Steel

The mission of the First Movers Coalition (FMC) is to advance the most **critical emerging climate technologies** required for deep decarbonization of the world's heavy-emitting sectors. To do this, FMC is building early market demand for such technologies by 2030, in order to help scale and catalyse their mainstream adoption for carbon-intensive sectors.

First Movers Coalition – Steel commitment

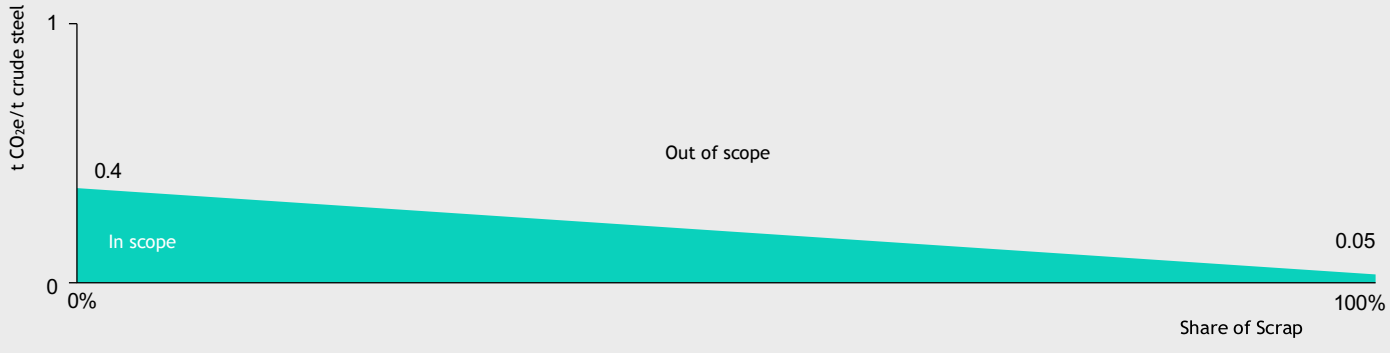
The First Movers Coalition has set ambitious commitments for purchasers of steel:

"At least 10% (by volume) of all our steel purchased per year will be near-zero emissions (as per FMC definition) by 2030"

Commitment details

Members of the First Movers Coalition Steel sector commit to purchase near zero-emissions steel satisfying the following criteria:

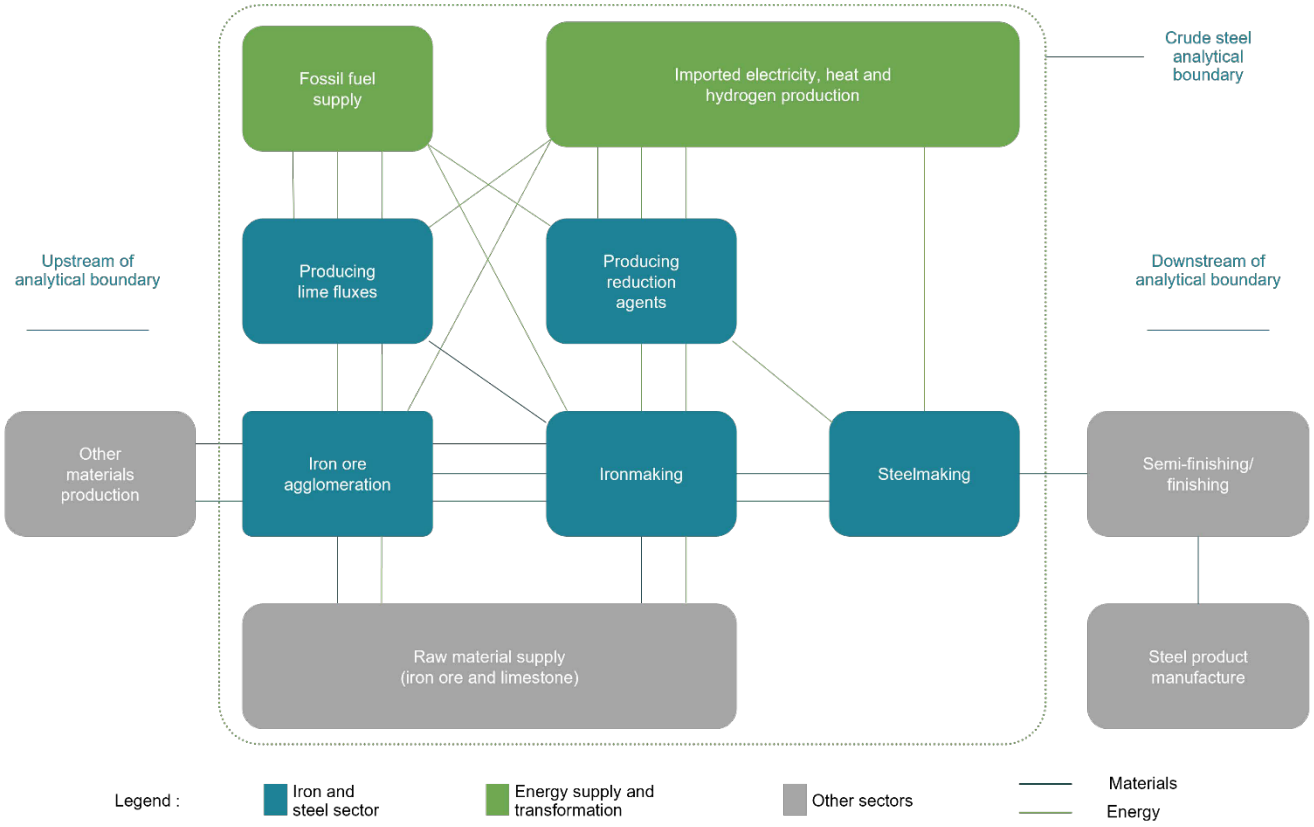
- Crude steel from breakthrough technology production facilities. Per IEA guidance, the steel should emit <0.4 (0% scrap inputs) to <0.05 t (100% scrap inputs) of CO_2e per tonne of crude steel produced[1]
- The analytical boundary captures the main emissions-intensive steps and emissions sources of steel production up to the crude steel boundary, in alignment with **IEA guidance[2]** in the report *Achieving Net Zero Heavy Industry Sectors in G7 Members*
- Steel (satisfying the FMC threshold) may follow identity preserved[3] or segregated[4] chain of custody models. Controlled blending[5] and site-level mass balance[6] chain of custody models may also be used given that emissions claims are tracked (e.g., via a registry) and verified by a third party to provide transparency, avoid double counting, and ensure accuracy. Group-level mass balance and book & claim[7] chain of custody models are not applicable to the FMC steel commitment at this time.[8]
  Decisions made within the transport sector regarding alternative chain of custody approaches can also be applied to the transport-related emissions of materials in other FMC sectors such as steel. This promotes consistency across sectors and reflects the interconnected nature of supply chains. An overview of which chain of custody model is allowed in which sector can be found here.
  In addition, the First Movers Coalition has established high-level, cross-sector guardrails that must be followed when implementing chain of custody models and can be found here.



