eama
2050 Connected

#LetsGetPEDRight
Supporting practical EERF development

GETTING PED RIGHT:

SUPPORTING A PRACTICAL EMBODIED EMISSIONS REPORTING FRAMEWORK FOR PRODUCT ENVIRONMENTAL DATA

July 2026

Version 1

ABOUT BEAMA 2050 Connected

BEAMA 2050 Connected is a not-for-profit subscription designed to unite the energy and built environment around the goal of supply chain and business decarbonisation by 2050 and promoting a circular economy. Collaboration through BEAMA 2050 Connected offers subscribers a range of benefits, with subscribing companies gaining access to a wealth of resource and opportunities to navigate the complexities of sustainability in a supported, aligned and consistent way.

For more information:

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DISCLAIMER

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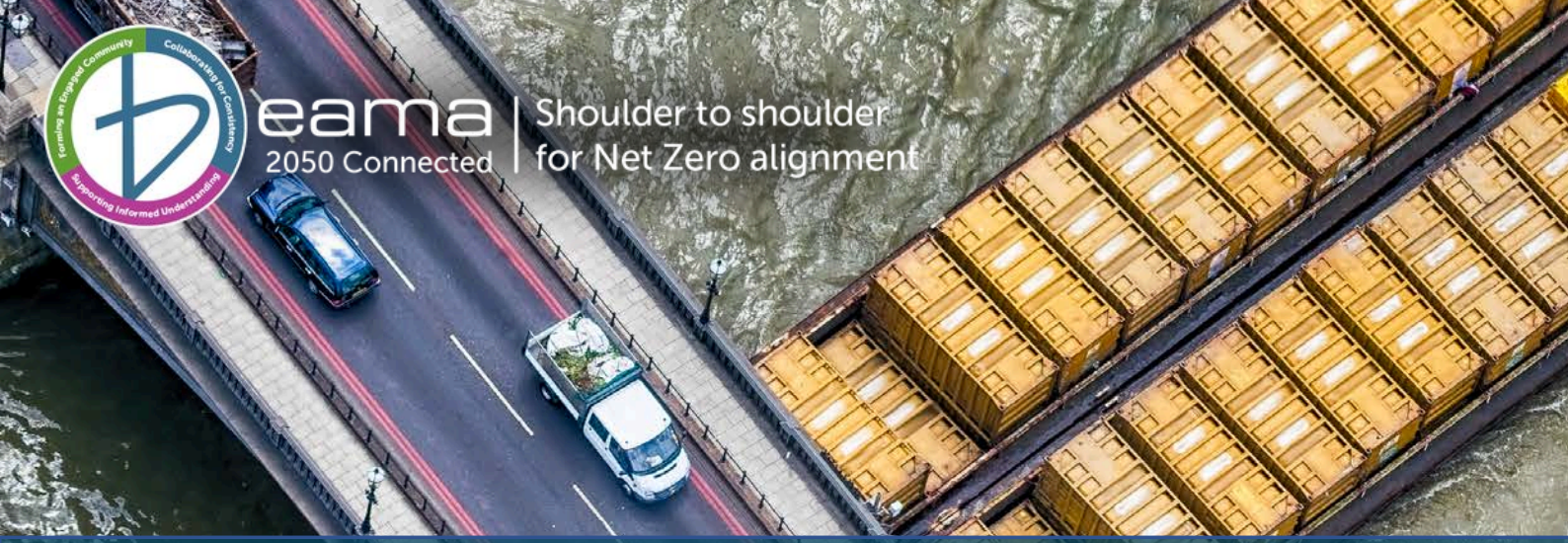
Contents



Executive Summary

The UK Government's proposed Embodied Emissions Reporting Framework (EERF) provides an important opportunity to establish a consistent and credible approach to product environmental data.

BEAMA and its members strongly support this ambition. However, as there is no standalone methodology for embodied emissions, the EERF will need to be underpinned by broader life cycle assessment (LCA) standards and a supporting structure mapping the relevant product category and product specific rules across sectors. The decisions made now will influence wider product environmental data policy and market expectations well beyond the framework's initial scope.

The development of the EERF also provides an opportunity to clarify industry terminology, including the use of 'Environmental Product Declarations (EPDs)' as a generic description for product environmental data.

To deliver a practical and scalable system, future policy should be founded on five key principles:

Principle 1 Aligned with existing internationally recognised LCA Methodology (ISO 14040/14044).

