



ASSESSING THE CREDIBILITY OF ARCELORMITTAL'S DECARBONIZATION STRATEGY

**A briefing for climate
conscious financial
institutions**

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Author:

Cynthia Rocamora, Industry Campaigner, cynthia@reclaimfinance.org

Contributors:

Lucie Pinson, Executive Director

Copy editor:

Hele Oakley

Graphic design:

Jordan Jeandon

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INTRODUCTION

Though more than half of global steel production takes place in China,¹ multinational companies outside of China dominate the steel market and have tremendous influence on the industry. One of these steel giants is ArcelorMittal. With an operating steel capacity of 99.2 million tonnes per year (mtpa), ArcelorMittal is the world's biggest steel company by revenue, holding 4.49% of the world's operating steel capacity.²

The steel sector accounts for around 7% of global greenhouse gas (GHG) emissions and 11% of global carbon dioxide (CO₂) emissions.³ Decarbonising the steel sector is key to achieving the goals of the Paris Agreement. The International Energy Agency's (IEA) Net Zero by 2050 report calls for steel sector emissions to drop by 25% by 2030 and by almost 92% by 2050. The sector's emissions are primarily due to its reliance on coal.⁴ Though the sector has long been considered "hard-to-abate", research shows that it can be fully decarbonized by 2050 thanks to recent technological advances.⁵

As a key player in the steel market, ArcelorMittal has a crucial role in advancing the global shift to clean steelmaking. This briefing is intended for financial institutions that would like to gain a better understanding of the activities and climate impact of ArcelorMittal in order to engage the company on its transition.

From the adoption of a detailed, consistent and robust climate strategy to the integration of climate key performance indicators (KPIs) in the governance of the company, financial institutions should push ArcelorMittal to take immediate action to reduce its GHG emissions. Securing a commitment not to develop new coal-based capacity in favor of green steel projects,⁶ while showing the same level of ambition across all geographies, will be essential to align the company's climate strategy with a 1.5°C pathway.⁷



1. WITH GREAT STEEL CAPACITY, COMES GREAT RESPONSIBILITY

a. Who is ArcelorMittal?

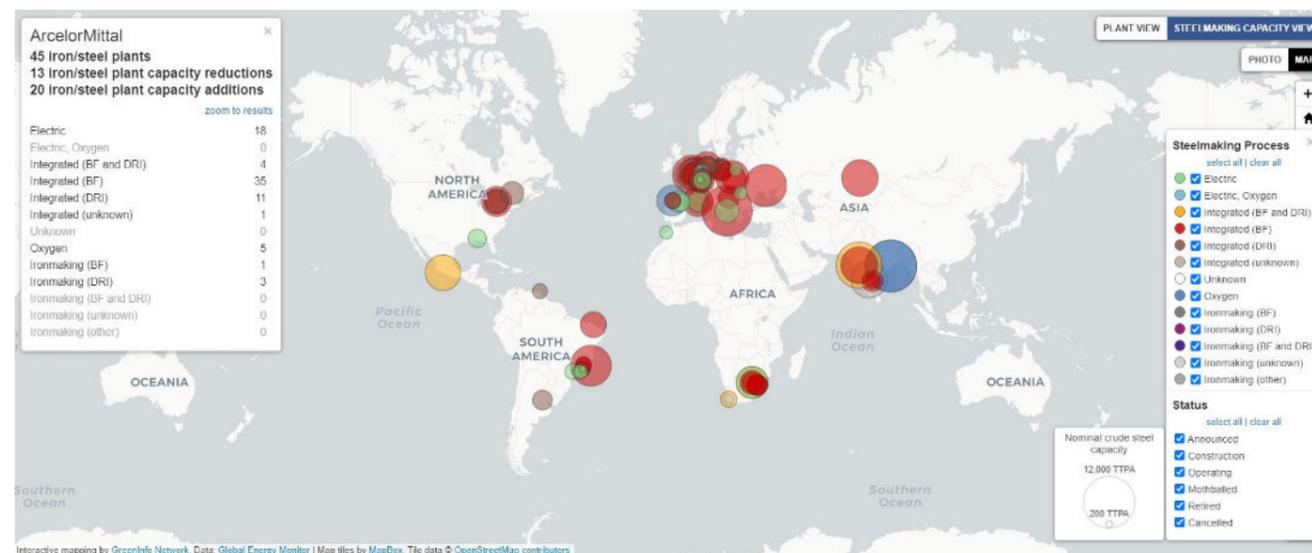
ArcelorMittal is a Luxembourg-based steelmaker born of a merger in 2006 of Arcelor and Indian-owned Mittal Steel. ArcelorMittal was the world's second-biggest steel producer in 2021 with 79.26 million tonnes of steel produced that year.⁸ It currently operates 32 steel plants in 15 countries,⁹ including 19 coal-consuming blast furnaces. Though over half of the company's crude steel production is located in Europe, it produces steel in almost every continent.

