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New EU battery regulation:

Enabling sustainable competitiveness?

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Batteries have long been highlighted by the European Commission as a strategic value chain for Europe. The growing battery industry is slated to create jobs and deliver on the EU Green Deal zero emission target. The EU is aiming for 'sustainable competitiveness'. It wants to develop green and ethically produced batteries on a mass scale that will outcompete Asian producers in the European markets and beyond.

On 10 December 2020 the European Commission put forward a comprehensive new battery 'law' to be applied uniformly across the EU single market in 2022.

Will the battery regulation enable sustainable competitiveness for European battery production?

In this brief we highlight some of the key sustainability and transparency requirements that have been proposed.

In short, these requirements are comprehensive and are set to gradually shift production in Europe to become more sustainable and circular. The regulation sets a gold standard for battery production and consumption and it creates a European market where sustainability likely will become an equally important driver as price in the market (Šefčovič 2020). It is too early to tell whether the regulation will build competitiveness for European producers beyond Europe. A small number of Asian firms dominate the global market today and they are set to remain as key players. Within Europe the proposal increases the competitiveness of companies across the value chain that operate with low CO2 emissions or can thrive in value chains where recycling and reuse are central.



The EU battery regulation in context

The battery regulation is one of several policy measures undertaken by the EU in the sphere of batteries. The EU has established the major Battery Alliance, which gathers most actors associated with the nascent battery value chains and helps coordinate wider European initiatives on batteries. Moreover, in late 2019 and early 2021 two Important Project of Common European Interest (IPCEI) were announced. The IPCEI mechanism suspends ordinary competition rules for the Single Market. The two battery IPCEIs are set to unleash over over 6 billion Euros in public financing from the participating member states and around 14 billion Euros in private investments. The funds will be disbursed across European battery value chains. Over 200 companies and other actors are involved directly or indirectly. These large scale initiatives illustrate the grand political ambitions the European Commission as well as key EU member countries such as Germany and France hold in relation to batteries.

Sustainability requirements – targets on carbon footprint and recycled content

One of the new provisions introduced in this proposal is the 'Carbon footprint of electric vehicle batteries and rechargeable industrial batteries' (Chapter 2, Article 7). It states that all electric vehicle batteries and rechargeable industrial batteries with internal storage and capacity above 2 kWh will have to provide a carbon footprint declaration starting 1 July 2024. The details regarding how to calculate the carbon footprint will be elaborated on in a delegated act that will be proposed by the Commission on 1 July 2023 at the latest. A threshold setting the maximum value of carbon footprint that the battery may contain will apply starting 1 July 2027. In addition to increasing the recycling targets from the battery directive and setting specific recycling targets for certain materials, the new regulation proposes a threestep approach to setting mandatory levels of recycled content to be included in the production of new batteries: 'Recycled content in industrial batteries, electric vehicle batteries and automotive batteries' (Chapter 2, Article 8). This applies for industrial batteries, electric vehicle batteries and automotive batteries with internal storage and a capacity above 2 kWh that contain cobalt, lead, lithium, or nickel in active materials. First, a declaration of recycled content will be demanded from 1 January 2027. The calculation methodology will be introduced through an implementing act by 31 December 2025. From 2030 onwards a battery placed on the European internal market will have to include a minimum of 12% cobalt, 85% lead, 4% lithium and/or 4% nickel provided the battery contains these materials. This timeframe is set as the Commission expects that the first generation of batteries sent for recycling will be ready by 2030. From 2035 the targets on recycled content will be updated to 20% cobalt, 85% lead, 10% lithium and/or 12% nickel.



Transparency requirements due diligence and information sharing becomes mandatory

The new regulation also provides provisions regarding transparency. This includes mandatory due diligence report on the battery supply chain: 'Obligations for economic operators that place rechargeable industrial batteries and electric vehicle batteries with internal storage and a capacity above 2 kWh on the market to establish supply chain due diligence policies' (Chapter 6, Article 39). These obligations will build upon the due diligence requirements set by OECD. Economic operators must keep documentation of information about raw materials and suppliers of raw materials. The responsibility of overseeing the supply chain due diligence process is put on the senior managers and they should keep the records for a minimum of five years. The information gained and maintained will have to be made available to the economic operator's downstream

purchasers with due regard for business confidentiality and other competitive concerns. The economic operators also have to annually report publicly on its supply chain due diligence policies.

