Low-carbon steel credits in the EU cars CO_2 standards - T&E position paper

Executive summary

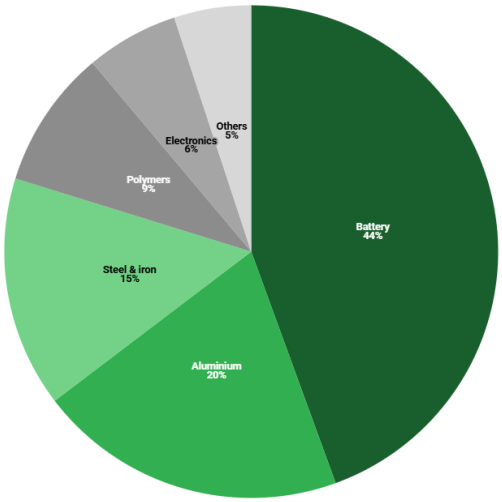
If designed properly, low-carbon steel credits under the EU car CO_2 standards can create a lead market for green steel produced in Europe. Given the automotive sector's large steel demand and purchasing power, the mechanism could support the scale-up and commercialisation of green steel projects, strengthen Europe's industrial base and reduce the carbon footprint of vehicles.

T&E's main policy asks:

- **Focus the mechanism on the cleanest steel pathways.** From 2035 onwards, only fossil-free primary steel should qualify. Rewarding weaker or transitional pathways beyond 2035 would undermine the investment signal for genuinely near-zero steel.
- **Define eligible low-carbon steel strictly and quickly.** The Commission should adopt a clear methodology under the ESPR and secondary legislation by the end of 2026 to define "low-carbon" steel, in order to give investors and carmakers regulatory certainty.
- **Maintain a dedicated credit mechanism for green steel only while** removing competing flexibilities (e.g. on fuels) that would dilute demand for green steel.
- **Introduce a limited transition phase from 2030.** Credits could start in 2030 to reward early movers, but in that case, should be tied to strict conditions, e.g. they should be capped at 3% of carmakers' CO2 target from 2030-2034.
- **Primary steel should be prioritised, combined with post-consumer scrap.** A dynamic emission baseline taking scrap content into account should be defined in order to reflect actual emission saving efforts in primary steel making while avoiding windfall credits from using scrap. T&E proposes that only post-consumer scrap is accounted for in the low-carbon steel credits and in the sliding-scale methodology.
- **Keep the lead market anchored in Europe.** Only EU-made green steel should qualify, while allowing limited use of imported green iron from 2035 onwards, (max 50% of eligible steel produced from imported green HBI).

1. Introduction

The European automotive industry, including vans and trucks, accounts for roughly 20% of EU steel consumption. Today, it predominantly relies on highly polluting primary steel, with an emissions intensity of around 2 tonnes of CO_2e per tonne of steel, approximately 60% higher than the EU steel industry average. As shown in the figure below, steel makes up an important part of the production emissions (the non-use phase of automotive emissions), accounting for an estimated 16% of lifecycle emissions for EVs and 27% for ICEs. Roughly 80% of the steel used in cars consists of primary steel.



Decarbonising automotive steel will therefore be crucial to achieving a full sectoral decarbonisation of the industry. While several low carbon and near-zero steel projects are underway in the EU, high electricity prices, limited availability of green H_2 and uncertainty around future demand for green steel have already led to the delays and cancellations of a number of green steel projects across Europe.