The company also has 16 projects under construction or proposed that together would produce at least 48.9 million tonnes of steel per year (mtpa). This includes blast furnace and basic oxygen furnace expansion

plans in Brazil, India and Mexico. On the other hand, ArcelorMittal is also investing in new technologies to produce steel. This includes hydrogen-based projects and electric arc furnaces (EAFs) to recycle steel scraps, and also carbon capture, utilization and storage (CCUS) projects.

In addition to steelmaking, the company operates 12 iron ore mines in Canada, the USA, Mexico, Brazil, Bosnia and Herzegovina, Ukraine, Kazakhstan and Liberia, plus one metallurgical coal mine in Kazakhstan.¹⁰

Its dominant position in the steel market makes ArcelorMittal a highly influential player, both among its peers and with regard to public policy and other initiatives relating to steel.



ArcelorMittal Steel plants, by steelmaking capacity, Global Energy Monitor, Global Steel Plant Tracker, March 2023 release

b. Being a steel decarbonization leader requires turning words into actions

ArcelorMittal wants to appear as a leader when it comes to decarbonizing the steel sector, as shown in its public communications and in its partnerships. For instance, it recently announced a partnership with the Paris 2024 Olympic and Paralympic Games to build torches and cauldrons for the Olympic flame using net zero steel.¹¹

The company is also involved in several leading initiatives on steel and industry associations.¹² For example, it has provided funding for the Science Based Target Initiative's (SBTi) work on steel,¹³ it is a signatory of the Mission Possible Partnership's Making Net-Zero Steel Possible report,¹⁴ it is a co-founder of the Net Zero Steel Pathway Methodology Project, and

it has also played a leading role in establishing the Responsible Steel initiative.¹⁵

However, although the company seems committed to Paris-aligned objectives in its public declarations, its lobbying practices are a cause for concern. In its 2022 Corporate Climate Policy Footprint report,¹⁶ the think tank InfluenceMap revealed that ArcelorMittal is among the 25 most influential companies blocking climate policy action globally.¹⁷ It is also a member of two of the top ten most negative and influential industry associations: BusinessEurope (4th) and the Federation of German Industries (10th). ArcelorMittal has a D+ grade on InfluenceMap's platform LobbyMap -18 the rating goes from A+ to F and measures a company's climate policy engagement, with grades from D to F indicating increasingly obstructive climate policy engagement. The company has actively lobbied against EU climate regulations, such as the Carbon Border Adjustment Mechanism and the EU Emissions Trading System reform.



2. ARCELORMITTAL VS THE PLANET

a. ArcelorMittal's environmental impact

ArcelorMittal's activities are more carbon-intensive than the global steel industry average. In its 2021 Climate Action Report, the steel giant disclosed that its steel and mining operations emitted 160.3 million tonnes of CO2 in 2020.¹⁹ This represents 2.08 tonnes of CO2 per tonne of steel. In comparison, the World Steel Association reports the global average for the industry as 1.83 tonnes of CO2 per tonne of steel.²⁰ Today, about 83% of ArcelorMittal's crude steel capacity is from the carbon-intensive coal-based route,²¹ compared to the global industry average of 72%.²² It is also likely ArcelorMittal's climate impact is higher than reported, since the company does not account for coal mine methane emissions related to its activities: globally, coal mine methane emissions are estimated to add 27% to steel's global warming impact.²³

Moreover, ArcelorMittal is regularly in the spotlight for the air pollution caused by its activities and the ensuing health impacts, which include respiratory diseases, several forms of cancer, chronic illnesses and premature deaths. The company has been sued and denounced several times for its air pollution, for instance in the USA, Bosnia and Herzegovina,²⁴ Kazakhstan,²⁵ South Africa,²⁶ India²⁷ and France.²⁸ Recent revelations from French investigative media Disclose on ArcelorMittal's Fos-sur-Mer and Dunkirk sites show that the company has breached environmental regulations several times, has exceeded air pollution legal limits, and has misrepresented its emissions.²⁹