The framework should be grounded in established lifecycle assessment standards to ensure a consistent and scalable methodological foundation across product types.

Principle 2 Proportionate in implementation and assurance requirements.

Implementation and assurance should be risk-based and proportionate, building on existing conformity systems to avoid unnecessary burden or duplication.

Principle 3 Appropriate methodologies for complex electrical products and systems.

Methodological approaches must reflect the complexity of electrical products and supply chains, supported by suitable product category and product specific rules.

Principle 4 Structured to avoid duplication across existing regulatory frameworks.

The framework should enable a single coherent dataset to support multiple regulatory and market requirements, reducing duplication and conflicting reporting demands.

Principle 5 Designed to support multiple compliant approaches where appropriate.

The system should enable different reporting formats to coexist under aligned principles, allowing multiple compliant routes while maintaining comparability.

Together, these principles will support a coherent product environmental data system that delivers comparable, trustworthy information while minimising unnecessary burden on producers.

This report forms part of BEAMA's #LetsGetPEDRight campaign and is supported by a suite of practical guidance and tangible policy proposals to help Government develop a workable, scalable and proportionate framework for product environmental data.

88%
of manufacturers already provide environmental data.

72%
use or plan to use a level of external support to meet data requests.

80%
can provide data in a self-certified declaration or format.

£3,200
average reported self-certified assessment cost per product.

20%
can provide data as a form of EPD.

£3,240
average additional reported cost to upgrade from a self-declared assessment to an EPD.

490
average number of products within the manufacturers portfolios.

£1.58m
illustrative average additional cost per manufacturer if product level EPDs become a market access requirement.

Key Industry Stats

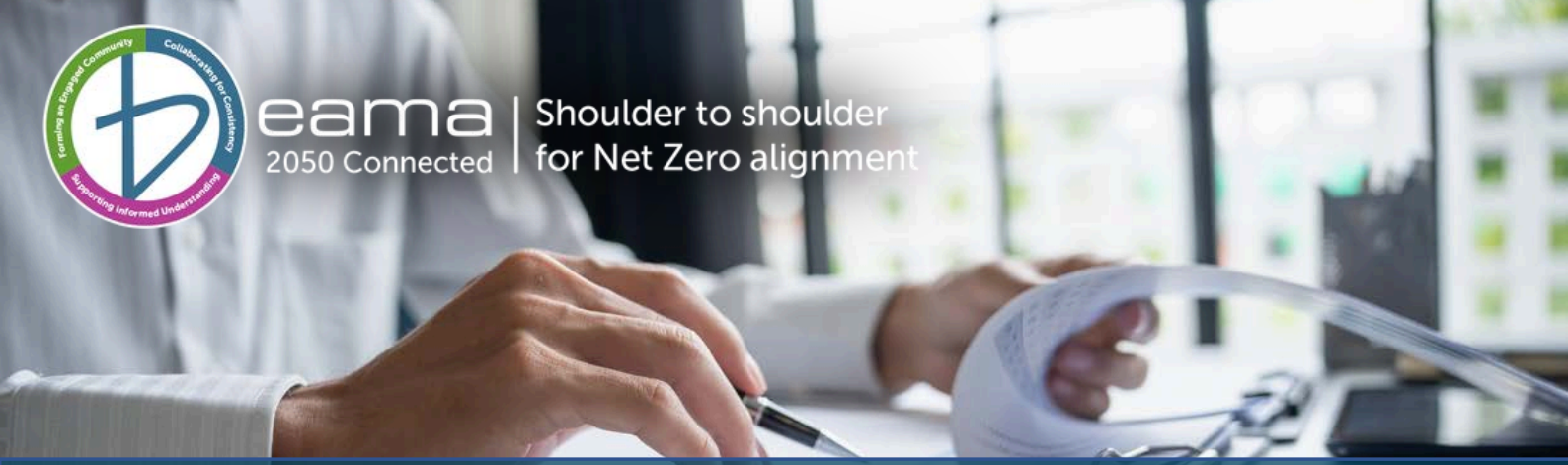
Results are based on responses received from BEAMA member manufacturers and represent a snapshot of the current market activity at the time of the survey.

Not all respondents answered every question. Percentages are therefore based on the valid number of responses to each individual question and may be subject to rounding. Where respondents selected a range, the midpoint of that range was used for calculation.