These commitments do not include steel that does not meet the sliding scale emissions threshold defined by First Movers Coalition or carbon offsets.

Leading analysis identifies that our goals are most likely to be accomplished with steel production using nascent and advanced green technologies – such as electrowinning, electrolizers, CCUS (carbon capture use and storage) and CCS (carbon capture and storage) with existing processes or DRI-EAF using zero-carbon H_2.

IEA analytical supply chain boundary for defining near-zero emission steel production*



*See the IEA 2022 report "Achieving Net Zero Heavy Energy Sectors in G7 Members." In the graphic, "other materials production" refers to the production of material inputs to the iron and steel sector besides iron ore and limestone, including electrodes, alloying elements, and refractory linings. Lime-based slag formers are included within the IEA boundary and therefore should be included in the calculation of emissions.

Disclaimers

Voluntary commitments made by members of the First Movers Coalition are subject to the availability of material(s), fuel(s), service(s) supply and regulatory approvals. Members acknowledge that procuring the material(s), fuel(s), or service(s) needed to meet these commitments may come at a premium cost.

Commitment design process

The original steel commitment was launched in 2021 with support from the design committee sector contributors Climate Group, Net Zero Steel Initiative (Mission Possible Partnership) and Energy Transitions Commission.
The commitment was revised in 2025 through a biennial Commitment Review process.

[1] FMC sets ambitious standards, including a supply chain boundary inclusive of raw material preparation (iron ore and limestone) and fossil fuel supply (including extraction, transportation, and beneficiation) through steelmaking and casting (including all iron ore and limestone processing transportation emissions; does not include sorting and transportation of steel scrap). Transport emissions of iron ore and lime products include all emissions regardless of intermediary stops between mining and steel plant.

[2] FMC acknowledges the growing number of GHG methodologies and standards in the steel sector. Other methodologies are acceptable as long as the emissions boundaries and definitions used are in line with the FMC commitment, hence the IEA near-zero framework. The IEA proposes principles for interoperability and net zero compatibility of emissions measurement methodologies and data collection frameworks, including a review of leading existing methodologies and frameworks here. To further support collaboration and transparency across regions, for specific regions, where no alternative is available, FMC members may rely on other credible methodologies that have proven certification and verification systems (e.g., CISA in China).

[3] Identity preserved: "the materials or products originate from a single source and their specified characteristics are maintained throughout the supply chain." ISO 22095:2020

[4] Segregated: "specified characteristics of a material or product are maintained from the initial input to the final output." ISO 22095:2020

[5] Controlled blending: "materials or products with a set of specified characteristics are mixed according to certain criteria with materials or products without that set of characteristics resulting in a known proportion of the specified characteristics in the final output." ISO 22095:2020

[6] Mass balance: "materials or products with a set of specified characteristics are mixed according to defined criteria with materials or products without that set of characteristics." ISO 22095:2020

[7] Book & claim: "the administrative record flow is not necessarily connected to the physical flow of material or product throughout the supply chain." ISO 22095:2020

[8] Exceptions apply to the use of book and claim market-based approach to carbon accounting for energy attribute certificates required to prove the origin of purchased energy per Greenhouse Gas (GHG) Protocol Scope 2 Guidance

Source: Mission Possible Partnership, International Energy Agency. Note: Commitment scope includes both flat and long steel.