Lawsuits have also been filed against ArcelorMittal for water pollution in several

countries in recent years. This includes regulatory violations and illegal disposal of toxic waste resulting in severe damage to local ecosystems. The company has been found guilty and fined in several instances, including in Ukraine,³⁰ France,³¹ India,³² the USA,³³ Liberia³⁴ and Canada.^{35,36}

b. ArcelorMittal's climate strategy

Although ArcelorMittal discloses extensive information on its climate strategy and is very vocal about its climate commitments, its current climate strategy is inadequate to limit global warming to 1.5°C. The Climate Action 100+ (CA100+) Net Zero Company Benchmark finds that ArcelorMittal's disclosure framework and decarbonisation strategy remain incomplete.³⁷ It could be expected that good practice which allows investors to properly evaluate a company's strategy includes disclosing all key information, but ArcelorMittal is currently failing to provide its investors with sufficient information on how exactly it is working to decarbonize its operations. Even more so, the information it does disclose shows that the company is not on track to limit global warming to 1.5°C.

Completeness of ArcelorMittal's climate strategy

On Scope 1 and 2 emissions, ArcelorMittal has committed to carbon neutrality by 2050, and set targets for 2030 for CO2 emission intensity: 25% globally and 35% in Europe.³⁸ However, unlike many of its peers, ArcelorMittal has only adopted an intensity target, failing to set a clear 2030 absolute target. The company also lacks a short-term target.



“ **If the world is to achieve net-zero by 2050, it will require all parts of the world to contribute. As the world's leading steel company, we believe we have a responsibility to lead the efforts to decarbonise the steelmaking process.** ”

*Aditya Mittal,
CEO, ArcelorMittal*

ArcelorMittal provides considerable information about its roadmap to net zero in its reporting,³⁹ but it does not provide a breakdown of how each of its projects contributes or is taken into account in its strategy – including coal-based projects – nor does it provide a detailed timeline to convert existing or planned coal-based assets to other technologies.

Furthermore, the company has not adopted any target relating to its Scope 3 emissions. Although the CA100+ methodology does not consider these emissions in its assessment of the transition plan of the company,⁴⁰ Scope 3 typically accounts for 27% of the total emissions of the steel sector.⁴¹ The Greenhouse Gas Protocol and the World Steel Association CO2 data collection guide⁴² recommends that elements of the Scope 3 value chain be accounted for in reporting practices.⁴³ In fact, reporting on Scope 3 emissions is already an industry practice – for instance, Tata Steel's⁴⁴ reporting highlights the different materiality of Scope 3 compared to Scopes 1 and 2.

ArcelorMittal also lacks accounting and mitigation measures for coal mine methane emissions related to its activities, which, as previously stated, are estimated to add 27% to steel's global warming impact.⁴⁵ Furthermore, the company lacks a commitment to decarbonize its capital expenditures (CAPEX): it does not provide any forward-looking breakdown of its future investments that would allow investors to test the alignment of the company's existing and planned assets against a 1.5°C pathway.



Corporate governance

- Disclosure framework

Overall, ArcelorMittal only meets four out of the ten criteria assessed by CA100+ in its disclosure category. These measure distant pledges like its net zero ambition by 2050 and the long-term targets that go with it, or indirect enabling factors that are not by themselves a proof of ArcelorMittal's transition, such as its climate governance, or climate policy engagement. Although these criteria are met in terms of disclosure, they remain insufficient in terms of climate alignment.

- Accounting and auditing practices

The CA100+ found a complete lack of climate sensitivity in ArcelorMittal's accounting and auditing practices following an analysis of its financial statements as of 31 December 2021. This assessment of its financial statements shows that ArcelorMittal does not disclose information concerning how material climate-related matters are incorporated, or its quantitative climate-related assumptions and estimates.

As such, assessing whether the company's financial statements are consistent with its other reporting is not possible.

Similarly, ArcelorMittal's auditors⁴⁶ did not factor climate into their assessment, meaning their own reporting could not identify the inconsistencies between the company's financial statements and its other information. The CA100+ assessment therefore concluded that ArcelorMittal's financial statements did not "use, or disclose a sensitivity to assumptions and estimates that are aligned with achieving net zero GHG emissions by 2050 (or sooner)".⁴⁷

- Climate governance

It is worth noting that ArcelorMittal fulfills all the CA100+ criteria in terms of climate governance, with clear oversight of the board on climate change and an executive remuneration scheme that incorporates climate change performance elements. It further shows that ArcelorMittal has the means to become more ambitious in its climate strategy.

