BELLONA EUROPA

Public consultation on ecodesign requirements for iron and steel products

CONSULTATION RESPONSE

August, 2026

Bellona's Input

1. What the ESPR label needs to achieve

The ESPR delegated act on iron and steel carries a heavy weight of expectation. It is simultaneously a product-information instrument, the operative definition of "low-carbon steel" for the IAA's lead-market provisions, and the first ESPR intermediate product group, which makes it a methodological precedent for following Delegated Acts.

Bellona's position is that the label has one overriding function: to signal to the market that decarbonisation will pay off. Following the **preliminary exercise** by the Joint Research Centre (JRC), we recommend a vastly strengthened design that clearly differentiates best from worst performers, incentivising the transformation of the steel industry.

We would set five objectives against which any design should be tested:

Legal requirement to improve performance. Article 7(4) ESPR requires that classes of performance correspond to significant improvements in performance levels, and Recital 24 speaks of removing the worst performing products from the market and moving progressively towards the best. A distribution in which the great majority of EU production already sits in the top two classes cannot satisfy either requirement, because there is no significant improvement left to signal within the green band.

Lead market pull. Under the IAA, a share of publicly procured steel in selected sectors must qualify as low-carbon by 2030, and the top two performance classes function as the operative definition of a green product for procurement purposes. The B/C boundary therefore becomes the de facto regulatory definition of green steel. If it is set where most conventional EU production already qualifies, selectivity collapses and green public procurement fails to create the green lead market it is intended to deliver.

Investment signal. The performance classes will shape capital allocation, not merely inform buyers. A system that tells investors the sector is already largely green undermines the business case for the first movers the Clean Industrial Deal and Competitiveness Compass explicitly seek to reward. Conversely, a credible top class gives frontrunners something concrete to aim for when taking final investment decisions.

Interoperability. The classification should interact effectively with CBAM, the ETS and the IAA, so that a single verified emissions dataset can serve reporting, border adjustment and procurement eligibility without duplicated verification burden. It such way, it may also inform emerging labelling practices in other jurisdictions.

Representativeness of the market. A label must cover enough production and product market share to comprehensively set a standard for EU steel production. Certain proposed approaches covering about half of the EU's steel market would not drive widespread change.

It is worth highlighting that an effective label will be necessary also to help reach the EU's climate goals. Wrong incentives for industry at this stage could open the door to attacks against the Emissions Trading System and misallocation of free allowances, among others.

2. What a credible steel label requires

Bellona has assessed how existing green steel certification schemes handle the technical questions the delegated act must now address. The following are our positions on what a credible classification requires, drawing from best practices and shortcomings of leading private labels.

2.1 Climate integrity and emissions scope

Thresholds anchored to a 1.5°C-compatible trajectory: Credible schemes set out explicit, quantified declining thresholds rather than describing today's market. The reference points already exist: the IEA Net Zero pathways define near-zero emission steel at ≤0.4 tCO_2/t crude steel at 0% scrap declining to ≤0.05 tCO_2/t at 100% scrap, and the SBTi steel guidance establishes separate 1.5°C-aligned decarbonisation pathways for ore-based and scrap-based production. A classification anchored to a current market distribution has no trajectory at all and cannot be assessed against net-zero pathways.

Full GHG accounting and upstream scope: Coverage should extend to Scope 1 and 2 plus upstream Scope 3, expressed as CO_2-equivalent across all greenhouse gases rather than CO_2 alone. We have seen otherwise strong frameworks constrained principally by a CO_2-only metric, which systematically understates the footprint of **methane**-intensive routes. Extending to Scope 3 for site-level data is the right direction and should be retained and built upon.

Full cradle-to-gate boundary, integration-neutral: Mining, pelletising, coking, lime production, auxiliaries and transport should sit inside the boundary, and the boundary should treat integrated and non-integrated producers consistently so that ownership structure does not determine reported performance. Exemptions for iron ore and coal mining, limestone quarrying, or scrap collection and sorting materially understate the footprint of ore-based routes and distort comparisons.

