MAY 2026

THE BATTERY DPP BLUEPRINT

Foundational Guide - EU Battery Regulation (EU) 2023/1542

PREPARED FOR

Battery manufacturers, importers & compliance teams

PUBLISHED BY

Circuland - www.circuland.co.uk

DISCLAIMER & CONTENTS

A practical compliance guide to the EU Battery Regulation 2023/1542

THIS GUIDE IS FOR INFORMATIONAL PURPOSES AND REFLECTS THE REGULATION AS UNDERSTOOD IN MAY 2026. IT DOES NOT CONSTITUTE LEGAL ADVICE. READERS SHOULD SEEK INDEPENDENT ADVICE ON THEIR SPECIFIC COMPLIANCE OBLIGATIONS

WHAT IS A BATTERY DIGITAL PRODUCT PASSPORT?

Chapter 1 of 6 - EU Battery Regulation

A Battery Digital Product Passport (DPP) is a structured digital record linked to an individual battery. It brings together key information about that battery: where it was made, what it contains, how it performs, how much carbon was emitted to produce it, and what should happen to it at the end of its life and makes that information accessible to the right people at the right time.

1.1 What it is not

A battery DPP is not a product label, a sustainability certificate, or a marketing tool. It is a data infrastructure requirement. The regulation sets out what data must be collected, how it must be structured, where it must be stored, and who can access it. Meeting the requirement means having the right data in the right place, not just printing a QR code on the packaging.

Definition: The EU Battery Regulation defines the battery passport as an electronic record of an individual battery, containing information about the battery model and the individual battery's status during its use phase, accessible via a data carrier.

1.2 Why it matters beyond compliance

The battery passport exists to solve a real problem: buyers, recyclers, and regulators currently have very limited visibility into what batteries contain and how they have performed. A spent EV battery arriving at a recycling facility today carries almost no traceable information. A battery passport changes that: potentially unlocking second-life applications, improving recycling efficiency, and giving manufacturers a basis for demonstrating sustainability credentials.

For your business, the passport is a compliance obligation. But the data it requires you to collect is also the data that will increasingly determine your competitive position with OEM customers, procurement teams, and investors who need to report on their own Scope 3 emissions and supply chain due diligence.

WHY THE EU INTRODUCED THE BATTERY PASSPORT

Chapter 2 of 6 - EU Battery Regulation

Batteries are central to the European Union's twin transitions: decarbonisation and digital transformation. Demand for batteries in the EU is expected to grow twelve-fold by 2030, driven by EV adoption and grid-scale energy storage. The materials required lithium, cobalt, nickel, manganese are largely sourced from outside Europe, often from regions with significant environmental and human rights risks.

Against this backdrop, the EU identified three structural problems that the battery passport is designed to address.

Problem 1: Lack of supply chain transparency

Manufacturers placing batteries on the EU market had no consistent obligation to disclose where their materials came from, under what conditions they were extracted, or what emissions were associated with their production. Buyers and policymakers had no reliable basis for comparison or verification.

Problem 2: Stranded end-of-life value

Without reliable data about a battery's chemistry, composition, and remaining performance, recyclers and repurposers struggle to make informed decisions. Batteries that could be given a second life as stationary storage are often sent directly to recycling. Recyclers working without composition data recover materials less efficiently. The passport creates the information infrastructure for a circular economy in batteries.

Problem 3: Inconsistent sustainability claims

Carbon footprint claims for batteries varied wildly, used different methodologies, and were unverifiable. The passport creates a standardised basis for calculating and disclosing the carbon footprint across defined lifecycle stages, enabling meaningful comparison and eventual regulatory thresholds.

***Context** - The battery passport is the first mandatory Digital Product Passport in EU legislation. It is intended to serve as the pilot for the broader Ecodesign for Sustainable Products Regulation (ESPR) DPP framework, which will eventually cover textiles, electronics, steel, and other product categories.*

THE BATTERY REGULATION EXPLAINED

Chapter 3 of 6 - EU Battery Regulation

3.1 Overview

EU Regulation 2023/1542 on batteries and waste batteries entered into force in August 2023. It is a wide-ranging piece of legislation covering sustainability requirements, performance standards, labelling, supply chain due diligence, end-of-life management, and the digital product passport. It replaces the previous Battery Directive (2006/66/EC) and applies directly across all EU Member States without requiring national transposition.

The regulation covers all batteries placed on the EU market, regardless of where they are manufactured. If you sell batteries into the EU, or sell products containing batteries into the EU, this regulation applies to you.

3.2 Scope

The regulation applies to all battery categories: portable batteries, SLI (starter, lighting, ignition) batteries, LMT (light means of transport) batteries, EV batteries, and industrial batteries. However, the digital product passport requirement, which is the focus of this guide, applies only to a subset of these categories.