Alignment of ArcelorMittal's climate strategy with a 1.5°C pathway

The information disclosed by ArcelorMittal and its auditors does not give investors the means to fully take into account all of the company's objectives and the coherence between these and the company's concrete actions. What is more, the information that is available shows a lack of aspiration. Investors have a key role to play in raising the level of ArcelorMittal's climate ambitions.

Additionally, the information provided as part of the CA100+ assessment, which is based on assessments by the Rocky Mountain Institute (RMI) and aims to determine the alignment of a company's production with the Paris Agreement goals, finds that ArcelorMittal is at a moderate distance from the IEA's Beyond 2°C Scenario (B2DS) target in 2030. This assessment also does not take into account Scope 3 emissions.

Furthermore, in terms of climate policy engagement alignment, the company only scores 57% when it comes to its support for Paris-aligned climate policy, and 48% on its industry associations. An interesting global assessment of ArcelorMittal's performance in terms of carbon emissions intensity and carbon trajectory can also be found in LGIM's ESG score, which gives ArcelorMittal a rating of 3/100 in its "Environment" category.⁴⁸

3. CHANGE IS COMING, BUT IT NEEDS TO HEAD IN THE RIGHT DIRECTION

a. Positive signs showing that change is possible...

ArcelorMittal is indeed taking steps in the right direction by developing steel projects using cleaner technologies. The Green Steel Tracker developed by the Leadership Group for Industry Transition⁴⁹ currently lists 18 green steel projects⁵⁰ for ArcelorMittal, with all but three located in Europe;⁵¹ the others being sited in Canada, Mauritania and South Africa. ArcelorMittal's green steel projects include hydrogen-based plants and electric arc furnaces that will recycle steel scraps in several locations, but also projects based on still unproven and unsustainable carbon capture, utilization and storage (CCUS) technologies, located in France, Norway and Belgium. The company also has shown encouraging signs with positive early investments in projects relying on hydrogen-based direct reduction of iron, such as in Gijon, Spain.⁵²

Additionally, in January 2023, ArcelorMittal made a US\$36 million investment in Boston Metal⁵³ for a project with the potential to decarbonize primary steel making using molten oxide electrolysis, a scalable process that eliminates the need for coal in steel production. This process is on track to be commercialized by 2026.⁵⁴

While ArcelorMittal is showing encouraging signs in Europe, it has yet to raise its ambitions in the rest of the world, where the company continues to develop coal-based steel projects.

b. ...but ArcelorMittal continues to develop unsustainable projects

ArcelorMittal's decarbonization strategy involves two main pathways:

- Innovative DRI: relies on green hydrogen for the direct reduction of iron.
- Smart Carbon: the term used by ArcelorMittal for investing in different technologies, primarily carbon capture, utilization and storage, but also renewable energy to power blast furnaces and replacing coal consumption with biomass and hydrogen.

While green hydrogen is a promising route for the decarbonization of steelmaking, ArcelorMittal's strategy contains significant flaws: it implies the development of unsustainable solutions, such as CCUS and biomass, and the continued development of coal-based infrastructure.

Relying on false solutions

As highlighted by IEEFA, there is a risk that ArcelorMittal's "Smart Carbon" pathway will be perceived as greenwash to justify the continued installation of blast furnaces under the claim that the impact will be mitigated by technologies such as carbon capture, utilization and storage. However, research shows the potential of CCUS is limited, with its efficiency not yet proven at a meaningful scale, and its use involving the perpetuated reliance on fossil fuels.⁵⁵

For example, in December 2022 ArcelorMittal inaugurated its Steelanol carbon capture and utilization project at its Ghent plant in Belgium.⁵⁶ The project aims to produce ethanol from gases emitted by blast furnaces. As highlighted in a report published by the Institute for Energy Economics and Financial Analysis (IEEFA), the company has stated that the replacement of one of its two blast furnaces in Ghent with new plant not powered by coal will save 3 million tonnes of CO₂ emissions a year by 2030.⁵⁷ However, the Steelanol project has the capacity to capture only 4% of this total.

