



BRIEFING - September 2025

Carmakers Green Steel Ranking

How good are EU carmakers on decarbonising steel?

Summary

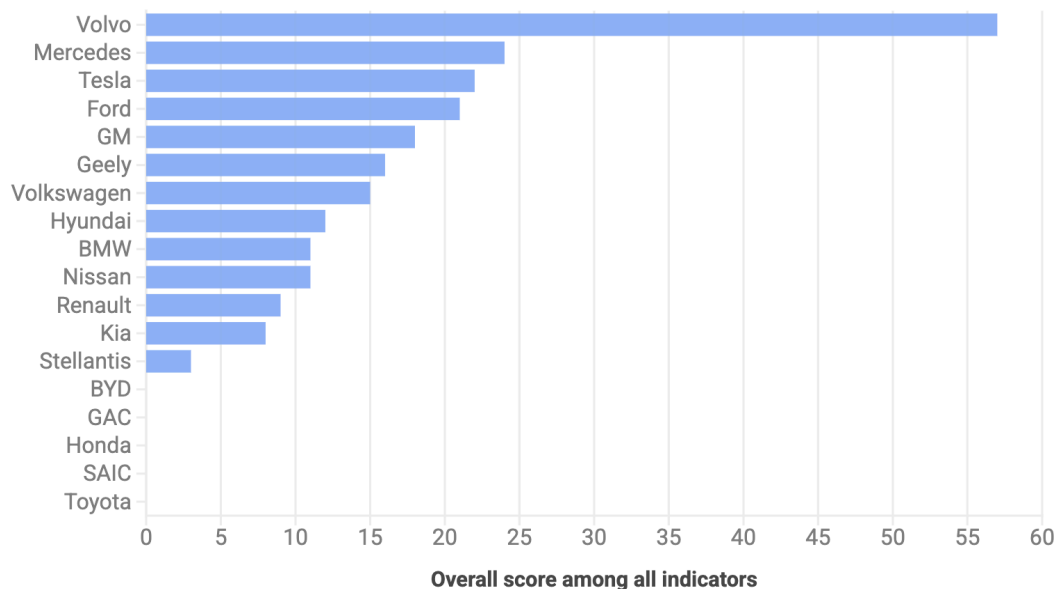
With the elimination of tailpipe emissions through electrification, decarbonising the production of cars is a crucial next step. Steel has a major role to play in this transition, being one of the main emission hotspots of car production (16% to 27% of embedded emissions depending on the model and type of car). Moving away from coal-based steel is the main way forward, but how well are carmakers doing in switching away using coal-based steel?

This briefing focuses on the green steel results of the yearly '[Auto Supply Chain Leaderboard Ranking](#)' from US-based "Lead the Charge" initiative. These are based on three indicators weighted differently out of 100% according to their importance:

- **Disclose (22%):** Assesses whether and to what level of detail the car manufacturers disclose their steel-based emissions from their supply chains.
- **Target Setting and Progress (34%):** Assesses whether automakers have set targets to increase their use of green steel and recycled steel.
- **Supply Chain Levers (44%):** Assesses measures that automakers have implemented with their suppliers to increase the production of green and recycled steel.

Ranking of carmakers performance on steel decarbonisation

Results from the T&E-Lead the Charge 2025 leaderboard ranking of progress on green steel



T&E

Volvo scores well across all indicators, having set ambitious targets and having already signed a number of offtake agreements. Mercedes comes in second place overall due to its purchase agreements with steel suppliers and having disclosed multiple agreements with suppliers in both Europe and North America. Tesla, GM and Ford make up the rest of the top five. Tesla continues to be the only company to disclose detailed scope 3 emissions from its steel supply chain. Overall, both US and European car manufacturers are performing significantly better than their counterparts from Korea, Japan and China.

Despite some carmakers scoring well in certain categories, the 'Green Steel Leaderboard' shows that the actual use of lower emission steel is rather low. Scaling up green steel production requires major infrastructure investment – which comes at a cost and requires clear demand offtake.