The battery passport is required for:

- Electric vehicle (EV) batteries
- Light means of transport (LMT) batteries
- Industrial batteries with a capacity greater than 2 kWh

Portable batteries and SLI batteries are not required to have a passport, but they are required to carry a QR code from August 2027 providing access to basic labelling and waste information.

3.3 Key compliance deadlines

Battery Type	Passport Required?	Key Deadline	Notes
EV Batteries	Yes	18th Feb 2027	Full DPP required
LMT batteries (e-bikes,e-scooters)	Yes	18th Feb 2027	Full DPP required
Industrial > 2 kWh	Yes	18th Feb 2027	Includes BESS, forklifts, UPS
Portable Batteries	No passport	N/A	QR code required from Aug 2027

Note: the 18 February 2027 deadline is when the passport becomes mandatory. Several preceding obligations including labelling requirements from August 2026, carbon footprint declarations, and performance data documentation have earlier timelines. These are covered in the Implementation Timeline template.

3.4 The relationship with ESPR

The EU Battery Regulation is sector-specific legislation. The Ecodesign for Sustainable Products Regulation (ESPR, 2024/1781) provides the overarching technical framework for digital product passports across all product categories. The battery passport must be technically interoperable with DPPs being developed for other sectors. Understanding the ESPR framework matters for technology decisions: any passport platform you select should comply with both the Battery Regulation and the broader ESPR technical architecture.

BATTERY CATEGORIES AND HOW REQUIREMENTS DIFFER

Chapter 4 of 6 - EU Battery Regulation

The Battery Regulation applies to all battery categories, but the DPP requirement applies to three. Understanding which category your batteries fall into determines what you must do and when.

4.1 Electric vehicle (EV) batteries

An EV battery is one specifically designed to provide traction to hybrid or electric vehicles. Category L vehicles (e.g. motorcycles, quadricycles) using batteries over 25 kg are included, as are all vehicles in categories M, N, and O (cars, vans, trucks, trailers).

EV batteries carry the full DPP requirement from February 2027, including carbon footprint declarations with performance class, supply chain due diligence, state of health reporting (where a BMS is used), and all material composition data. State of certified energy (SOCE) is a specific data attribute required for EV batteries using a BMS.

4.2 LMT batteries

An LMT battery provides traction to light wheeled vehicles - e-bikes, e-scooters, e-mopeds - and weighs 25 kg or less. The category covers type-approved vehicles within the EU category L framework.

LMT batteries carry the full DPP requirement from February 2027. For LMT batteries using a BMS, remaining capacity and state of charge must be reported as dynamic data. LMT batteries are arguably the highest-volume category facing the DPP requirement and the category where supply chain data collection is often least developed.

4.3 Industrial batteries above 2 kWh

This is a broad category covering batteries specifically designed for industrial uses, or any battery over 5 kg that is not EV, LMT, SLI, or portable. It includes:

- Stationary battery energy storage systems (BESS) - grid-connected and home storage
- Forklift and electric logistics batteries
- Uninterruptible power supply (UPS) batteries
- Rail, heavy machinery, and off-road vehicle batteries

The 2 kWh threshold is the key dividing line. Industrial batteries at or below 2 kWh do not require a passport. For those above the threshold, the full DPP requirement applies from February 2027. Stationary energy storage systems have some additional specific data attributes.

4.4 Portable batteries - no passport, but QR code required

Portable batteries weigh 5 kg or less, are not designed for industrial use, and do not fall into the EV, LMT, or SLI categories. Common examples include consumer electronics batteries and power tool batteries. No passport is required, but a QR code must be affixed providing access to labelling and waste battery information from August 2027.

4.5 SLI batteries - no passport but QR code required

SLI batteries are used for starting, lighting, and ignition in conventional vehicles. They also serve auxiliary purposes in boats and machinery. Like portable batteries, SLI batteries do not require a passport but must carry a QR code from August 2027. For SLI batteries, the QR code must also provide access to recycled content data for cobalt, lead, lithium, and nickel.

What if a battery could fall into more than one category? *- Where a battery could reasonably be classified under more than one category, it must be treated as belonging to whichever category carries the stricter requirements. This is stated explicitly in Article 3 of the regulation.*

WHO IN THE SUPPLY CHAIN IS RESPONSIBLE FOR WHAT?

Chapter 5 of 6 - EU Battery Regulation

The economic operator concept

The regulation uses the term economic operator to describe any business subject to obligations under it. For the battery passport specifically, responsibility is assigned to the economic operator who places the battery on the market, either the manufacturer or the importer.