The "SmartCarbon" pathway also involves relying on solutions like biomass, for instance using biogas at the Rodange plant in Luxembourg,⁵⁸ or the company's Torero project that uses forestry residues and agricultural waste to produce electricity through torrefaction, and which is also getting its first trial in Ghent.⁵⁹

Continuing to develop coal-based capacity with the claim of reliance on false solutions, like carbon capture and biomass, is not an acceptable climate strategy. Financial institutions must question how ArcelorMittal's investment decisions are aligned with its net zero by 2050 strategy.

Building new coal-based capacity

Even though ArcelorMittal is making promising investments in green hydrogen-based projects, it continues to develop coal-based projects in parallel. Some of these will come online after 2025, even though existing steel pathways clearly indicate that by that time no coal-based capacity without at least 90% carbon capture and storage should come online – to do so would risk dangerous carbon emissions lock-in. For instance, in Brazil, where ArcelorMittal currently operates six steel plants of which half produce steel in the conventional high-emission route, it is planning to expand the Monlevade plant with a 1.2 million tonnes per annum blast furnace expansion. In Mexico, the company is planning to expand its Las Truchas plant with a 2,5 million tonnes per annum basic oxygen furnace.

ArcelorMittal is also planning to expand its steel plant in India, which it co-owns with Nippon Steel. The expansion plans include two additional blast furnaces that will become operational in 2025 and 2026 and an upgrade of the existing blast furnace from 2 to 3 million tonnes per annum.⁶⁰ NGOs have asked for closure of the plant until environmental concerns are addressed:⁶¹ local communities have complained about water, air and land pollution and the impact of the company's pollution on crops and people's health. However, ArcelorMittal has received clearance, claiming that the increase in steel capacity "represents a significant boost for the government's National Steel Policy".⁶² As highlighted in IEEFA's recent 'ArcelorMittal: Green steel for Europe, blast furnaces for India' report,⁶³ the company is planning a two-speed decarbonization strategy in which cleaner technologies are installed overwhelmingly in the Global North while coal-fired blast furnaces continue to be built and run in the Global South.



4. RECOMMENDATIONS

There is no time to lose; ArcelorMittal must be pushed to act for the climate. Financial institutions have a key role to play in challenging the company to adopt a comprehensive climate strategy and to be consistent in its operations across all geographies. This includes engaging the company to make a commitment to stop developing coal-based projects while relying on unproven and false solutions, and to renounce its two-speed strategy, which has been revealed in its operations in India.

Moreover, many of the existing coal-based facilities owned by ArcelorMittal are reaching the end of their lifetime, requiring retrofitting or replacement with new technologies. This is an opportunity for financial institutions to push the steel giant to invest instead in the most sustainable alternatives available, including technologies that rely on renewable sources of energy, and green hydrogen-based direct reduction of iron.

Financial institutions should also ask the company for more transparency on how it factors its coal-based facilities into its current climate strategy, plus what mitigation measures are planned if existing projects fail to deliver.

The 2023 Annual General Assembly is an opportunity to push these demands forward, by asking ArcelorMittal to:

- Commit to consulting its shareholders annually on a detailed transition strategy.
- Include climate-related risks in its accounting and auditing practices.
- Respond to specific questions that challenge how the company's capital expenditure plans in India are aligned with the company's 2050 net zero target.

Detailed demands and questions can be found in the following boxes.

1. Adoption and publication of a comprehensive climate strategy

Investors should ask ArcelorMittal to adopt and publish a comprehensive climate strategy, with a commitment to a 2050 net zero objective aligned to a 1.5°C pathway, and to consult shareholders through the Say On Climate initiative.

This includes:

- Adopting a comprehensive climate plan, including submission to a shareholder vote. This climate plan should at least include the following indicators:
 - » Short- and medium-term GHG emissions reduction targets on Scopes 1, 2 and 3, expressed in both absolute and intensity terms, encompassing all activities.
 - » Possible contributions of captured GHG volumes to achieving emissions reduction targets.
 - » Carbon offsetting approaches that may be implemented to complement the reduction targets.
 - » Short- and medium-term CAPEX plans disaggregated by activity and by allocation between maintenance and development of company assets.
 - » Explanation of a baseline scenario used to set climate targets, and how it considers the best available science.
- Making climate strategy an integral part of the company's governance. This includes:
 - » Making sure the board has a clear oversight of climate change and has named a board position with responsibility for climate change, ensuring that the board overall has sufficient capabilities to assess and manage climate-related risks and opportunities.
 - » Incorporating climate change performance within the company's executive remuneration scheme.
 - » Committing to reflect the way in which climate change and global decarbonization efforts are being captured in critical accounting assumptions and judgments within the company's accounting practices and related disclosures.
 - » Reclaim Finance's detailed recommendations on companies' climate commitments can be found [here](#).

