

CSO Open Letter Opposing Greenwashing of Coal-based Steel Using “Mass Balance” Accounting Schemes

The undersigned civil society organisations share a vision of achieving a decarbonised global steel industry as part of a thriving zero emissions society. We are calling for the establishment of robust markets for genuine low emission steel products based on credible definitions and accounting methodologies. We oppose creative accounting practices that lead to greenwashing labels on high emissions coal-based steel in the market.

Coal-based production of steel accounts for 90% of the emissions of the entire sector, and 90% of those are driven by the energy-intensive ironmaking¹ So transforming ironmaking is key to decarbonising the steel sector. A number of steelmakers are investing in and constructing facilities using transformative technology that will replace fossil fuels for ironmaking and are on their way to begin commercial-scale production from the late 2020s².

The decarbonisation of the steel industry requires that the front-runners producing truly low emissions steel are adequately rewarded through green premiums paid by buyers, subsidy and purchasing targets by governments, recognition by financiers, and other mechanisms. It is essential that first movers are able to recoup their significant investments and offset higher production costs associated with the implementation of transformative and cleaner production processes. However, multiple steelmakers are making green claims about steel produced using high emissions-intensity coal-based production processes.

Independent international standards are needed to transparently determine the greenhouse gas emissions profile of steel products and create a level playing field. Right now, key greenhouse gas accounting and climate standards are being revised, including the Science-Based Targets Initiative (SBTi), Greenhouse Gas (GHG) Protocol, International Organization for Standardization (ISO) standards and the World Steel Association Chain of Custody Guidelines. These revisions have the opportunity to improve the accuracy and transparency of accounting for product emissions for the steel industry and beyond. However, several powerful companies are lobbying to change standards to redefine how product emissions are accounted for.

The undersigned civil society organisation are deeply concerned by proposals originating with the Japan Iron and Steel Federation (JISF) and Nippon Steel³ to use accounting tricks to obfuscate the actual emissions from production. We recognise the industry is trying to solve a

¹ SteelWatch. “SteelWatch Explainer: Why steelmaking drives climate change – and why it doesn’t have to be this way” 22 Jan, 2025. <https://steelwatch.org/steelwatch-explainers/climate/>

² The steelmakers with FIDs for H2-DRI development - [Stegra](#), [thyssenkrupp](#), [Salzgitter](#).

³ Regarding promotion of these standards globally see Japan Iron and Steel Federation presentation at COP29 by Hitoshi Dohnomae (Nippon Steel). <https://www.jisf.or.jp/en/activity/climate/documents/241119COP29JISFeventHDohnomaeenvfinal.pdf> and Nippon Steel, “Nippon Steel’s Green Transformation (GX) Initiatives.” Presentation. March 13, 2025. https://www.nipponsteel.com/en/ir/library/pdf/20250313_100.pdf slides 48-52.

challenge of rewarding companies for making short-term incremental emissions reductions measures, but this approach harms more than helps. It risks destroying incentives for true decarbonisation while applying green labels that lack credibility to high emission coal-based steel.

These schemes pool GHG emissions reductions occurring anywhere within a company's iron and steelmaking operations and then issue equivalent reduction certificates to a particular product. The schemes have been labelled as 'mass balance'⁴ but in fact there is no requirement for actual physical connection between the reported emissions reduction achieved and the labelled product. In other words, the buyer of a "mass balance"-based low-emissions steel product might receive a product that is completely identical to the high-emissions, standard version of that product, with emissions reductions having occurred in a site or a process without any connection to the purchased product.

Moreover, emissions reduction certificates from projects may be allocated to cover the entire emissions of a steel product, and this would result in coal-based steel labeled as having "zero emissions" - a level not physically achievable by even the most advanced low emissions steel technology today.

There is a further risk that these virtual project-based pooled GHG reduction certificates could become embedded in a Product Carbon Footprint (PCF) or Environmental Product Declaration (EPD) for steel products, which would make it impossible for buyers to understand the actual emissions intensity of the steel products they are purchasing. Project-based accounting can use an arbitrary baseline to calculate virtual emissions reductions and is quite different to inventory accounting which is used to determine the actual physical emissions of steel products. It is critical that Product Carbon Footprints (PCF) be kept separate and strictly based on emissions from production to remain credible.