Policy recommendations

The EU should use the upcoming **Industrial Decarbonisation Accelerator Act (IDAA)** to send a strong demand signal and position the automotive industry as the lead market for green steel.

The EU Commission should set the following requirements in IDAA:

- Introduce **green steel targets in new cars: the [evidence](#) shows that 40% in 2030, 75% in 2035 and 100% in 2040 are feasible thresholds**, covering both recycled and primary green steel.
- **Incentivise made-in-EU green steel:** To strengthen the resilience of the European economy, support the EU steel industry's effort to decarbonize, and prevent loopholes from foreign resource shuffling.

To set such targets, the EU needs **harmonised steel carbon labels**. The labels should cover the carbon intensity of steel (in tCO₂/t of steel produced) and should rely on a simple methodology based on location-based electricity grid carbon intensity averages.

With the right design and support policies, green steel labels and quotas offer European OEMs a strategic opportunity to gain a competitive advantage. To complement the targets the EU should set national and EU policies to boost demand for locally made green steel through public procurement, fiscal incentives (e.g. bonus-malus, eco-bonuses, tax credits), and local content rules tied to EU and national funding.

1. The automotive industry plays a crucial role in driving steel decarbonisation

With the electrification of car fleets, the climate impact of vehicle production takes up an increasing share of the sector's emissions. Around 60% of the total life cycle emissions of an electric car occur during the production of a vehicle ('embedded CO2 emissions'). Depending on the model and drive technology, steel is responsible for [16% to 27% of these CO2 emissions](#), which makes it a hotspot of embedded emissions.

The steel used by the major European car manufacturers has an estimated emission intensity of [2 tonnes of CO2e per tonne of steel produced](#). This is about twice the average emissions of the EU steel industry.

More generally, the steel industry has a massive impact on the climate: according to the International Energy Agency (IEA), it is responsible for around [7% of global greenhouse gas emissions](#). That is almost three times as much CO₂ as global air traffic causes. The [IEA predicts](#) that the global steel industry will have to reduce its greenhouse gas emissions by 25% by 2030 in order to achieve net zero emissions by 2050. In Germany, the steel industry is responsible for almost [30% of total industrial emissions](#). The high emissions in steel production are caused by the coal used in primary steel production.

The automotive industry is one of the steel industry's most important customers worldwide, especially for high-quality primary steel. In the EU, the automotive sector is the second biggest steel consumer ([17% of the overall demand](#)). As one of the largest consumers of steel produced in Europe, automotive manufacturers have a pivotal role in leading one of the most important primary industries into a climate-neutral future. By boosting demand for green steel, car manufacturers can play a crucial role in the decarbonisation of the steel industry.

2. Carmaker leaderboard ranking: progress on green steel

Every year, the '[Auto Supply Chain Leaderboard Ranking](#)' evaluates 18 of the world's leading car manufacturers in terms of their efforts to eliminate emissions, environmental damage and human rights violations in their supply chains. The Leaderboard is published by the US-based initiative '[Lead the Charge](#)', a network of 17 local, national and international NGOs committed to a fair, sustainable and fossil-free supply chain in the automotive industry. A special edition of the Leaderboard exclusively and in close cooperation with T&E has been published ahead of the IAA 2025 in Munich. This briefing summarises the most important findings on the topic of green steel in the automotive industry. On this basis, Lead-the-Charge and T&E present - for the first time in Europe - a ranking of the world's 18 leading car manufacturers based on their progress in the use of green steel. The ranking measures the manufacturers' success based on three key indicators that are weighted differently out of 100% according to their importance (see % weighting factors below):