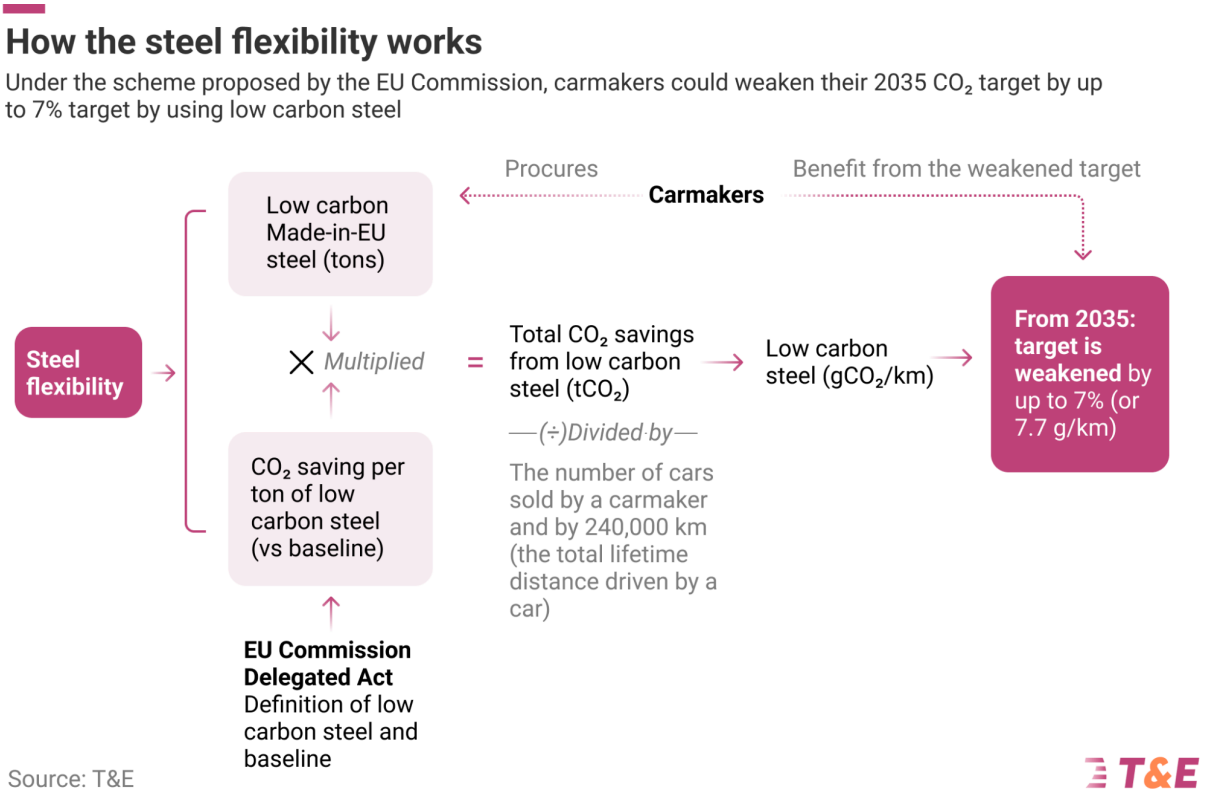
T&E supports the scaling up of clean materials made in Europe and the creation of **lead markets for low-carbon and near-zero steel.** With its strong purchasing power, the automotive sector has a significant potential to become the first lead market for green steel made in Europe. If properly designed, an automotive lead market for low-carbon steel can significantly reduce automotive supply-chain emissions and protect high-quality industrial jobs in Europe by securing a pathway to decarbonise the steel industry in Europe.

The Draghi report already highlighted in 2024 why the automotive industry is best placed to be a lead market and drive demand for low-carbon materials: *"These are downstream industries in which the energy-intensive input share in total production value is relatively small (diluting the required price premium), but output volumes are high enough to allow for a scaling up of low carbon production (e.g. steel and aluminum in automotives)."*

This paper explores the low carbon steel credit mechanism discussed under the review of the car CO_2 emission regulation and sets out T&E's recommendations to ensure that steel credits deliver real climate and industrial benefits.

The paper also shows clearly that already in 2030 there will be enough low-carbon steel available in Europe to cover most of the automotive steel demand.

2. How the low carbon steel credit mechanism works



On December 16, 2025, the European Commission proposed significant changes to the EU's car CO_2 emission standards, **weakening the 2035 zero-emission target to a 90% reduction target** (compared to 2021 emission levels). Within this 10% flexibility margin, carmakers would be allowed to compensate **up to 7 percentage points (equivalent to 7.7 gCO_2/km)** through the use of low-carbon steel in vehicles.[1]

Under the proposed methodology, emission savings would be calculated by: calculating the total CO_2 savings from the use of low carbon steel for each carmaker (in tCO_2), and converting this into CO_2 emission credits (in gCO_2/km), see diagram below.

[1] The other 3% of emissions from the weakening (3.3gCO_2/km) can be compensated provided there are sufficient quantities of renewable fuels, i.e e-fuels and advanced biofuels derived from waste and residues (including biogas), are placed on the market to compensate for the added emissions. Allowing e-fuels and advanced biofuels in cars will only increase the costs for decarbonisation, especially for consumers and slow down the transition towards affordable electric mobility.

However, the Commission has not yet defined what qualifies as “made-in-EU low-carbon steel”. This definition will be set in secondary legislation, drawing on the methodology developed under the Ecodesign for Sustainable Products Regulation (ESPR) delegated act on steel and iron products.

