Green steel in the context of EU product policy developments and lead markets - 2025 ESTEP Workshop

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The difficulty in reaching an agreement on a common definition of green steel, originates from the different purposes of a definition

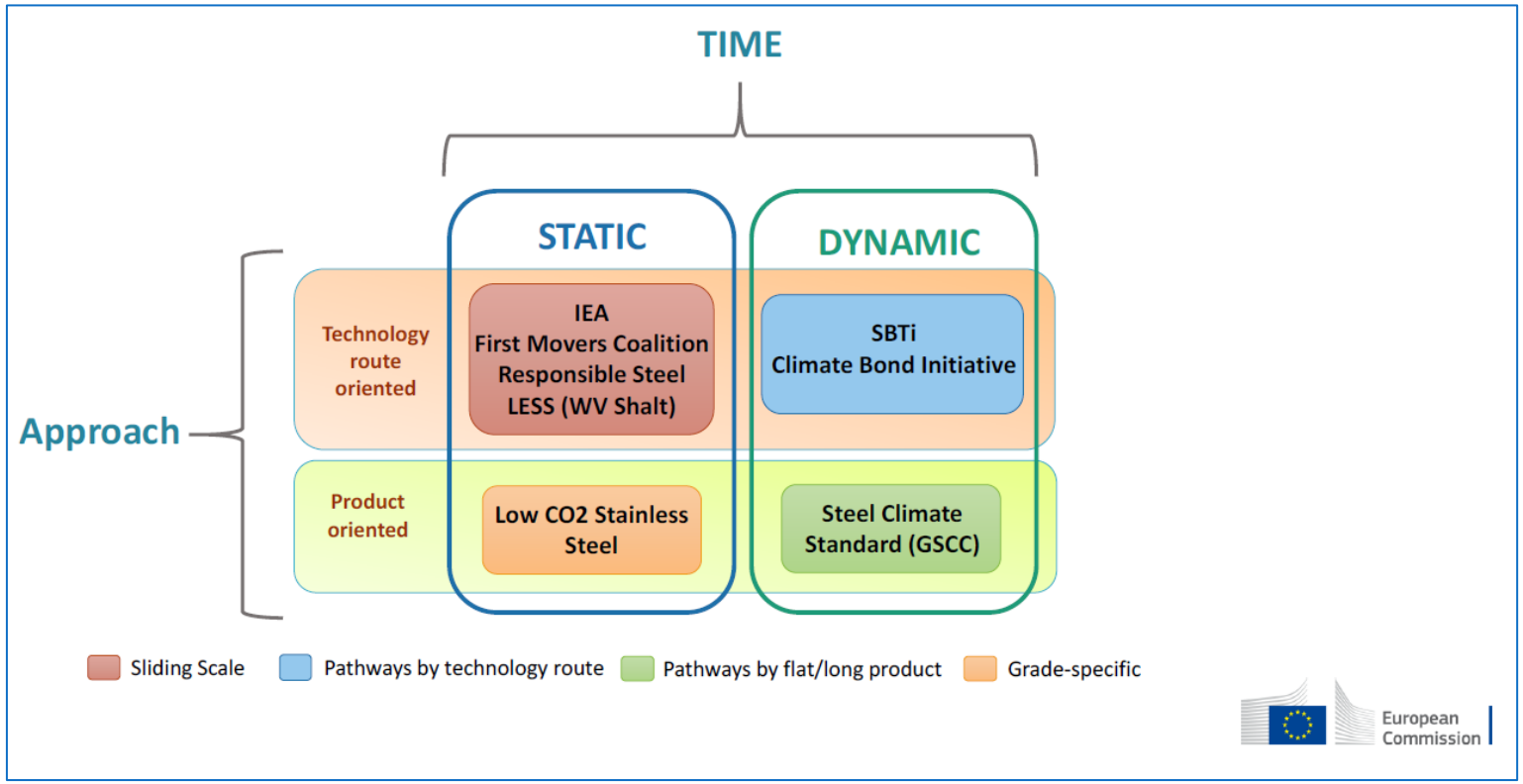
1. *How will a definition recognise decarbonisation efforts of steel producers and the extent to which they are transitioning towards a goal of near zero CO_2 emissions by 2050?*
2. *How will a definition recognise the absolute CO_2 emissions of steel products, and being able to differentiate products in the market on the basis of their carbon footprint?*

Objective / purpose	Technical instruments (measurement / assessment method)	Political instruments (incentives)
Assessing and incentivising decarbonisation efforts	Sliding Scale (WV Stahl / IEA) or other approaches	Contracts for Difference Lead Markets Green Public Procurement
Assessing and incentivising the use low CO_2 products on the market	Product Footprint (PCF, PEF, EPD)	Lead Markets Green Public Procurement Final product CO_2 thresholds e.g. EPBD