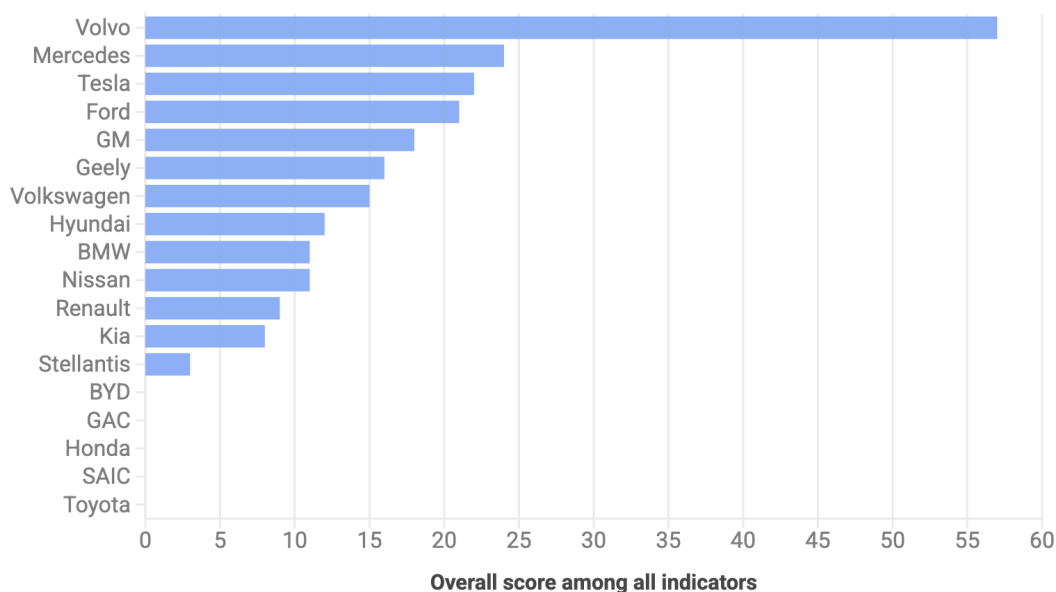
- **Disclose (22%):** Assesses whether and to what level of detail the car manufacturers disclose their steel-based emissions from their supply chains.
- **Target Setting and Progress (34%):** Assesses whether automakers have set targets to increase their use of green steel and recycled steel, and whether they disclose the progress they are making toward those targets on an annual basis.
- **Supply Chain Levers (44%):** Assesses measures that automakers have implemented with their suppliers to increase the production of green and recycled steel. These include participation in voluntary initiatives such as SteelZero and the First Movers' Coalition, suppliers' commitment to undergo certification by Responsible Steel and the signing of purchase agreements for green steel.

2.1 Results of the Leaderboard ranking

The results of the ranking show Volvo performing well on all indicators (four times higher than the industry average) and coming well ahead of all carmakers, including 2nd-ranked Mercedes. The company has made clear progress compared to previous years on disclosure, set targets for increased use of low carbon steel and recycled steel, signed agreements to supply near-zero emission steel and invested in closed loop processes for steel recycling.

Ranking of carmakers performance on steel decarbonisation

Results from the T&E-Lead the Charge 2025 leaderboard ranking of progress on green steel