Offsets excluded or limited to truly residual emissions: Offsets and removals should not be determinant to meeting a class threshold. At most they should be confined to residual emissions beyond compliance, and disclosed as to extent, role and source.

Explicit CCS and CCU guardrails: CCU should be recognised only where CO_2 is permanently chemically bound in products, in line with the permanence requirements established under the EU ETS, and explicitly excluded for enhanced oil recovery, short-lived products and fossil-energy production. CCS should meet the monitoring, verification, leakage-accounting and permanence requirements of the EU ETS Directive and the EU CO_2 Storage Directive. For capture, transport or storage occurring outside the EU, crediting should require independently verified evidence demonstrating compliance with equivalent environmental-integrity and carbon-accounting standards.

2.2 MRV, methodology and data integrity

Alignment with recognised international MRV: The ISO 14404 series, ISO 20915, worldsteel methodology and IEA principles are established reference points.

Standard functional units, interoperable with CBAM and the ETS: Tonnes of steel produced, defined consistently for integrated and non-integrated producers, is a widespread functional unit. Ease of comparison with ETS and CBAM should be prioritised to avoid unnecessary complexity and burdens.

Annual independent verification: For a classification that sets procurement eligibility and state aid, annual verification by an approved independent verifier is an appropriate standard. Two- to three-year cycles are not sufficient.

2.3 Electricity, hydrogen and attribute claims

Electricity accounting: This is the most consequential of the accounting rules, because for the scrap-EAF route it directly determines the reported figure. Where a scheme accepts unbundled guarantees of origin without geographical correlation conditions, declared Scope 2 emissions can be driven towards zero at a cost of around 1 €/MWh extra[1]. This lowers a reported number without changing the electricity actually used, and destroys the credibility of the label.

Our ask is therefore that the label requires physical correlation and hourly temporal matching within the relevant bidding zone, with robust anti-double-counting, and that unbundled certificates are not accepted for the purposes of classification. We are not proposing that a grid-average factor be applied as the default, which would unfairly penalise those producers in carbon-intensive bidding zones purchasing clean power. The point is to ensure that, where a producer claims better-than-grid performance, the claim reflects electricity that was actually generated and delivered on a matched basis, rather than merely a certificate purchased in a surplus market.

Hydrogen attribution: Where renewable hydrogen is consumed, attribution should follow RFNBO rules (additionality, temporal and geographical correlation) for renewable hydrogen. Any low-carbon hydrogen route should be held to standards at least as strong as the EU rules, with specific safeguards to avoid underreporting of upstream emissions of LNG supply.

Full-chain methane accounting: Methane must be accounted across the full supply chain under the correct global warming potential, GWP20, either immediately or under a set timeline. This is directly material to how gas-based DRI is positioned relative to hydrogen-based routes, as underestimating upstream methane favours natural-gas DRI over H2-DRI.

Biomass guardrails: Biomass should be subject to strict sustainability criteria and proper biogenic carbon accounting, with its role limited. Zero-rating biomass by default, or applying loose sustainability rules, creates risks to nature and label credibility.

[1] The physical cost of generating and grid-delivering electricity is separate from the virtual "green attribute" certificate. In essence, a consumer pays the market price for physical power, and then pays a small premium (approx. 1.5% to 3% extra) to "prove" it was green. As of 15 July, the EEX European Renewable Power GO Future settlement price sits at 1.48 EUR/GO, compared to a German Power Base Year Future price of 102.3 EUR/MWh.

Mass balancing of environmental attributes, book-and-claim and export credits: Unrestricted book-and-claim should be excluded. Where any decoupling of physical and claimed attributes is permitted, it should meet strict conditions on physical link, geographic limits, MRV quality, registry transparency and phase-out. Allocation methods between co-products should be conservative and transparent. Credits for exported power, heat or gas should never be capable of flipping a product across a threshold.