T&E supports the Commission’s proposed calculation methodology for CO2 credits but calls on the Commission to swiftly bring forward the carbon footprint methodology under ESPR and the delegated act to define ‘low carbon’ and ‘made in EU’ steel’.

T&E also recommends maintaining the 7% level for the credit cap in 2035, keeping the scope focused on steel. At the same time the fuel flexibility should be removed to create a better incentive for the market to turn to steel compensation credits rather than other flexibilities.

3. Sufficient European green steel is available for the credits

According to research by Agora Industry and T&E, **EU near-zero primary steel production capacity based on green hydrogen (H_2-DRI) could reach 12.3 Mt in 2030**. Combined with 9.4 Mt of DRI projects which will initially start with natural gas before transitioning to green H_2, as shown in the table below, **the total expected capacity of near-zero steel will be roughly 21.7 Mt in 2030,** if all DRI-EAF-NG projects fully transition to green hydrogen.

Planned EU primary green steel projects: total capacity 21.7 Mt

Company: Project name	Country	Project status	Completion year*	Capacity (Mt)	Fuel type in 2030
Stegra: Boden	Sweden	Under construction	2027	2.5	Green H_2
GravitHy: Fos-Sur-Mer	France	Pre-FID	2029	2.0	Green H_2**
Hydnum Steel: Puertollano	Spain	Pre-FID	2029	1.5	Green H_2
LKAB: Gällivare	Sweden	Pre-FID	2029	1.3	Green H_2
SSAB: Luleå	Sweden	Pre-FID	2029	2.5	Green H_2
Blastr Green Steel: Joddböle V	Finland	Pre-FID	2030	2.5	Green H_2
Salzgitter: SALCOS Phase 1	Germany	Under construction	2027	1.9	Natural Gas & H_2
Thyssenkrupp Steel: tkH_2Steel	Germany	Under construction	2027	2.5	Natural Gas
SHS: Power4Steel	Germany	Under construction	2028	2.5	Natural Gas
Tata Steel: Ijmuiden	Netherlands	Under construction	2029	2.5	Natural Gas
Total				**21.7**	

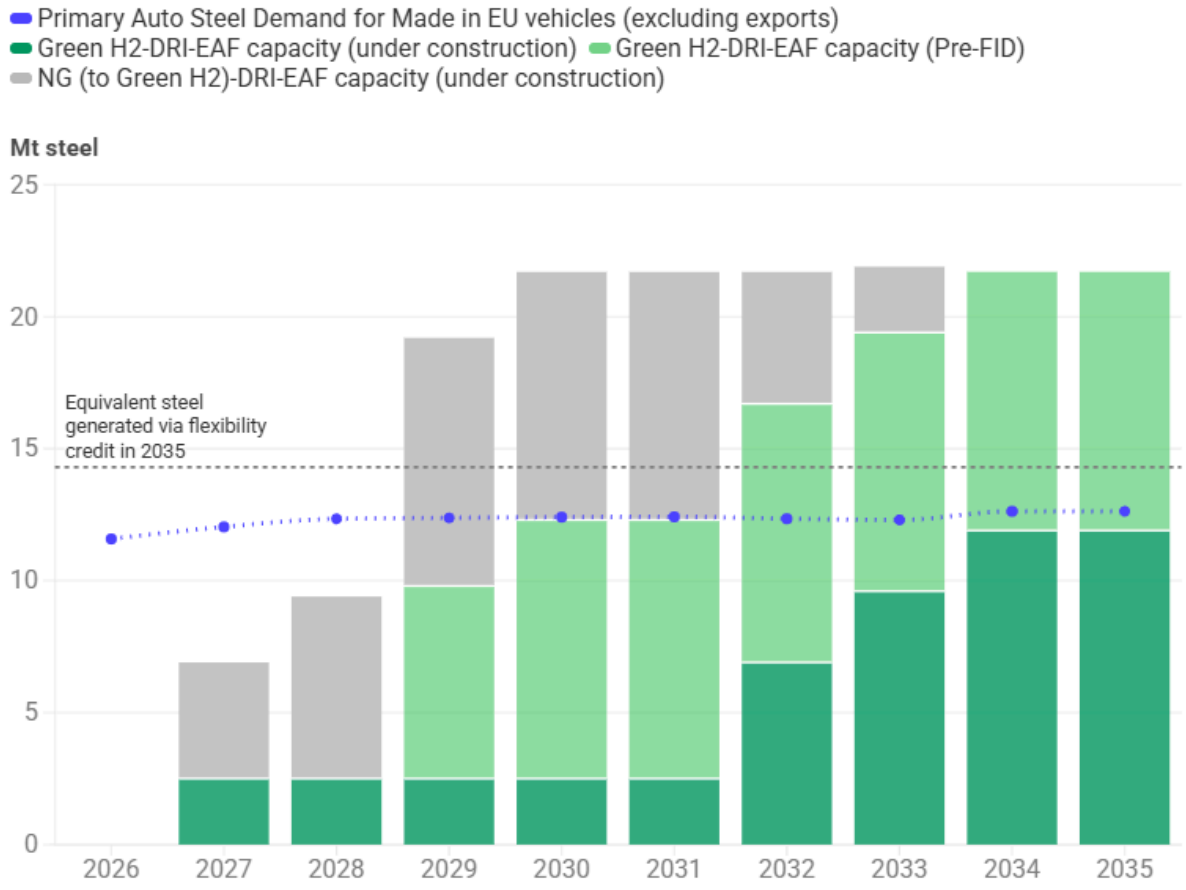
* Expected completion year is sourced from Agora Industry's analysis (2026) reviewing progress announcements from each project.
** Green H_2 here includes nuclear-derived H_2 under the Green H_2 definition.
Note: to see how these are distributed across Europe, see a European map in the Annex.