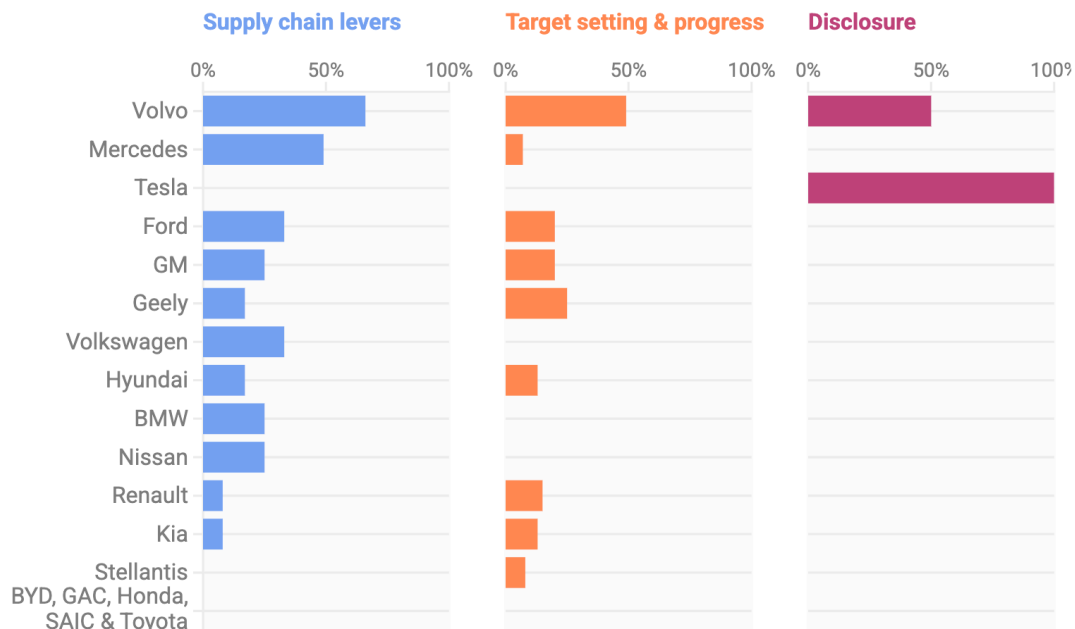


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Apart from Volvo, carmakers score quite differently across the three indicators. While several companies have indirectly signed supply chain purchase agreements via coalitions, commitments remain limited. Similarly, only a few carmakers have some kind of target on increasing the share of low-carbon and/or recycled steel usage in their supply chain. The main

blindspot is that almost none of them disclose information on steel-related emissions in their supply chain, except Volvo and category-leader Tesla. Still, there is significant progress on the first two categories compared to the first edition of the ranking. Despite being encouraging, there is still a lot of room for improvement for almost all carmakers in every category, particularly the “Disclosure” one.

Breakdown of steel decarbonisation indicator scores



Supply chain purchase agreements driven by green steel coalitions

As part of the [First Movers Coalition](#), Ford and GM have committed to sourcing at least 10% of their annual steel requirements from near-zero emission sources by 2030. Through its membership of [SteelZero](#), Volvo has set the target of using 50% low-CO2 steel by 2030. At the same time, all of the company's steel suppliers are to become members of [Responsible Steel](#) by the same year and have their sites certified in accordance with these standards.

So far, Volvo and Mercedes-Benz are the only car manufacturers to have signed up to Responsible Steel, with Volvo outperforming Mercedes in the overall score for this category. Nevertheless, since 2021, Mercedes-Benz has also been the first car manufacturer to [invest](#) several million euros in the Swedish green steel start-up Stegra (formerly H2 Green Steel). The car manufacturer has [announced](#) that it will purchase more than 200,000 tonnes of CO2-reduced steel for its European plants by 2030.

Volvo's and Mercedes' commitment to decarbonise embedded emissions from automotive steel are the current best practice among OEMs, making them leaders of the transition. These commitments should be replicated in order to ensure an industry-wide change. Overall, the results of the ranking show that the current use of green steel in the automotive supply chain

remains low despite some promising commitments. Some recommendations on how to scale up the production and therefore the use of green steel in the automotive sector can be found in section 3 of this briefing.

Few car manufacturers have internal recycled/green steel targets

Recycled steel and low-carbon primary steel are two sides of the same coin when it comes to cleaning the steel industry. Geely and Volvo (Volvo has been part of Geely since 2010) were the only companies to set targets to increase the use of recycled steel by 2030. Volvo aims to use 25% recycled steel in its vehicles by 2025 and 35% by 2030, while Geely has a target for its key suppliers to use 20% recycled steel by 2025. While Mercedes-Benz has set a target for one third of the steel used in its European press shops to be low-emissions steel by 2030, they do not provide any data on the percentage of its global steel consumption these supplier agreements account for. For this reason, Mercedes performs worse on this indicator than SteelZero member Volvo and First Mover Coalition members Ford and GM.

It is worth noting that the five companies at the bottom of the ranking (Honda, Toyota, GAC and BYD) are all Asian car manufacturers. Renault and Stellantis are by far the worst performers among the European manufacturers.