Reported costs are arithmetic averages and individual manufacturer costs may vary significantly depending on product complexity, existing data maturity and assessment methodology.

A large number of respondents reported using software platforms and internal spreadsheets to complete assessments; therefore, reported costs may understate the cost of a fully outsourced assessment and should not be interpreted as the full market cost of a consultant-led assessment.

The potential additional cost per manufacturer of an EPD as a market access requirement was calculated by multiplying the additional cost of an EPD against a self-certified assessment (£3,240) by the average portfolio size of the survey respondents (490). This calculates that for a single manufacturer with a portfolio size of 490 products each requiring an EPD at individual product level, the additional cost compared to self certification is £1.58m. More than 38% of respondents reported portfolios exceeding 1,000 active product lines. Actual costs will therefore vary considerably depending on portfolio size, product complexity and opportunities to group products within assessments.



Setting the Scene

Product environmental data is becoming an increasingly important feature of UK industrial policy and commercial decision making, with 88% of manufacturers already providing a level of this data to the market.

Recent Government announcements signal a clear direction of travel towards a more structured approach to product level emissions, including the proposed development of an Embodied Emissions Reporting Framework (EERF) as an initial step.

The development of EERF will necessarily rely on standards and methodologies which extend beyond embodied carbon alone. As such, it is important that any framework is designed with an understanding of the broader standards landscape on which it will depend.

In addition, while policy frameworks may be developed with a defined initial scope, in practice they are often adopted more widely across procurement systems and adjacent regulatory or market applications, driven by the need for consistency and comparability in environmental data. This creates a need to consider, at the design stage, how methodologies may be interpreted and applied beyond their original intent.

We strongly support the UK Government's ambition to improve the consistency, comparability and quality of product environmental data to support industrial policy, procurement and environmental objectives.

As this policy area develops, there is a critical need to ensure that emerging frameworks are practical, scalable and suitable for the diversity of products, systems and supply chains they are intended to govern.

This paper sets out key principles that BEAMA and its members believe should underpin the future development of any policy framework related to product environmental data, including embodied emissions.

Electrical Infrastructure Producer Position

A common framework for embodied emissions is both welcome and necessary as a basis for improving consistency and comparability across markets. However, its development and application will have implications for businesses and markets that extend beyond the initial scope for which it is currently being delivered.

Future requirements should therefore be guided by the following five principles:

1. Aligned with existing internationally recognised LCA Methodology (ISO 14040/14044).
2. Proportionate in implementation and assurance requirements.
3. Appropriate methodologies for complex electrical products and systems.
4. Structured to avoid duplication across existing regulatory frameworks.
5. Designed to support multiple compliant approaches where appropriate.

Principle 1

Aligned with existing internationally recognised LCA Methodology (ISO 14040/14044).

Position

The Embodied Emissions Reporting Framework (EERF) must be grounded in internationally recognised lifecycle assessment (LCA) methodologies, specifically ISO 14040 and ISO 14044.

Policy Requirement

The EERF should be developed as a practical, proportionate and scalable methodological framework based on ISO 14040 and ISO 14044, capable of supporting consistent, comparable and usable environmental reporting across UK industry.

Proposed policy wording to enable this is set out in BEAMA's *Getting PED Right: Proposed Policy Wording for the Embodied Emissions Reporting Framework* supporting guidance.

Rationale

There is currently no standalone methodology for embodied emissions assessment; calculations are derived from broader lifecycle assessment standards and supporting methodological frameworks.

As a result, the framework must ensure requirements remain proportionate and achievable. In particular, due to cost and excessive resource burden, reporting embodied emissions should not automatically require a full life cycle or Environmental Product Declaration, with average additional reported cost to upgrade from a self-declared assessment to an EPD £3,240.

To support fair market access and minimise unnecessary burden, the framework must be designed as a cross-sector system capable of accommodating different product types and routes to compliance, rather than relying on approaches developed for specific sectors or product categories.

ISO 14040 and ISO 14044 provide a sector agnostic foundation that enables consistency and comparability while reflecting the diversity of manufactured products and supply chains.

This is particularly important given the likelihood that the EERF will be used as a reference point beyond its initial scope, including as a proxy for comparability across wider markets.

Without alignment to internationally recognised LCA methodology, there is a risk of inconsistent application, distorted comparisons and unintended barriers to market access.

