JULY 2025

The 2024/2025 global automaker rating: Green steel

As automakers shift to produce more zero-emission vehicles, manufacturing will make up a growing share of life cycle vehicle emissions and become a key target for decarbonization efforts. Steel is one of the largest contributors to these emissions, representing about 15%–27% of greenhouse gas (GHG) emissions from vehicle manufacturing.[1] To fully decarbonize vehicles, automakers must shift toward procuring steel with lower GHG intensity.

The challenge:

- **Emissions intensity**: Steel procured by automakers globally has a higher emissions intensity than the industry average due to heavy reliance on coal-based primary steel.[2]

The opportunities:

- **Substantial emission reductions**: Switching to fossil-free steel would reduce the steel-related vehicle GHG emissions by 95%.
- **Minimal cost:** Using green steel would increase vehicle costs by $100–$200.[3]
- **Scale of impact**: The automotive sector accounts for 12% of global steel demand, positioning itself as a potential market driver of fossil-free steel adoption.[4]

AUTOMAKERS' POSITIONS IN THE GREEN STEEL TRANSITION

To determine the state of automakers' transition to green steel, we estimated the GHG emissions intensity of car manufacturers' current steel purchases, evaluated future green steel procurement targets, and assessed signed green steel offtake agreements.

The analysis found:

- The top five automakers all had green steel targets and green steel offtake agreements in place in 2024.
- Out of the 21 companies in the rating, 14 did not have targets or offtake agreements with green steel producers.

1 Anh Bui, Aaron Isenstadt, Yuanrong Zhou, Georg Bieker, and Marta Negri, *Technologies to reduce greenhouse gas emissions from automotive steel in the United States and the European Union* (International Council on Clean Transportation, 2024), https://theicct.org/publication/technologies-to-reduce-ghg-emissions-automotive-steel-us-eu-jul24/.

2 Marta Negri, Anh Bui, Ysak Ordonez, Georg Bieker, and Aaron Isenstadt, *Which Automakers are Shifting to Green Steel? An Analysis of Steel Supply Chains and Future Commitments to Fossil-free Steel* (International Council on Clean Transportation, 2024), https://theicct.org/publication/green-steel-automakers-us-europe-sep-24/.