Almost all manufacturers fail to disclose steel supply chain data

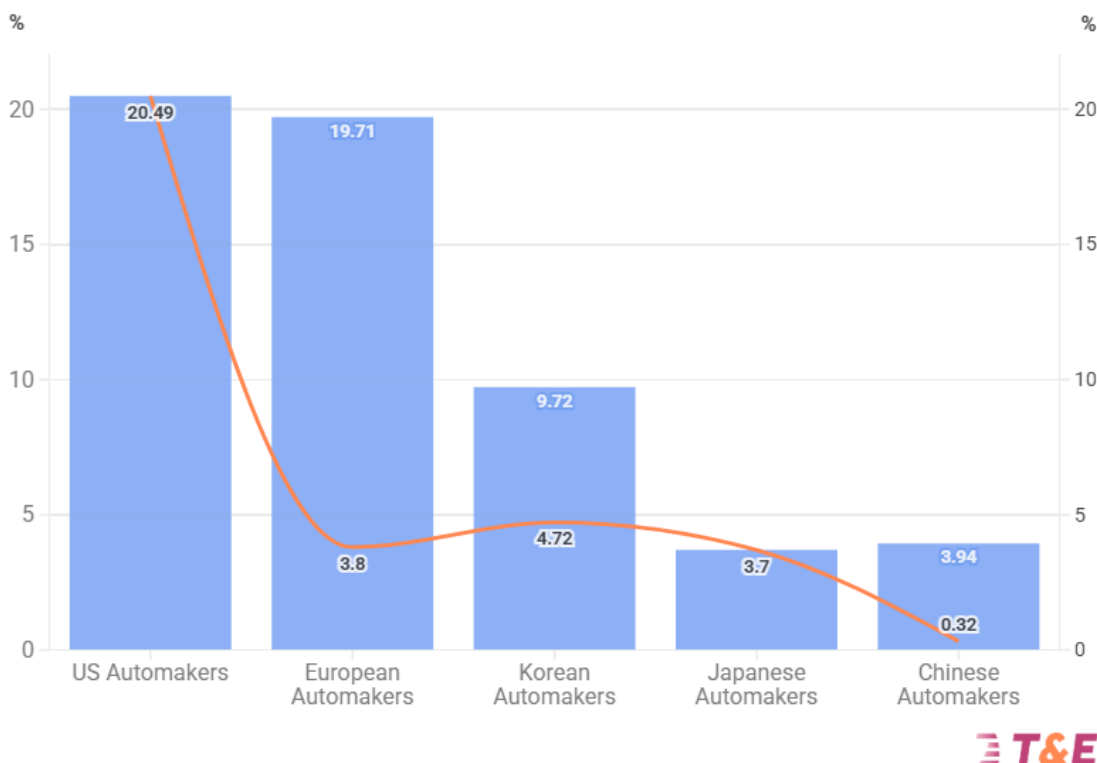
No company discloses the amount of low-emission steel used in its annual production, even though Tesla has [published](#) disaggregated GHG emissions for its entire steel supply chain, disclosing that steel accounted for 6.48% of its supply chain emissions in 2023. In a similar vein, Volvo is the only car manufacturer to disclose the CO2 emissions of its steel supply chain by model. Since 2019, the manufacturer has disclosed life cycle assessments for each new BEV model with disaggregated data on emissions from the steel, aluminium and batteries used in these vehicles. In particular, the LCA of the EX30 model has the lowest carbon footprint of any all-electric Volvo vehicle to date and is an example of the company's leadership in decarbonising its supply chain.

2.2 Carmakers performance across regions

The graph below shows that both US and European car manufacturers are performing significantly better than their counterparts from Korea, Japan and China. US manufacturers have improved the most compared to the first edition of the ranking with a 20% increase of their score. European, Korean and Chinese carmakers have made equivalent progress while Chinese manufacturers are lagging behind, having barely made any progress since 2023.

European and USA automakers perform better than Asian counterparts.

■ Average Steel Score in 2025 Leaderboard
■ Average score improvement for steel: 2025 vs. 2023



Within Europe, there are major differences between car manufacturers in the use of green steel. Volvo, for example, achieved a score in the ranking that is more than twice as high as the average of its European competitors. Stellantis, on the other hand, achieved a score of less than 3%, which is seven times lower than the European average.