These misleading emissions accounting approaches undermine the credibility of claims and the transparency of emissions data, while also risking double-counting. Marketing such 'mass balanced' products as green steel could expose both steel buyers and steel producers to accusations, or even legal challenges, alleging unsupported claims of environmental benefits.⁵ It

⁴ The Japan Iron and Steel Federation approach to "mass balance" bears little relationship to conventional meanings of the term mass balance, which is a chain of custody model used when inputs that are low emissions or certified cannot be separated from other inputs, and are attributed to a share of production based on the principle of mass conservation (the company should not be able to market a volume of certified products whose volume of inputs is greater than the purchased amount of certified inputs). The JISF approach is akin to a book and claim model with one key distinction- rather than being based on the embodied emissions of a product, emissions reductions certificates are created (or 'booked') at the company level when a company undertakes an emissions reduction project. The company can record reductions based on a baseline of the company's choosing. This volume of reduced CO₂ can then be arbitrarily applied to reduce the calculated emissions of a specific steel product, also of the company's choosing, by up to 100%. <https://www.jisf.or.jp/business/ondanka/kouken/greensteel/>

⁵ The Korea Times. "FTC sanctions POSCO for deceptive eco-friendly marketing." April 17, 2025. <https://www.koreatimes.co.kr/business/companies/20250417/ftc-sanctions-posco-for-deceptive-eco-friendly-marketing>

also puts steel produced through decarbonised production processes on an unfairly equal footing with coal-based steel produced by steelmakers that only achieved minor reductions in emissions.

For the success of the steel industry transition, preferential treatment should primarily benefit genuine low emissions steel products produced using near-zero emissions compatible technology. Companies' business models for low emissions steel depend on preferential treatment to be successful. If companies artificially reduce their products' emissions footprint by taking cheaper incremental measures, but are treated the same as pioneering companies investing in deep decarbonisation, there is a strong risk of destroying emerging markets for true low emissions steel. This false equivalence threatens to set back the decarbonisation of the sector as a whole.

International corporate standards including the SBTi and the GHG Protocol should not allow steel buyers to reduce their upstream scope 3 emissions by the purchase of steel coupled with pooled GHG reduction certificates. The World Steel Association's upcoming revised Guidelines for Chain of Custody must keep steel emissions reduction certificates entirely separate from product Life Cycle Assessments (LCA) to maintain transparency and credibility. Steel that is labelled with the so-called 'mass balance' approach, based on transfers of certificates, must not be labelled as green or low-emissions steel. The International Organization for Standardization (ISO) should also reject efforts to allow virtual emissions reductions to be included in LCA emissions calculation methodologies.

1. Credible Low Emissions Steel is:

- fully traceable through a physical chain of custody;
- reported with transparent emissions accounting, and verified using full third-party assurance; and
- the result of investments in the deep decarbonisation of production which deliver physically low-emissions steel.

2. Non-credible Low Emissions Steel is:

- based on the allocation of emissions reductions from one place of steel production to another using baselines that may be arbitrary, inflated, and unstable;
- lacking transparency and traceability of emissions;
- missing full third-party verification to ensure this traceability and transparency; and
- based upon incremental emissions reductions by technologies incapable of the deep decarbonisation of production.

We urge independent standard-setting bodies and governments to only recognise credible low-emissions steel in their standards and to reject undue influence by steelmakers in weakening these standards. We urge corporate steel buyers not to pay premiums for so-called 'mass balance' steel but rather encourage the production of physically low emissions steel. Low

emissions steel production is feasible today and would benefit from purchase commitments to unlock final investment decisions and bring production to scale.

This letter is being shared with other organisations and in the public domain, as we believe this matter is of important public interest, given the risk posed to incentives for true decarbonisation in the steel sector.

Sincerely, the undersigned organisations (listed in alphabetical order):

1. Action Speaks Louder
2. African Resources Watch International / African Resources Watch (AfreWatch)
3. BankTrack
4. Beyond Fossil Fuels
5. BigWave
6. Centre for Environmental Rights
7. CAN-Europe (Climate Action Network Europe)
8. Eko forum Zenica
9. Environmental Coalition on Standards (ECOS)
10. Fair Steel Coalition
11. Fundación Ecología y Desarrollo (ECODES)
12. Germanwatch
13. Global Efficiency Intelligence
14. Green Advocates International
15. Greenpeace Japan
16. Industrious Labs
17. Instituto Políticas Alternativas para o Cone Sul- PACS
18. Just Shift
19. Korean Federation of Environmental Movements (KFEM) Chungnam
20. KlimaNexus
21. Lead the Charge Network
22. Mighty Earth
23. People of Asia for Climate Solutions
24. Public Citizen
25. Sandbag Climate Campaign
26. Solutions for Our Climate (SFOC)
27. SteelWatch
28. The Sunrise Project
29. Transition Asia
30. urgewald
31. Vaal Environmental Justice Alliance (VEJA)

(the list of signatory organisations was last updated on 9 June 2025, after the initial publishing on 5 June 2025)

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