In comparison, **demand for steel in EU passenger cars and vans that are made in the EU** is projected at around **15 Mt in the 2030s**, roughly at the same level as today. Of this 15 Mt, 13 Mt is from primary steel. **The proposed 7% flexibility could generate credits equivalent to 15 Mt of low-carbon steel for cars and vans in 2035**.

This means that projected EU low-carbon steel capacity will be sufficient to cover the total demand for cars and vans in the 2030s as well as fully utilise all the credits under the 7% cap. Furthermore, potentially all of the 13 Mt primary steel demand required by the automotive sector can be supplied by green hydrogen-produced steel already in 2030.

EU made green primary steel will match demand from cars and vans

Green primary steel is defined by its access to DRI capacity.



Sources: Agora Industry (2026); T&E (2026) • Projects under construction are considered low risk. Projects Pre-FID have a greater risk profile for reaching operation.

However, uncertainty around demand from the automotive sector, high electricity prices, and low volumes of available green H_2 at affordable costs, have already led to several **projects being delayed, paused, or reconsidered.** While many European steel makers are currently delaying their steel decarbonisation projects, **China is investing and shifting to green steel.** A recent deal by Chinese steelmaker HBIS to export hydrogen-based low-carbon steel to European customers is a signal that Chinese producers are gearing up to become major exporters of hydrogen-based green steel.

For this reason, the discussion on how to foster the demand stimulation for green steel in Europe is at a critical moment.

Creating a green lead market for automotive steel made in Europe could be a game-changer for the green steel projects currently at risk and on hold. The credits could finally secure the much-needed demand for these projects and would lay the foundation for a successful transition of the European steel industry. At the same time, studies show that for the end-consumer, the price of a car made with 100% green H_2-DRI steel, would only increase between 0,7% to 1%.

4. Our proposal - T&E policy asks

T&E supports strengthening green steel production made in the EU. If properly designed, low-carbon steel credits under the car CO_2 regulation could establish a lead market at minimal cost to consumers.

4.1 Green steel credits should be limited to 100% green H_2-based steel from 2035[2]

In order to provide the right demand signal for green steel projects, the low-carbon steel credits under car CO_2 should focus exclusively on fossil-free steel from 2035.

In practice this means **limiting the definition of low carbon steel to the highest performance class (for example "near zero" in the LESS label: 500 kg/t steel or below)**. This category should correspond to GHG intensity and production processes that are **aligned with European climate neutrality objectives** (as laid down in Regulation (EU) 2021/1119 of the European Parliament and of the Council). Rewarding other production pathways would dilute the signal for green H_2 steel by rewarding the industry for planned transitional efforts that are already driven by the EU ETS.

4.2 A limited transition period from 2030 to reward early movers

By rewarding low-carbon steel projects with credits from 2030, the EU would reward early movers and support transition efforts and investments that are geared towards green steel. This will create a demand and investment signal to secure the 10 European green steel projects identified in section 3, all of which have a starting date around 2030.

[2] If the molten electrolysis technology becomes economically available, this technology should be included as well.