Principle 2

Proportionate in their implementation and assurance requirements.

Position

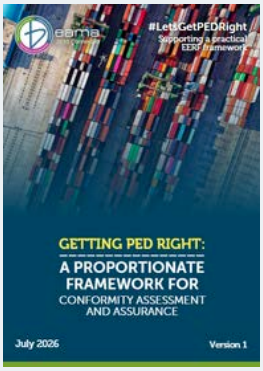
Implementation and assurance requirements for product environmental data, including but not limited to the EERF, should be proportionate to the information being reported and should build on existing conformity assessment systems wherever possible.

Policy Requirement

Government should ensure that assurance requirements are proportionate and build on existing conformity assessment systems, recognising established industry assurance mechanisms and applying additional verification only where justified by risk and policy need.

Existing certification, conformity assessment and quality assurance processes should be recognised where appropriate, including internationally recognised systems such as the IEC Quality Assessment System, to avoid unnecessary duplication.

Further detail is provided in BEAMA's *Getting PED Right: A Proportionate Conformity Assessment and Assurance Framework for Product Environmental Data* supporting guidance.



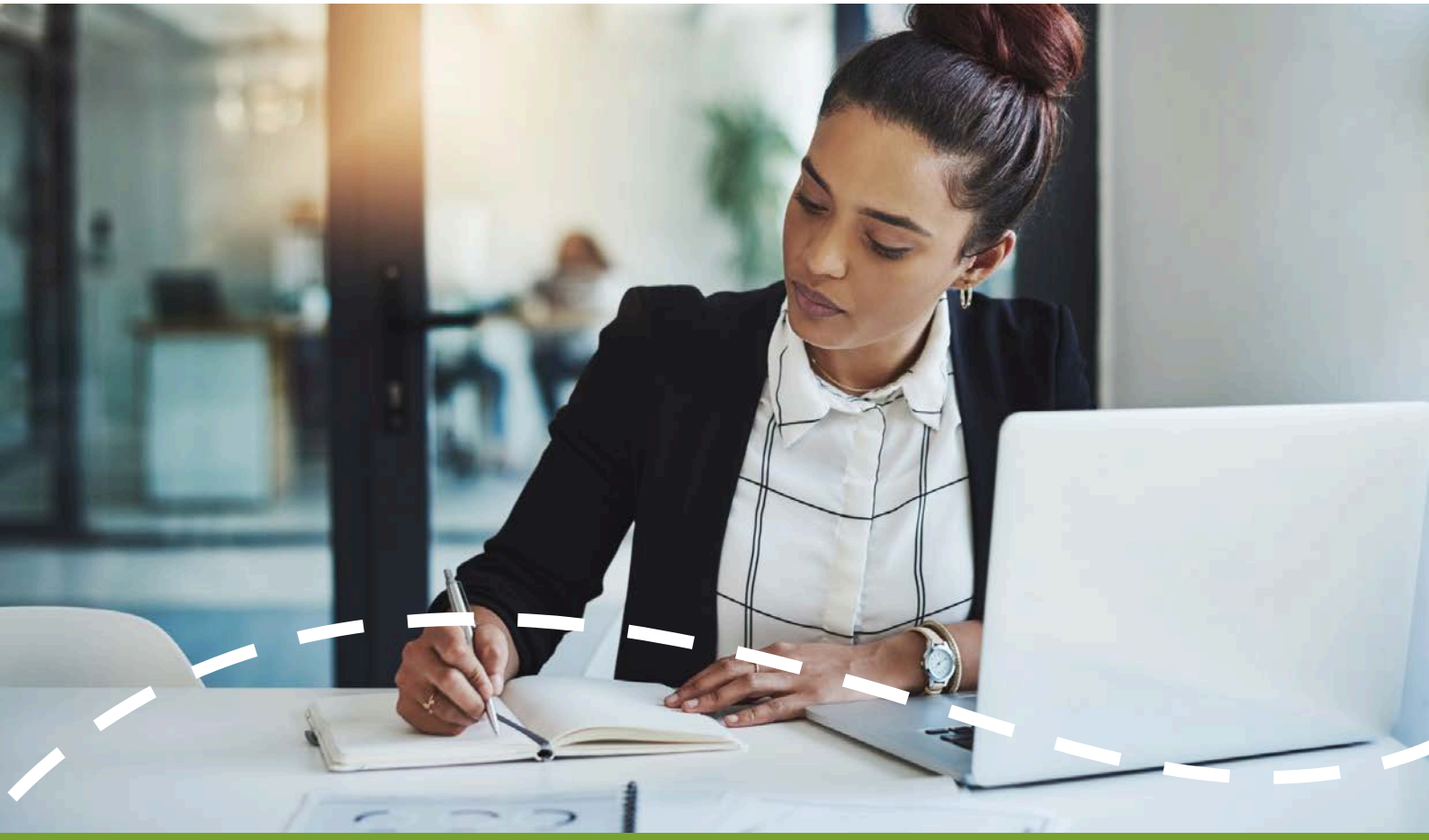
Rationale

The proposed Embodied Emissions Reporting Framework (EERF) aims to improve the consistency, comparability and confidence of product embodied emissions data. These objectives should be achieved without introducing unnecessary cost or administrative burden.

Manufacturers of electrical products already operate within well established conformity assessment frameworks to demonstrate compliance with safety, performance and regulatory requirements. These systems provide robust governance and assurance mechanisms that should be recognised when developing environmental data requirements.

Reporting embodied emissions should not automatically trigger assurance requirements that exceed those applied to existing product declarations, particularly for safety and performance. A disproportionate approach risks increasing producer burden and market access costs without delivering improvements in data quality.

Much of the current demand for third party verification has emerged in response to inconsistent methodologies and limited comparability. By improving methodological consistency through the EERF, Government has an opportunity to reduce reliance on verification as a proxy for confidence, allowing verification to become a proportionate, risk based assurance mechanism rather than as a default requirement.



Principle 3

Appropriate methodologies for complex electrical products and systems.

Position

Product environmental data frameworks must be suitable for the diversity of products they are intended to govern. For complex electrical products and systems, this requires appropriate Product Category Rules and product specific methodological guidance.