The Commission plans to set up a system for exchanging information electronically, 'Electronic exchange system' (Chapter 8, Article 64). This system will be set up by January 1st, 2026. The information and data on rechargeable industrial batteries and electric vehicle batteries with internal storage and a capacity above 2 kWh will be accessible for third party use through this system. The architecture, format and rules for this system will be established by an implementing act by 31 December 2024. By 1 January 2026, these batteries will also have a 'Battery passport' (Chapter 8, Article 65). The passport will be unique for each battery and the identifier will be printed or engraved on the battery. Economic operators placing batteries on the internal market will contribute here, and make sure that the data is accurate, complete, and up to date. In terms of repairing and repurposing, the responsibility for the battery record in the battery passport will be 'transferred to the economic operator that is considered to place the industrial battery or the electric vehicle battery on the market or that puts it into service'.

More regulation to come

The regulation sets out a clear path for the future of battery legislation in Europe. It constitutes a major update of the battery directive from 2006 and incorporate major new legislation on sustainability and transparency. This makes the regulation much broader in scope than any previous battery related legislation seen in Europe. Still, the proposed comprehensive battery regulation that will likely come into operation in January 2022 is not the end point. Further details and operationalisation of the provisions will have to be developed over the course of the next decade in more than 30 pieces of secondary legislation. The secondary legislation will be developed on issues such as: product requirements, labeling, battery conformity, electronic exchange, battery passport, green public procurement, and due diligence. A review of the regulation will take place by the end of 2030.

Key milestones in the coming decade and beyond

The political will to get the proposal adopted and rolled out is high. Vice President of the European Commission, Maroš Šefčovič, has stated that the procedure for getting the legislation proposal approved will get 'fast-tracked'. The Commission hope the new regulation will enter into force starting 1 January 2022 (Šefčovič 2020). A stepwise approach is taken. In the early 2020s emphasis will be placed on information sharing and declarations. In the late 2020s the first absolute, yet modest targets will come into effect. Beyond 2030 there will be more ambitious targets formulated, but these will be developed in close consultation with stakeholders. Below is a timeline that contains important dates for industrial, electric vehicle and lithium-based batteries.

Timeline

Adopting the legislation:

The goal is adoption by the end of 2021, meaning that the legislation will come into effect as of 1 January 2022.

12 months after regulation enters into force:

Technical documentation containing values for the electrochemical performance and durability parameters for rechargeable industrial batteries and electric vehicle batteries with internal storage and a capacity above 2 kWh (Article 10).

1 July 2024:

A carbon footprint declaration requirement for batteries with internal storage and a capacity above 2 kWh will come into effect (Article 7, Annex II).

By 1 January 2025:

Recycling processes shall have achieved a minimum recycling efficiency of 65% by lithiumbased batteries' average weight (Article 57, Annex XII).

1 January 2026:

Industrial battery and electric vehicle battery placed on the market or put into service and whose capacity is higher than 2 kWh shall have an electronic record, 'battery passport' (Article 65)

By 1 January 2026:

Specific recycling efficiencies for cobalt, copper, lead, lithium, and nickel have to be achieved (Article 57, Annex XII).

From 1 January 2026:

Requirements of performance and durability for rechargeable industrial batteries with internal storage and a capacity above 2 kWh (Article 10, Annex IV).

1 January 2027:

Requirements of recycled content declaration for industrial batteries, electric vehicle batteries and automotive batteries with internal storage and a capacity above 2 kWh that contain cobalt, lead, lithium, or nickel in active materials (Article 8).

1 July 2027:

A maximum life cycle carbon footprint threshold will come into effect (Article 7, Annex II).

1 January 2030:

Recycling processes shall have achieved a minimum recycling efficiency of 70% by lithiumbased batteries' average weight (Article 57, Annex XII).

By 1 January 2030:

Increased specific recycling efficiencies for cobalt, copper, lead, lithium, and nickel have to be achieved (Article 57, Annex XII).

From 1 January 2030:

Specific requirements of recycled content for industrial batteries, electric vehicle batteries and automotive batteries with internal storage and a capacity above 2 kWh that contain cobalt, lead, lithium, or nickel in active materials (Article 8).

From 1 January 2035:

Increased specific requirements of recycled content for industrial batteries, electric vehicle batteries and automotive batteries with internal storage and a capacity above 2 kWh that contain cobalt, lead, lithium, or nickel in active materials (Article 8).