T&E recommends introducing steel credits already in 2030, under the following conditions:

- **Limiting compensation to a maximum of 3% of fleet emissions** in the initial phase from 2030-2034.
- **Allow only strictly defined low-carbon steel to qualify**. A blend mix of H_2 and natural gas can be defined as low-carbon steel in 2030-2034 (with minimum share of 50% green H_2 in the blend), as explained in the next paragraphs. This could also take the form of allowing a maximum 50% of natural gas-based DRI to be eligible for the credits during that 2030-2034 period. In any case, there should be a commitment and plan to move to fully H_2 DRI from 2035. Fossil fuel based BF-BOF and DRI-NG technologies with CCS should not be allowed to count.
- **No extension of any other flexibilities for the 2030** car CO_2 target. By extending flexibilities like the compensation for biofuels or the 5 year average, the carmaker fleet wide target is weakened. This drastically reduces the likelihood of the green steel credits being used since they are the most costly compliance option[3].
- **The greenest near-zero steel should receive the highest number of CO_2 credits**, reflecting its greater emissions reduction. Where more than one class of steel is rewarded, credits should be allocated in proportion to the actual CO_2 reductions achieved by each pathway, in line with the spirit of the credit mechanism in the car CO_2 regulation.

To create a lead market during the transition while safeguarding the environmental integrity of the regulatory framework and avoiding windfall credits, **the definition of low-carbon steel must be carefully and strictly defined:**

- **From 2030 - 2034: Only primary steel produced with a share of at least 50% green H_2 should qualify for the credits** (allowing mass balance between different plants of one steel company). This would correspond to a carbon intensity threshold of roughly 1,000 kg CO2 per tonne of steel (**LESS[4] classification B)**.
- **From 2035 on: Only fossil-free steel based on 100% green hydrogen will qualify for the credits.** Under the **LESS label classification** this would correspond to the highest performance class “near zero”: fossil fuel free steel (typically referred to

[3] Carmakers have to procure green steel to get CO_2 credits under the low carbon steel credit scheme while other flexibilities (fuel compensation mechanism, target averaging, or supercredits) are provided at no extra cost for the carmaker.
[4] Low Emission Steel Standard: https://lowemissionsteelstandard.org

as near zero emission steel with a carbon intensity of **500 kg CO_2e** per tonne of steel or below. This category should be aligned with climate neutrality objectives.

Natural gas-based (NG) DRI plays an important transitional role in the broader steel transformation as it cuts scope 1 emissions by roughly 60% (Scope 3: roughly -30%) compared to the BF-BOF route based on coal. Using natural gas as a transition fuel allows steel companies the deployment of DRI facilities while the green hydrogen infrastructure is being set up and green hydrogen prices become more competitive against fossil fuel equivalents (combined with ETS carbon prices). This is why DRI-EAF-NG technology should only qualify for a short transitional period for the credits under the Car CO_2 regulation, **the key objective of the green steel credits still being to incentivise the quick uptake of (fossil-free) green hydrogen based steel in Europe.**

Current studies indicate that the baseline carbon intensity for automotive steel is approximately 2.1 tCO_2e per tonne of steel with roughly 20% of scrap used. In order to be fair and consistent, the baseline should be dynamic and take scrap content into consideration, similarly to the sliding scale system. More specifically, the baseline will be lower the more scrap is used. By accounting for scrap use in this way, this mechanism will encourage steelmakers to achieve emission reductions across other aspects of production, regardless of the level of scrap input rather than just using more scrap in their production in the case of a fixed baseline.

The average carbon footprint of a tonne of steel is set to decrease in the next few years. Therefore, this should be reflected by updating the baseline on a yearly basis. Otherwise, CO_2 emission reductions from steelmaking will be overestimated as the CO_2 intensity of a ton of steel will be compared to an emission baseline that will be too high.

4.3 Granting credits based on green steel procured in the EU

The proposed green steel credits are based on the number of cars registered in the EU, which is the logic of the cars CO2 regulation. This should be maintained. However, this approach could potentially penalise OEMs that export cars produced in the EU with green steel despite this green steel contributing to EU green steel production. In order to lower the administrative burden, and fully reward all green steel used in automotive in the EU, the green steel credits upon registration could be approximated by the overall procured volume of green steel for European automotive production plants.

More specifically, carmakers could have the flexibility to virtually allocate all the low carbon steel purchased - even the share used in vehicles destined to exports, to their vehicles sold in Europe.

OEMs that export more cars from the EU than they import, would therefore benefit slightly more from this flexibility. But at the same time, this would support the build-up of green steel production capacity made in the EU.