Policy Requirement

Government should ensure product environmental data policy is founded on internationally recognised life cycle assessment standards rather than methodologies developed for a single sector or product category.

The EERF should reference appropriate Product Category Rules and product specific methodologies for different technologies. Where gaps exist, Government should work with industry and standards bodies to develop the necessary guidance, ensuring the framework remains suitable as its scope evolves.

Relevant international standards, including IEC 63366 Product category rules for life cycle assessment of electrical and electronic products and systems, should be recognised where applicable.

Further detail is provided in BEAMA's supporting statement: *Product Embodied Carbon and EPDs.*

Rationale

Established environmental data methodologies, such as EN 15804, were developed primarily for relatively simple material based construction products such as steel and concrete. Electrical products, systems and infrastructure are fundamentally different, often comprising multiple components, complex global supply chains and regulated safety and performance requirements.

As product environmental data has become more widely used, the term ‘EPD’ is increasingly used as a generic description for product environmental data, irrespective of whether an EPD is the appropriate methodology or reporting format. This can blur the distinction between the data required and the format used to communicate it.

Methodologies developed for relatively linear product categories may not always be suitable for complex electrical products. Applying them beyond their intended scope risks reducing comparability while increasing reporting burden and barriers to market access.

A lifecycle assessment framework based on ISO 14040 and ISO 14044, supported by appropriate Product Category Rules and product-specific guidance, provides the flexibility needed to accommodate diverse product types.

Principle 4

Structured to avoid duplication across existing regulatory frameworks.

Position

The data required for the EERF, and the underlying methodologies it draws upon, should enable a single, consistent set of product environmental data to be used across both regulatory and market-side reporting requirements.

Policy Requirement

Government should ensure that product environmental data frameworks are designed to enable a consistent core dataset that can be used across both regulatory and market-side requirements.

This should be supported through coordinated policy development across departments and regulators, alongside cumulative impact assessment of environmental data obligations, to reduce duplication and improve consistency across the system.