2. Requests regarding the inclusion of climate-related risks in financial statements

The inclusion of climate-related issues in a company's financial information is essential, both from an environmental and an investment perspective. Accordingly, it is critical that ArcelorMittal commit to disclose details regarding the following questions:

- What are the useful lives and values of ArcelorMittal's carbon-intensive assets?
 - » How is it consistent with the company's 2050 net zero pathway? Under which scenario?
 - » Geographic scope: What are the impacts on the useful lives of carbon-intensive assets in geographies outside of the EU and Canada?
Reminder: ArcelorMittal has significant production (c. 25% sales) in Brazil (and neighboring countries including Argentina, Costa Rica and Venezuela) and its ACIS segment (i.e. South Africa, Ukraine and Kazakhstan), which will need to be replaced, retrofitted or similar in order to achieve both its growth and climate targets.
 - » What are the considerations of climate-related matters with respect to long-term provisions?
- What are the company's quantitative climate-related assumptions and estimates for the following factors?
 - » Carbon price (and/or the estimated costs of carbon capture, utilization and storage, or of other potential mechanisms (e.g. carbon offsets). Used in impairment testing).
 - » Remaining useful lives of carbon intensive PPE (cash flow forecast period, plus number of years in explicit forecast).
 - » Volume/production assumptions for steel products relating to the energy transition (remaining estimated useful lives of assets, and calculations of residual values).
 - » Increased costs and changes in demands for products related to the company's technologically-focused strategy.
- And regarding the sensitivity of the reported financials for a 1.5°C pathway:
 - » Has Carbon Pricing been used in the preparation of the accounts? If so, where and at what price? Has a sensitivity table been made?
 - » How has the consistency between these assumptions and the decarbonization targets been assessed?
 - » What are the main inconsistencies/risks arising from this analysis?
 - » Will any reconciliation table be disclosed?

3. Questions regarding ArcelorMittal's two-speed decarbonization strategy

Investors should question ArcelorMittal's two-speed decarbonization strategy. Its expansion plans in India, which is a joint venture with Nippon Steel, provide an opportunity to challenge the company. Investors should ask ArcelorMittal the following questions, which are taken from IEEFA's report, [ArcelorMittal: Green Steel for Europe, Blast Furnaces for India](#), published in February 2023:

- » How is the construction of two new blast furnaces in India aligned with ArcelorMittal's targets to reach net zero emissions by 2050?
- » What steelmaking technology is ArcelorMittal/Nippon Steel India planning for further expansion at Hazira and in Odisha state?
- » What technologies is ArcelorMittal planning to use to mitigate the emissions from its new steel plants in India?
- » If CCUS is part of the plan to mitigate emissions from new blast furnaces in India, what is the timeline for when blast furnaces will be retrofitted? And what measures have been put in place to mitigate the risk of future CCUS implementation failure as has been experienced in other sectors?

APPENDIX

OVERVIEW OF THE MAIN STEELMAKING ROUTES

Reclaim Finance published a briefing in March 2023 entitled Decarbonizing the Steel Sector – The role of financial institutions. An explanation of the main steelmaking processes and existing alternatives is included in the briefing and can be found below.