2.4 Circularity, scrap and claims

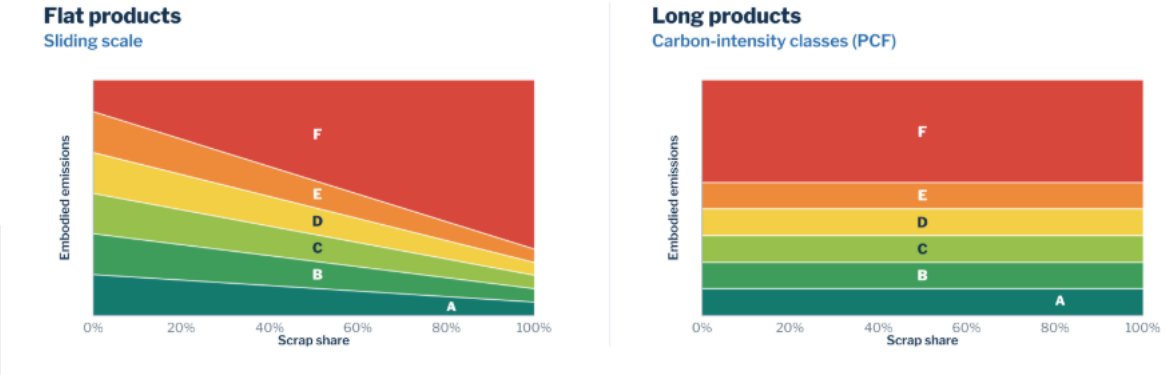
Mandatory scrap disclosure: Scrap share, type and quality should be disclosed. This bears directly on the digital product passport elements of the ecodesign process, where disclosure of recycled content and its source, pre- or post-consumer, should be mandatory.

3. Three possible designs

The label debate has been dominated by a binary choice between sliding-scale and absolute-intensity approaches. In our view, there are compromise positions where each of these can deliver an effective model for Europe's steel industry transformation. What determines this outcome is where the highest performance classes are and whether the accounting rules in Section 2 are respected. We set out three architectures for consideration. We would note that the fallback status-quo of no label, or a label that classifies nearly every steel product as green, would be a setback we cannot afford.

Option A: Differentiated treatment of flat and long products

Long products (construction steel; tubes, rods, bars, etc.), today predominantly produced in Europe via the scrap-EAF route, would be classified against an ambitious absolute product carbon footprint, building on the process already established under the Construction Products Regulation and the JRC's preliminary study. Flat and primary-dominated products would be classified on a scale that preserves the investment signal for primary decarbonisation, with thresholds and slopes designed so that the shift to H_2-DRI-EAF is rewarded and coal-based steelmaking is excluded from the top classes.



The case for this split is pragmatic and realistic, matching the design to each product segment's decarbonisation lever. The already lower-carbon long-products segment has

as key levers grid emissions and process electrification, which an absolute PCF captures directly; for the primary-dominated flat segment, the lever is capital investment in breakthrough ironmaking, which a relative scale rewards.

Three conditions would need to be preserved:

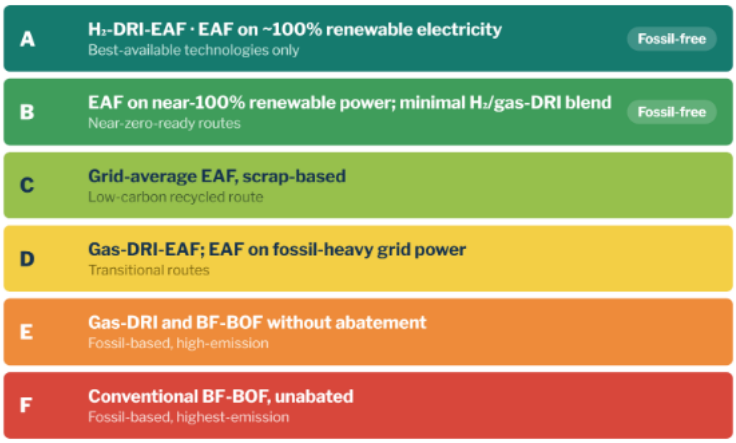
- The top class must be anchored to near-zero performance on **both** sides of the split. A differentiated structure whose upper classes are calibrated to today's market reproduces the current status quo.