3. Recommendations for EU policies

Creating lead markets with green steel mandates in automotive

Despite some carmakers scoring well in certain categories, the 'Green Steel Leaderboard' shows that the actual use of lower emission steel is rather low. Scaling up green steel production requires major infrastructure investment – which comes at a cost and requires clear demand offtake. The current lack of firm offtake from automakers is preventing steel producers from making the costly investments needed to scale the technology.

The European Commission plans to propose a new law in Q4 2025 to accelerate the decarbonisation of the heavy industry - the Industrial Decarbonisation Accelerator Act (IDAA). Putting in place green steel quotas for new cars in the upcoming IDAA would address both the

embedded emissions problem in cars and the lack of business case to commercialise green steel in Europe.

The EU should set the following requirements in IDAA to establish the automotive industry as a lead market for green steel in the EU:

- Introduce **green steel targets in new cars: the [evidence](#) shows that 40% in 2030, 75% in 2035 and 100% in 2040 are feasible thresholds**, covering both recycled and primary green steel.
- **Incentivise made-in-EU green steel:** To strengthen the resilience of the European economy, support the EU steel industry's effort to decarbonize, and prevent loopholes from foreign resource shuffling, green steel quotas should focus and incentivise Made in EU green steel. This can be achieved with a bonus-malus system where green steel produced outside the EU is weighted 0.5 while green steel produced in the EU would be weighted 1.2.

Steel carbon labels: the tool to implement green steel lead markets

To create a lead market for green steel in the automotive industry, the EU needs an appropriate tool or methodology to measure and report on the steel carbon intensity. Carbon labels for steel - as announced in the [European Steel and Metals Action Plan](#) - is the right instrument to do this.

- **Mandatory reporting in automotive:** The steel carbon labels should show the **carbon intensity of steel in tCO₂/t of steel produced** (as well as steel carbon class and share of scrap used) and be mandatory for every steel product used in the automotive industry.
- **Scope 2 electricity emissions** should use simple location-based electricity grid carbon intensity averages, in line with the latest [draft](#) of the EU battery carbon footprint delegated act (starting with EU average, rather than national ones). This avoids driving competition between EU member states and focuses instead on making production in Europe attractive versus imports from abroad.
- For **scope 1 emissions**, ETS data should be used for the carbon intensity of EU production while the CBAM framework can capture the carbon intensity of imported products. Stringent verification and reporting requirements are essential for credible assessment of foreign production emissions. In cases where accurate and verifiable data is unavailable, conservative default values should be applied as a fallback.
- **One single EU method:** it is important that the methodology for carbon labels is simple (low admin, easy to automate) in order for the tool to be effective and rapidly implemented and used across all EU carbon footprint efforts (incl CBAM, battery carbon footprint, ESPR, etc).

Finally:

- **Tiered classes for CO₂ differentiation:** The carbon labels should create tiered classes in order to allocate each batch of steel into the corresponding class of label. This should be based on the sliding scale approach (i.e. depending on the amount of scrap steel used),

in particular for near zero emissions steel. A transitional class for DRI with natural gas can also be considered. The LESS system provides a good basis for the definition of such classes as it extends beyond crude steel to hot rolled steel covering more production processes.

Supportive policies and funding to make it a success

Beyond green steel quotas, complementary measures to ensure broad uptake, fair competition and accelerated investment in low carbon steel production are also needed:

- **Public procurement:** Governments at national and local levels should commit to buying products containing EU-made green steel through public procurement. This can be done by mandating minimum shares of Made-in-Europe green steel in infrastructure, transport, and public works.
 - **Fiscal incentives:** EU governments should implement a favourable fiscal system for products to reward the use of Made in Europe green steel. For example a bonus-malus system for cars or a French-style “eco bonus” could reward vehicles using low-carbon steel, same with tax credits or rebates.
 - **Made in EU local content rules** should also be used to reward the use of locally made low emission steel in final products, such as cars. This can be done by adding Made in EU requirements to EU funding (e.g. Innovation Fund or InvestEU), EIB loans and national state aid programmes.
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Further information

Zachary Azdad

Policy Officer

T&E

zachary.azdad@transportenvironment.org

Mobile: +33786441517