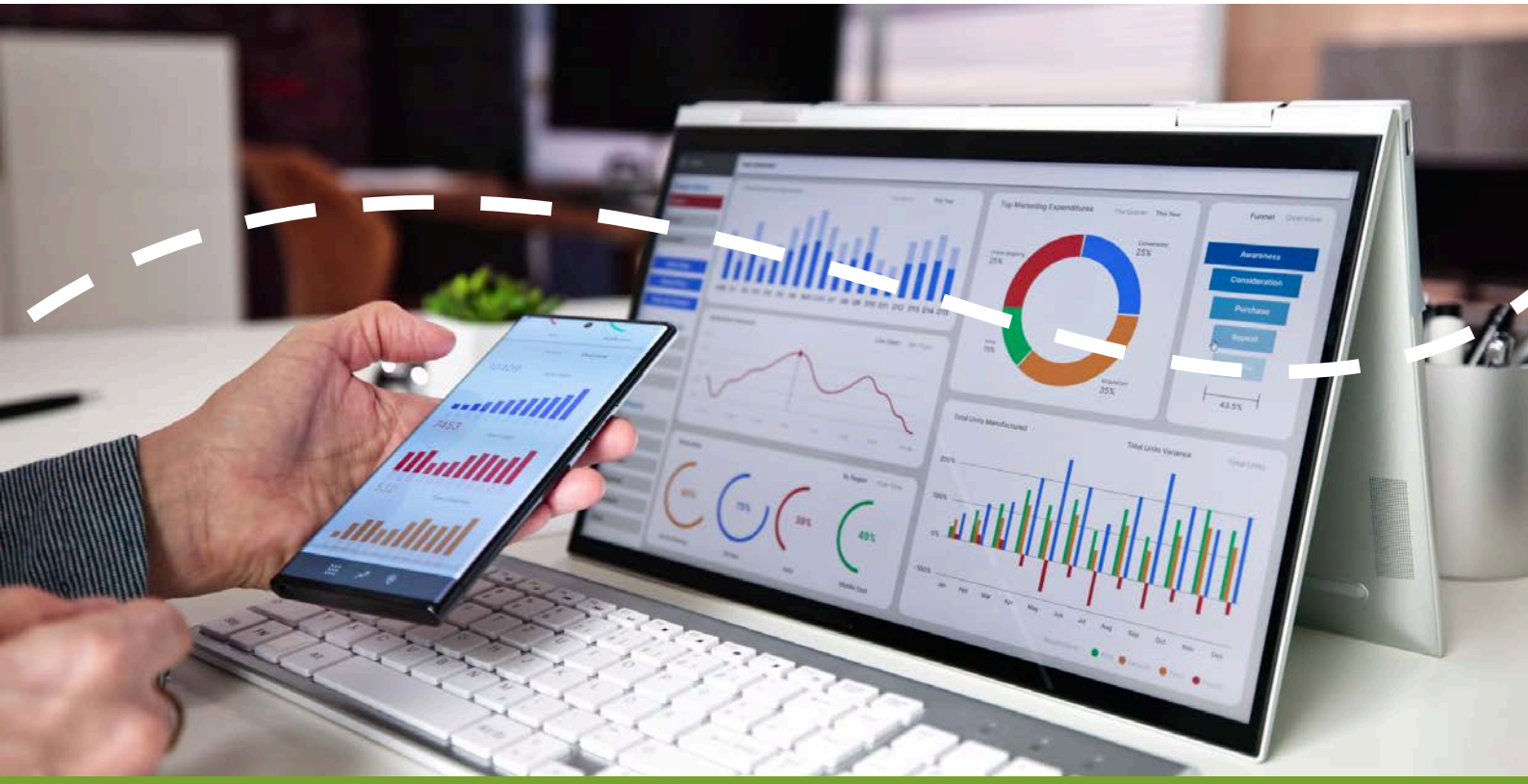
Rationale

Product environmental data requirements, including embodied emissions requests, are emerging across multiple layers of the policy and market landscape, including statutory regulation (such as CBAM, ESPR and SECR), sector-specific frameworks (including Building Regulations, a proposed taxonomy for clean growth enabling electrification products, and Ofgem reporting requirements), and a growing range of market-led disclosure and procurement standards (such as the UK Net Zero Carbon Building Standard, GLA Whole Life-Cycle Carbon requirements, local authority frameworks, and private procurement requests including EPD-based approaches).

While each of these frameworks may be proportionate when considered individually, in practice they are often applied in parallel. Businesses, particularly SMEs and manufacturers with large product portfolios, are therefore required to respond to overlapping and sometimes inconsistent data requests.

This creates duplication of effort, increases administrative burden and cost, and can lead to divergent outputs from the same underlying product data depending on the reporting route used. It also reduces clarity for specifiers and procurers seeking comparable information across markets.