4.4 The role of scrap-based steel

One of the main objectives of the green steel credits should be to support and accelerate the decarbonisation of the steel industry in Europe. Since over 80% of steel used in the automotive industry is primary steel with a high carbon intensity, the focus should be on replacing high-emission coal-based primary steel from the BF-BOF route with low-emission steel from DRI, based on natural gas and eventually green hydrogen.

While scrap-based steel production in an EAF has a low emission intensity (~0.7 tonnes of CO2e per tonne of steel, using EU average electricity mix), **the use of secondary steel from post-consumer scrap steel in automotive production has remained quite low, ranging from 5-11% in the EU**. This is mainly due to the **poor quality of post-consumer steel scrap due to high copper contamination** which does not allow it to meet the high-quality requirements of automotive steel. **This problem has been partly addressed in the updated ELVR**. But to further increase the uptake of high-quality based scrap steel, **T&E calls for introducing a recycled content quota in the End-of-Life Vehicle Regulation (ELVR).** This would create an incentive to improve steel recovery and thereby increase the availability of high-quality recycled steel. By the beginning of next year, the Joint Research Center (JRC) of the EU will publish a study on the feasibility of recycled-content quotas for steel in newly registered cars.

Recycled steel from pre-consumer scrap, i.e. the one that is generated when producing steel products for cars, is a consistent share of the steel used by automakers. On average, 45% of the steel purchased by automakers ends up as production scrap. Since this scrap is typically high-quality, it retains market value and it is therefore sold back to steel producers for recycling. For this reason, and because of its low environmental benefit, **pre-consumer scrap should not be accounted for in low-carbon steel credits mechanism as it does not need to be further incentivised**. In addition, rewarding the use of pre-consumer scrap fails to encourage more efficient steel production and it does not support the creation of green lead markets.

Steelmakers should therefore remain free to choose the share of scrap used in their production pathways provided they meet the required emission thresholds. A sliding scale system provides this flexibility, ensuring consistency in how each emission baseline for calculating emission savings is determined, as outlined in Section 4.2. Post-consumer scrap should be favoured as it is the only way to actually reduce waste.

T&E therefore proposes that only post-consumer scrap is accounted for in the low-carbon steel credits and in the sliding-scale methodology to prevent creation of windfall CO2 credits from the circulation of pre-consumer scrap generated from conventional steel.

4.5 Definition of Made in EU steel

After the presentation of the IAA, **the green steel credits under car CO2 regulation remain the only lead market instrument which combines "low-carbon" with made in the EU provisions.** This combined approach is the only way to successfully scale up a lead market for green steel within the automotive sector, while simultaneously securing jobs and ensuring a future for the European steel industry. As the IAA has identified steel as a strategic sector, **it must be our objective to keep the core steel supply chain in Europe**.
However, recent studies have shown that green hot briquetted iron **(HBI) imports into domestic production could cut steelmaking costs in Europe by 12-15 percent by 2040**, while keeping the rest of steelmaking, along with downstream jobs and value creation, at local level. While these potential cost reduction opportunities need to be carefully considered, there is a need to make sure that Europe will not be fully dependent on green iron imports at the same time. There is a risk that once iron-making goes abroad, downstream jobs may follow the same path.

We therefore suggest a balanced approach which will, on the one hand, secure the steel supply-chain in Europe, making a clear investment signal for the front-runner DRI projects currently planned in the EU before 2035 - and at the same time allow to carefully establish green iron trade corridors to further bring down the costs of green steel in the EU. **This could be done by allowing the use of green iron imports from 2035 onwards. However, OEMs will only receive credits, if the amount of steel made with imported green HBI does not exceed 50% in OEMs' fleet average and does not come from a country that controls more than 40% of the global market (in line with NZIA).**

5. Conclusion

If properly designed, low-carbon steel credits can serve as a pragmatic bridge between ambitious climate policy and industrial strategy. They can:

- Reduce supply-chain emissions in the automotive sector
- Create a long-term investment security for European steel companies
- De-risk investment in EU green steel projects

- Protect European industrial competitiveness
- Create a green steel value chain - made in Europe

However, environmental integrity is key. The main objective of the credits is to incentivize the uptake of green hydrogen based steel, plus only EU-made green steel should qualify. Most important for T&E: The credits should not undermine the electrification targets of the current regulation. Done right, this mechanism could become the cornerstone of Europe's first large-scale green steel lead market.

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Annex: Map of DRI projects per country as listed in Table 1