- The boundary must be defined clearly, with explicit treatment of products that sit awkwardly, such as wire rod, rails, and high-quality long products that cannot be made from post-consumer scrap because of residual copper limits. Rails require residual copper below roughly 0.15%, and only a small number of European producers make them from scrap. Where a product genuinely cannot be produced from scrap, it should still be able to earn recognition for using low-carbon primary iron, rather than being excluded from the scheme.

- Electricity accounting must be addressed, since an ambitious PCF for longs places considerable weight on Scope 2. Nonetheless, designing a PCF threshold that implicitly requires abatement of Scope 1, through electrification of heating processes used in preheating, currently reliant on fossil gas, ladle-furnace heating and reheating, would strengthen the approach considerably.

Option B: A recalibrated, ambitious absolute PCF classification

The alternative is to retain an absolute PCF metric across all products and change what the class boundaries are calibrated to. As **Bellona called for** in response to the JRC's study, calibration needs to meet the technology performance frontier rather than today's market volume distribution. This is the more direct route, builds on methodological work already done, and avoids boundary-definition problems.



Our recommendations for this architecture:

1. Anchor class boundaries to climate-compatible trajectories, not current distributions: Class A should be reserved for near-zero and breakthrough steel, with an indicative threshold consistent with H_2-DRI-EAF and scrap-EAF on 100% renewable power. Modelling in the preparatory work suggests an H_2-DRI route on fully renewable electricity yields approximately 0.635 tCO_2eq/t hot-rolled coil; we regard this as conservative, and the frontier is likely lower. Class A should define that frontier, not sit within a broad band that also contains conventional scrap-EAF on grid-average electricity. A near-empty Class A would incentivise a race to the top in this regard.

2. Calibrate with respect to the EU market: The ESPR governs products placed on the EU market, where roughly 70-73% of consumption is domestically produced. Thresholds set against a global distribution inflated by high-emitting non-EU installations make EU production appear better than is appropriate for the classification's purpose. Global benchmarking can be retained optionally for transparency and international comparability.

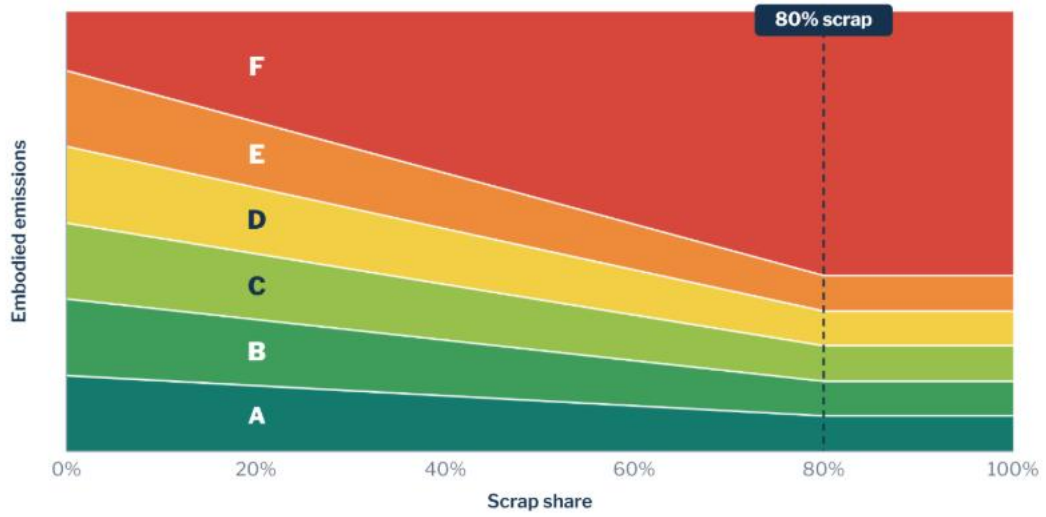
3. Use verified data rather than penalty-based proxies: CBAM transitional-period default values are deliberately conservative figures designed to incentivise importers to report actual data. They are not performance data and should not be treated as such for the purposes of setting real-world thresholds. Until verified plant-level CBAM data is available from the definitive phase, best-estimate country-average intensities should serve as the reference for non-EU production.