This reinforces the need for a coordinated approach to product environmental data design that supports alignment across both regulatory and market-driven requirements, ensuring data is collected once and used multiple times where appropriate.



Principle 5

Designed to support multiple compliant approaches where appropriate.

Position

The EERF should be outcome-based and descriptive, enabling multiple routes to compliance rather than mandating a single reporting format.

Policy Requirement

Policy should be outcome-based rather than format-prescriptive, focusing on life cycle assessment principles and data quality requirements rather than mandating specific documentation types such as EPDs.

The EERF should recognise multiple compliant routes, including EPDs, PEPs and TM65 assessments alongside the EERF tool.

This will support a consistent and accessible system for product environmental data across diverse products and supply chains while maintaining comparability, usability and flexibility of approach.

Rationale

Environmental Product Declarations (EPDs), Product Environmental Profiles (PEPs) and TM65 assessments are all valid expressions of lifecycle assessment (LCA) principles.

A LCA based framework should ensure consistent underlying methodological rules so that results are comparable, while allowing different reporting formats to remain distinct. This enables EPDs, PEPs and TM65 assessments to sit alongside EERF-based tools, with data that is comparable for regulatory and market use. This provides flexibility for producers based on resource, product type and international reporting needs.

Relying on a single prescribed format risks limiting flexibility for different product types and supply chains, particularly for complex manufactured products outside the construction sector. It may also increase administrative burden where alternative compliant routes could deliver equivalent transparency.

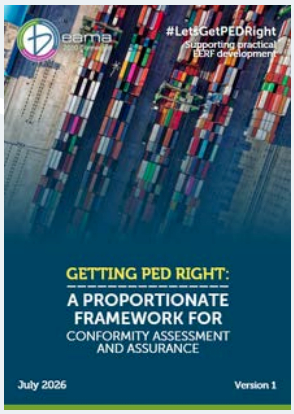
An LCA based system with a clear embodied emissions reporting boundary of A1 - A3, supported by appropriate Product Category Rules, enables consistent data generation across different compliant routes while maintaining comparability.

Supporting Documents and Guidance

BEAMA and its members have a long history of engagement on product environmental data, embodied carbon and life cycle assessment. This work has generated guidance, proposals and industry insight to support the development of a practical and effective Embodied Emissions Reporting Framework (EERF) and wider product environmental data methodology.

Policy wording proposal for the EERF.

An assessment framework for trusted data.



A position statement on the suitability of EPDs for the electrical sector.

Market guidance on the use of embodied emissions data.

Read more

BEAMA also convenes a number of technical sustainability working groups to address shared industry challenges, including a dedicated **Product Carbon Metrics Group**. This group is currently completing a sector wide mapping exercise covering:

- Existing and future regulatory and market requirements for product environmental data.
- Relevant Product Category Rules for electrical products.
- Areas requiring additional guidance, practice or standards.

The findings will inform a targeted programme of work to develop sector guidance, methodologies and standards where gaps are identified, aligned with emerging policy frameworks and relevant standards bodies.

In addition, BEAMA's ongoing industry insight series **Connecting the Dots** collects evidence and feedback from the sector on key sustainability topics. Our first snapshot focused on Emissions Reporting Capabilities, and the upcoming snapshot will provide a current look at Product Environmental Metrics in practice.

Find out more

#LetsGetPEDRight

The UK has an opportunity to lead in the development of a credible, scalable and internationally relevant system for embodied emissions and wider product environmental data in the process.

To achieve this, future policy must be designed as a coherent framework that delivers the strongest basis for consistency and comparability while recognising the diversity of products, supply chains and routes to compliance that exist across the economy. A successful framework will be grounded in robust life cycle assessment principles, supported by proportionate assurance and designed to work across multiple sectors and product types.

BEAMA supports the Government's ambition to improve the quality and use of product environmental data. We stand ready to work with policymakers, regulators, standards bodies and industry partners to support the development and implementation of an effective EERF.

By building on existing expertise and aligning with established systems, Government can create an approach that delivers trusted and usable environmental data, supports innovation and industrial competitiveness, and accelerates progress towards our emission reduction goals.

This paper forms part of BEAMA's wider **#LetsGetPEDRight** campaign, which brings together industry perspectives to support the development of a coherent, workable and proportionate approach to Product Environmental Data.

To find out more about the campaign and our wider work on business and supply chain decarbonisation, please visit the campaign page here.

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Find out more

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