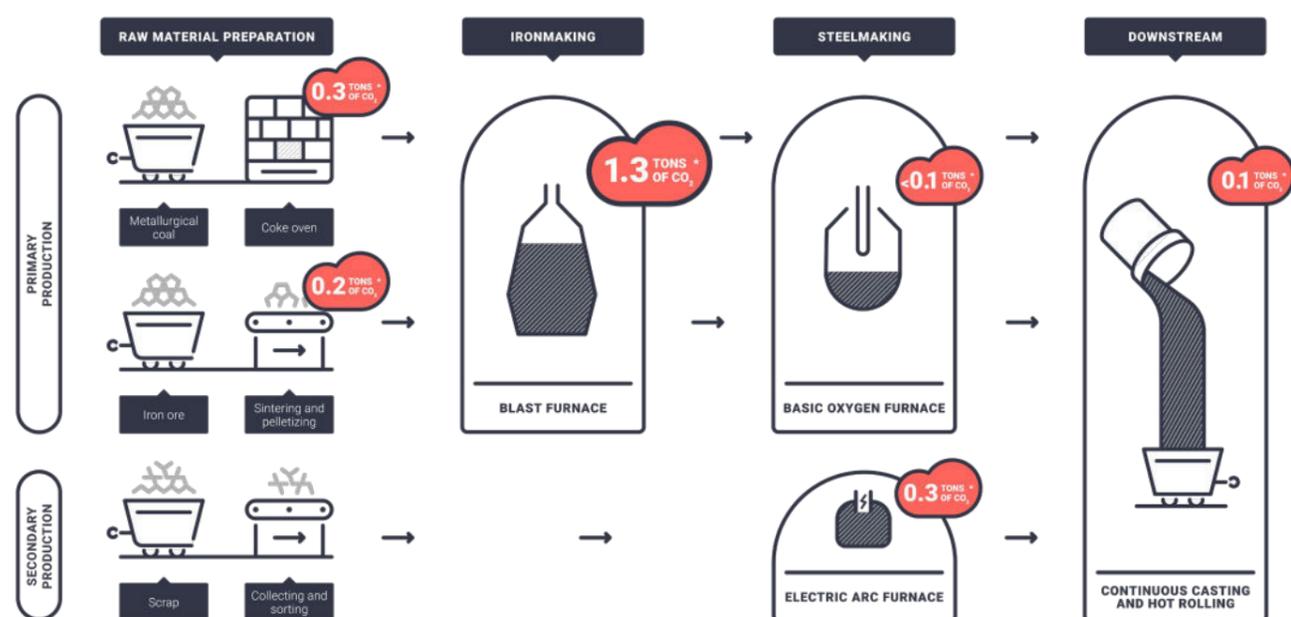
There are two main ways to produce steel:

- **Primary steelmaking** from iron ore accounts for around 70% of global steel production. It is the most emissions

intensive way of producing steel, with on average seven times more emissions than secondary steelmaking.⁶⁴ Primary steelmaking is almost exclusively done through the blast furnace to basic oxygen furnace route (BF-BOF) using metallurgical coal.

- **Secondary steelmaking** relies on electric arc furnaces (EAF), which are mainly used to process scrap. It accounts for almost 30% of global steel production.

OVERVIEW OF THE MAIN STEELMAKING PROCESSES



*per ton of steel - Sources: IEA; Material Economics, Industrial Transformation 2050 - Graphic design: guenole.fr ©2023



The BF-BOF route is both the most CO₂- and coal-intensive way to make steel. Producing a tonne of crude steel via this route with coal injection (90% of BF-BOF steel production) directly emits around 1.2 tonnes of CO₂ per tonne of crude steel. In addition, it results in an average of 1.0 tonne of CO₂ per tonne of crude steel in indirect emissions from electricity and imported heat generation. In comparison, scrap-based EAF production directly emits only about 0.04 tonne of CO₂ per tonne of crude steel, and results in an additional 0.3 ton of CO₂ per ton of crude steel in indirect emissions.

There are currently three groups of solutions to decarbonize steel:

- Reduce the use of steel.
- Increase quality and efficiency, and scale up recycling.
- Develop new technologies and clean sources of energy. This includes:
 - recycled electric arc furnace (EAF) steel with renewable electricity;
 - primary steel from hydrogen-based direct reduced iron (HDRI) to EAF;
 - methane-fed direct reduced iron (DRI) furnaces with carbon capture and storage (CCS); and
 - blast furnace to basic oxygen furnaces (BF-BOF) with CCS.

Studies however highlight both the limited potential of CCS and the risk that investments in CCS for the steel sector may be a dead end.⁶⁵ Maximizing the use of recycled scrap and fast-tracking the innovation process needed to commercialize green hydrogen-based DRI is therefore essential.

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ASSESSING THE CREDIBILITY OF ARCELORMITTAL'S DECARBONIZATION STRATEGY

A briefing for climate conscious financial institutions

Reclaim Finance is an NGO affiliated with Friends of the Earth France. It was founded in 2020 and is 100% dedicated to issues linking finance with social and climate justice. In the context of the climate emergency and biodiversity losses, one of Reclaim Finance's priorities is to accelerate the decarbonization of financial flows. Reclaim Finance exposes the climate impacts of financial players, denounces the most harmful practices and puts its expertise at the service of public authorities and financial stakeholders who desire to bend existing practices to ecological imperatives.

contact@reclaimfinance.org