3 Bui, Isenstadt, Zhou, Bieker, and Negri, *Technologies to reduce greenhouse gas*.

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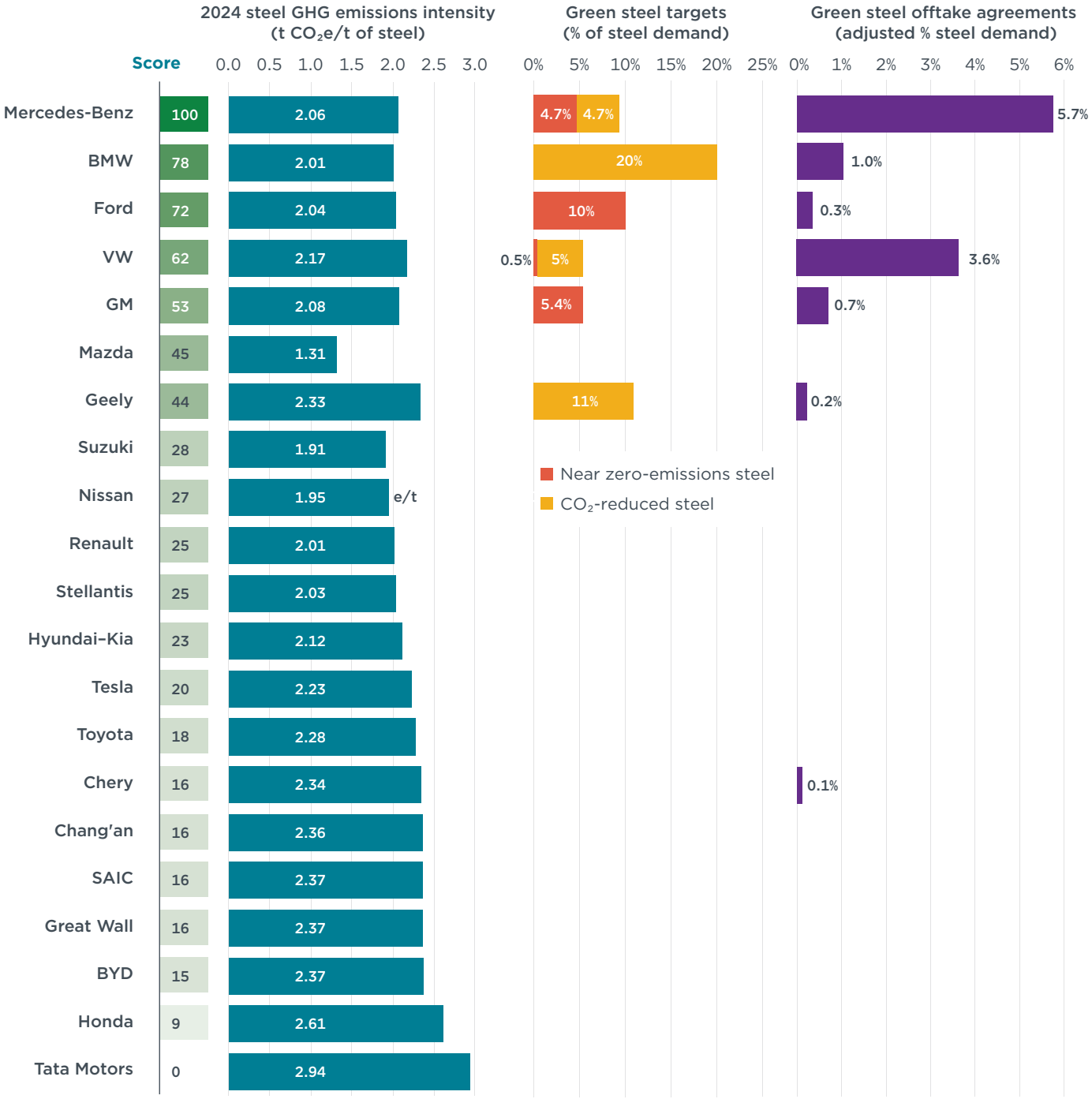
Figure 1

Green steel metric score by manufacturer



Notes: Volkswagen has not announced a steel target but has signed offtake agreements that show the company is committed to decarbonizing a fraction of its steel supply; accordingly, we also gave Volkswagen credit for this amount in the steel target factor.

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HOW THE TOP AUTOMAKERS ARE LEADING ON GREEN STEEL

- **Mercedes-Benz**
  - Lower-than-average steel GHG emissions intensity
  - Reduced-CO_2 steel commitments for 2030 cover an estimated 9% of its 2024 steel demand
  - Offtake supply contracts with Stegra, Steel Dynamics, Salzgitter, Arvedi, and Nucor that make up 50% of their procurement target, and additional Letters of Intent with other steelmakers
- **BMW**
  - Committed to sourcing reduced-CO_2 steel for an estimated 20% of steel demand by 2030
  - Contracts with Stegra, Salzgitter AG, SDI, and U.S. Steel
  - Memorandum of Understanding (MOU) with HBIS to procure CO_2-reduced steel from 2023
- **Ford**
  - Member of the First Movers Coalition, which entails committing to using 10% green steel out the total steel demand
  - Signed MOUs with Salzgitter AG, Thyssenkrupp, and Tata Steel
- **Volkswagen**
  - Contracts with Stegra and Salzgitter AG, and MOUs with Vulcan Green Steel, Salzgitter AG, and Thyssenkrupp
- **GM**
  - Member of the First Movers Coalition, although it has limited the commitment to North America
  - Contracts with U.S. Steel, ArcelorMittal, and Nucor

WHAT'S NEXT FOR AUTOMAKERS?

As a major purchaser of steel, automakers are uniquely positioned to support investments in fossil-free steel production. Automakers can:

- **Demonstrate demand for green steel**
  - Sign binding offtake agreements
  - Join global initiatives to accelerate the development and commercialization of green steel
  - Join demand aggregators for green steel purchases
- **Track and disclose information on steel use**
  - Steel emissions intensity
  - Scrap steel share
  - Specific procurement plans and agreements

PUBLICATION DETAILS

Title: The global automaker rating 2024/2025: Who is leading the transition to electric vehicles?

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Download: https://theicct.org/global-automaker-rating-2024/

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