5.1 Manufacturers

A manufacturer is any legal or natural person who manufactures a battery, or has one designed or manufactured, and markets it under their own name or trademark or puts it into service for their own purposes.

If your business assembles battery packs from cells and places them on the EU market under your brand, you are the manufacturer and you bear primary responsibility for the battery passport.

That means:

- Issuing and maintaining the battery passport
- Ensuring the unique identifier is assigned to each battery
- Collecting the required data from your upstream suppliers
- Making the passport accessible via QR code
- Keeping the passport accurate and up to date

5.2 Importers

An importer is any business established within the EU that places a battery on the EU market from a third country. If you import fully assembled battery packs from a manufacturer outside the EU and sell them in Europe, you are the importer and you take on the manufacturer's obligations for the battery passport.

This is a significant point for businesses that source batteries from Asian manufacturers. The EU importer, not the overseas manufacturer, is the responsible economic operator. The importer must ensure the passport exists, is compliant, and is maintained.

5.3 Distributors

A distributor is any business in the supply chain, other than the manufacturer or importer, that makes batteries available on the market. Distributors are not responsible for creating or maintaining the battery passport, but they must cooperate with market surveillance authorities, provide information on their supply chain when requested, and take corrective action if non-compliant batteries are identified.

A distributor who places a battery on the market under their own name or trademark, or who significantly modifies a battery, must be regarded as a manufacturer and takes on all associated obligations.

5.4 Upstream Suppliers

Although upstream suppliers, cell manufacturers, cathode active material producers, miners and refiners are not directly responsible for the battery passport, the regulation places an explicit obligation on them to provide the information and documentation necessary to comply. Article 39 states that suppliers of battery cells and modules must provide this information free of charge to the responsible economic operator.

In practice, this means your supplier questionnaires and contractual arrangements need to build in data provision obligations. This is frequently where implementation bottlenecks occur.

5.5 Who is responsible when a battery changes hands?

Responsibility for the battery passport can transfer during the battery's life. For example, when a battery is remanufactured, repurposed, or changes economic operator. If a battery is significantly changed, a new passport must be issued and linked to the previous one. The previous operator remains responsible for the accuracy of the data they contributed; the new operator takes responsibility for the complete passport going forward.

Practical rule of thumb *- If your business is the one making a battery available to EU customers for the first time - whether you made it yourself or imported it - you are responsible for the battery passport. If you're further down the chain simply distributing someone else's product, the passport responsibility sits upstream, but you must still be able to access and pass on passport information when required.*

WHAT HAPPENS IF YOU ARE NOT COMPLIANT?

Chapter 6 of 6 - EU Battery Regulation

6.1 Market access is the core enforcement mechanism

The most direct consequence of non-compliance with the battery passport requirement is loss of EU market access. Batteries without a compliant passport cannot legally be placed on the EU market. For businesses whose revenue depends on EU sales, this is existential.

Market surveillance authorities in each EU Member State have the power to:

- Require economic operators to provide documentation and information
- Require corrective action within a defined period
- Prohibit or restrict the placing of non-compliant batteries on the national market
- Order withdrawal or recall of non-compliant batteries
- Impose penalties - determined at Member State level

6.2 Penalties are set by Member States, not the EU centrally

The Battery Regulation itself does not define a single set of financial penalties for non-compliance with the passport requirement. Instead, it requires Member States to establish effective, proportionate, and dissuasive penalties. What this means in practice will vary by country. It is reasonable to assume that penalties will be significant. The regulation states explicitly that penalties must be dissuasive.

Civil liability may also arise. If inaccurate passport data leads to harm; for example, incorrect safety information leading to an incident, claims under product liability law may follow.

6.3 Market surveillance authorities will check passport data

The regulation specifically notes that market surveillance authorities should carry out checks on the information contained in battery passports. This means the obligation is not just to have a passport that exists but the data within it must be accurate, complete, and current. A passport with missing or materially inaccurate information is a non-compliant passport.

6.4 Third-country customs enforcement

Batteries imported into the EU will be subject to customs controls. Customs authorities will be able to check whether batteries have a compliant passport before they are cleared for the EU market. For importers, this means the passport must be in place before goods arrive at the border, not something that can be retrofitted after import.

Practical implication *- The deadline of 18 February 2027 is ten months away as of April 2026. Every battery you place on the EU market from that date must have a compliant passport. Supplier data collection, platform setup, QR code generation, and registry registration all take time - and that time is now very short. If you have not started, start today. If you have started, accelerate.*

READY TO START? TALK TO CIRCULAND.

WWW.CIRCULAND.CO.UK
JAMIE.DOHERTY@CIRCULAND.CO.UK