EUROFER is providing technical input where needed and monitoring developments

1. ESPR
   - JRC is analysing different approaches and could propose a definition/label
2. Steel Standards Principles
   - Common measurement standards (interoperability)
3. IDDI
4. ……

JRC analysis of different green steel definitions:



Supply Side Mechanisms

- Carbon Contracts for Difference (CfD)
- Government or private investment funding can cover:
  - CAPEX
  - OPEX

However, not all producers in every member state will able to access public funding, and/or it may not cover all additional costs of making CO_2 reduced steel.

Demand Side Mechanisms (lead markets)

- Private customer procurement policy
- Market sector commitments
- Public procurement policy
- Legislation on product minimum requirements or government incentives for top performers.

Lead markets can increase demand for lower CO_2 steel products, which can generate a **price premium** and therefore reduce reliance on government support via CfD. As the customers' willingness to pay increases, the public cost of compensation via CfD reduces.

Product Policy developments

Ecodesign for sustainable products regulation (ESPR):

- Ability to set requirements for all steel products put on the market via delegated act, including:
  1. Information requirements - including labelling with classes of performance
  2. Performance requirements – including a minimum level of environmental performance

- Requires **public procurement** to comply with the minimum requirements based on the two highest performance classes
- Any **Member State incentives** shall be aimed at the highest two classes of performance

- Iron and Steel is the 1st priority intermediate product selected under the ESPR workplan

ESPR Preparatory study – Iron and Steel Products

The preparatory study for new Ecodesign requirements for iron and steel products:

The Study will address the following tasks, in accordance with a tailor-made methodology that brings together existing best practices in the area of technology assessment, life cycle assessment and multi-criteria analysis.

- Task 1 – Scope (**28/09/2023-22/10/2023**)
- Task 2 – Market Research (**07/12/2023 – end of April 2024**)
- Task 3 – Technical Analysis (**launched -**
- Task 4 – Environmental & Economic Assessment **(launched**
- Task 5 – Design Options
- Task 6 – Policy Analysis and Scenarios
- Task 7 – Development of Criteria
- Task 8 – Digital Product Passport related work

Online workshop on 25 June 2024

Online workshop expected in February 2025

Drafting of Delegated act; may start from June 2025

Task 3: Technical Analysis

- Material Flow Analysis of steel + scrap in the EU
- Representative Products (RP) based on several criteria
- Development of Bill of Materials for the selected RP
- BAT
- BNAT

Task 4: Base Case, LCA & LCC

- Set up of an LCA model of the steelmaking process considering:
  - both BF-BOF and EAF routes
  - recycled content (scraps)
  - parallel work with Task 3 on the BoM
  - data inventory collection: primary data, existing datasets

RPs selection to frame the environmental footprint assessment

RP

Long products

Rods and wire rods

Main production route (in the EU): EAF

Flat products

Hot rolled coil

Galvanised Cold rolled coil

Electrical steel

Main production route: BF/BOF

Special steel categories

Stainless steel

Main production route (in the EU): EAF

Next steps

- Data collection for **Bill of materials** and associated inventory datasets
- Prepare the **environmental footprint** assessment (Task 4) and associated hotspots
- Evaluate the feasibility of potential **policy interventions**

Identification of measures with the highest improvement potential vs. costs

European Commission

Note: All steel products are in scope for ecodesign requirements and not just the selected Representative Products

Other Product Policies

Construction Products Regulation (CPR), Energy Performance of Buildings Directive (EPBD)

- Mandatory reporting of GWP emissions from 2026, once a harmonised product technical specification (hEN) has been cited in the OJ.
- Similarly to the ESPR, Green public procurement - minimum environmental sustainability requirements, and member states shall target the highest two performance categories.
- EPBD requires member states to set lifecycle CO_2 limit values on all new buildings

End of Life Vehicles + CO_2 emission standards for cars and vans

- Potential design requirements on use of steel in vehicles with respect to overall recycled content of steel or possible use of low CO_2 primary materials?
- Move towards a lifecycle assessment of vehicle CO_2 emissions – credits for using green steel?

Net Zero Industry Act

- Measures to boost EU resilience and autonomy of low carbon technologies made in the EU, e.g. wind, including assessing supply chain emissions.

The above measures my help boost the demand for low CO_2 steel products, but it is unlikely to develop a significant volume of demand before 2030, especially without a common definition of low CO_2 steel.

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Thank you