter with sufficient accuracy under realistic operating conditions. In addition, some definitions set out in

Annexes IV and VII to that Regulation require minor technical adjustments to ensure consistent use. Article 77(3) of and Annexes IV, V and VII to Regulation (EU) 2023/1542 should therefore be amended accordingly,

HAS ADOPTED THIS REGULATION:

Article 1

Requirements for performance and durability

The requirements concerning minimum values for the electrochemical performance and durability of rechargeable industrial batteries with a capacity greater than 2 kWh, except for those with exclusively external storage, are laid down in Annex I.

Article 2

Amendments to Regulation (EU) 2023/1542

Regulation (EU) 2023/1542 is amended as follows:

- (1) In Article 77(3), the second subparagraph is replaced by the following:
‘The QR code shall comply with EN 18220:2026 and the unique identifier shall comply with EN 18219:2026, or their equivalent.’;
- (2) Annexes IV, V and VII are amended in accordance with Annex II to this Regulation.

Article 3

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the Commission
The President
Ursula von der Leyen