4. Introduce a fixed maximum emissions threshold between Classes C and D: A product should move into a better class only when its own emissions improve. An absolute backstop, for hot-rolled coil, on the order of 2.2 tCO_2eq/t, prevents high-emitting steel from drifting upward simply because the wider market benchmark worsens.

One further point on route neutrality: it would be useful to introduce a correction index favouring DRI-based flat steel to incentivise sizeable investments in route-switching. Fairness between BF-BOF, EAF and DRI routes through a scale measured in emissions intensity and open to any pathway is correct in so far as threshold measurement goes, but route neutrality should not extend to neutrality in ambition signals, simply because not all routes are equally compatible with net-zero trajectories. A classification that accommodates unabated BF-BOF within its upper classes cannot differentiate transition-compatible pathways from incremental improvement, and will ultimately leave Europe's steel industry in an uncompetitive position in tomorrow's global markets.

Option C: A sliding scale that levels out at approx. 80% scrap input

Another alternative would be to introduce a "hockey stick" sliding scale with thresholds that flatten at around 80% of scrap input. This design would lessen the differentiating effect of a continued sliding scale when reaching the scrap ranges for products that are traditionally made fully via the scrap-EAF route. This means that scrap-EAF producers would not see as much of a difference in emissions towards the top range of a sliding scale, reducing the perceived disadvantages against primary routes competing for those products. Primary producers would retain a structure that incentivises decarbonisation through incremental and transformational investments. It would also simplify the design into a single methodology covering all products (for carbon steel).



4. Cross-cutting conditions

Whichever architecture is adopted, the following should be reflected in the delegated act rather than left to implementation:

- **Electricity accounting**: physical correlation and hourly matching within the bidding zone; unbundled guarantees of origin not accepted. No requirements for additionality, however.
- **Methane**: full-chain accounting under the adequate GWP.
- **Mass balancing and book-and-claim**: unrestricted decoupling excluded; export credits never determinative of compliance.
- **Hydrogen**: RFNBO-equivalent attribution including additionality.
- **Biomass**: strict sustainability and biogenic carbon accounting; no zero-rating by default.
- **Scrap**: share, type and source disclosed in the digital product passport; recognised on its own terms, never used to justify higher absolute emissions.
- **Verification and interoperability**: annual independent verification, facility-level data without portfolio averaging, functional units mapping to CBAM and ETS.

5. Information requirements and the Digital Product Passport

We support a first delegated act focused on carbon footprint. The ESPR can address a wide range of environmental impacts, but carbon is rightly identified as the most critical for this sector, and

concentrating on it keeps the act simple, effective and deliverable within a realistic timeframe. Water and energy consumption requirements can follow through the reviews mandated under Article 8(l). On information requirements under Article 7, the essential principle is granularity, meaning carbon footprint, recycled content and substances of concern should be reported at batch level, and the reported figure must be representative of the narrowest level possible. Averaging at firm or company level, or designating some batches as greener through a detached chain of custody, would defeat the purpose. This is the same concern that underlies our position on facility-level data and mass balancing in Section 2, and it should be made explicit. Where recycled content or similar claims are made, only chain-of-custody models that enable physical traceability should be permitted.

The Digital Product Passport should carry carbon footprint, recycled content including the pre- and post-consumer split, and conformity documentation as publicly available data. Information on substances of concern should be accessible to downstream businesses, end-of-life operators and others with a legitimate interest, and given how far the sector has already moved on digitalising product data, the Commission could reasonably explore further datapoints such as mechanical properties, chemical composition and quality certification. On the label itself, carbon footprint expressed through classes of performance should be the headline information, with recycled content shown alongside as additional information. Finally, we support mandatory reporting of substances that make steel harder to recycle, copper above all, drawing on the harmonised standards under the Construction Products Regulation where such disclosure is already required for certain construction steels placed on the EU market.

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