

# **Sustainable Development overview**

**Annie Heaton** 

Corporate Sustainability, May 2022

# Safety is our priority: committed to reach zero harm

- Following full review of every aspect of safety a multi-pronged action plan has been deployed, building on and supporting the considerable policies and processes already in place
- Global H&S team strengthened
- Group's H&S policy, standards and golden rules updated: comprehensive and effective dissemination throughout the Company is being actioned
- Safety training & mentoring upgraded: leadership presence on the shop floor now mandatory and central to day-to-day performance reviews
- Instituted a "quarantine" for operations that have experienced a serious incident or deemed at risk of such an incident
- Remuneration links to H&S strengthened: 50% increase in the STI link to safety performance (with fatalities acting as a circuit breaker); Safety target in STIP increased to 15%, and LTIP to 10%; ESG objectives included in LT incentive plans

### Health and safety performance (LTIF)\*



Global Health & Safety Day on April 28, 2022



\* LTIF = Lost time injury frequency defined as Lost Time Injuries per 1.000.000 worked hours; based on own personnel and contractors; A Lost Time Injury (LTI) is an incident that causes an injury that prevents the person from returning to his/her next scheduled shift or work period. Figures presented for LTIF rates exclude Arcelor/Mittal Italia in its entirety and from 2021 onwards exclude Arcelor/Mittal USA following its disposal in December 2020. (Prior period figures have not been recast for the Arcelor/Mittal USA disposal); STI/LT refers to short term / long term incentive plan

# Sustainability governance

Sustainable development underpins ArcelorMittal's purpose

- Board oversight of SD progress each quarter by New Board Sustainability Committee → three independent directors, chaired by Clarissa Lins
- Five sustainability themes used to ensure Board focus on all key aspects of sustainability over the year, via dashboards, progress reports
- 10 SD outcomes provide framework for SD planning by business operations
- Accountability for SD is led by the Executive Officer, Business Optimisation, reporting directly to the Executive Office
- ResponsibleSteel and IRMA certification program to drive strong, consistent ESG management systems across business



### Our 10 SD outcomes

- 1. Safe, healthy, quality working lives for our people
- 2. Products that accelerate more sustainable lifestyles
- 3. Products that create sustainable infrastructure
- 4. Efficient use of resources and high recycling rates
- 5. Trusted user of air, land and water
- Responsible energy user that helps create a lower carbon future
- 7. Supply chains that our customers trust
- 8. Active and welcomed member of the community
- 9. Pipeline of talented scientists and engineers for tomorrow
- Our contribution to society measured, shared and valued Underpinned by transparent good governance







10 SD outcomes = ArcelorMittal's equivalent of 17 UN SDGs



### Building a better world with smarter steels

ArcelorMittal's solutions enable customers to enhance their contribution to low carbon circular economy

- Steel is as relevant as ever to the future success of our world: reusable, recyclable, strong and durable.
- We are evolving the contribution steel can make, innovating to make our solutions smarter and increasingly sustainable.



Steligence<sup>®</sup> enables architects and engineers to design building solutions that minimise material use while maximising space, flexibility and end of life recyclability



Magnelis<sup>®</sup> enhanced corrosion resistance for solar projects in harsh conditions, even in deserts and on water. Projects globally including PV and CSP structures



**S-in motion®** offers solutions for electric vehicles including body-in-white, chassis and battery pack, enabling carmakers to extend drive range and enhance safety at the most affordable cost.



# Climate Leadership: Successful first year for initial two XCarb<sup>™</sup> offers



Two XCarb that respond to customer demand for low carbon steel, covering both primary and secondary steelmaking



XCarb green steel certificates enable customers to reduce their Scope 3 emissions' XCarb recycled and renewably produced offers customers steel with an extremely low CO2 footprint Growth of XCarb® green steel certificates (Mt)





# **Clear sustainability commitments**

Our sustainability targets cover material sustainability issues





# First global ResponsibleSteel site certification 2021 and in 2022 in the Americas

Reduces our SD risk, improves our SD performance and meets our stakeholders' rising SD requirements



- ArcelorMittal Tubarao, March 2022: first site in the Americas to receive certification against the ResponsibleSteel<sup>™</sup> site standard
- Nine of ArcelorMittal's European steelmaking sites were the first steel plants globally to be certified against ResponsibleSteel in July 2021:
  - ArcelorMittal Belgium (Geel, Genk, Gent, Liège)
  - > Luxembourg (Belval, Differdange and Rodange)
  - Germany (Bremen and Eisenhüttenstadt)
- Further sites in Europe, Brazil and N America have commenced the rigorous independent audit process. Goal is to see steelmaking sites in 50% ArcelorMittal operating countries to be certified by 2025.

- Unique multistakeholder ESG standard for steel industry
- Value to customers, investors and steelmakers
- Site certification requires independent assurance of management systems, governance and disclosure across broad range of ESG aspects:
  - human rights and labour rights
  - water stewardship and biodiversity
  - climate change and greenhouse gas emission
  - community relations and business integrity
- Steel certification standard planned 2022 drives demanding performance requirements on GHG performance levels and responsible sourcing conditions



# **Gender diversity:**

Target to double women in management to 25% by 2030

### Strategy

- Women make up higher % of our workforce vs industry peers
- Target to double % of women in our leadership positions
- Launch of new diversity strategy designed to:
  - Raise awareness of the importance of greater diversity
  - o Strengthen inclusive culture
  - o Increase focus on female talent in recruitment
  - o Increase focus on gender balance in leadership positions



Four of our eleven Board members are women, including a female sustainability expert who was appointed in 2021.

#### Two of our Group Management Committee members are women.

### **Actions underway**

- Strengthen diversity and inclusion governance via global Diversity Council
- Track gender KPIs covering % women in management; % women recruited; % women in succession plans
- Active support for career paths of female high potentials into leadership positions
- ≥ 1 woman in succession plans for all leadership positions: 56% in 2021
- Tackle unconscious bias through training: 1,100 employees Q4 '21
- Gender diversity target in our executive remuneration scheme
- Active promotion of STEM\* studies for young women; creation of entry opportunities for young women with STEM background

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\* STEM refers to science, technology, engineering and mathematics



# **Global strategic leadership on decarbonization**





\* Both Europe and groupwide targets are for CO2 equivalent (scope 1 + 2, steel and mining) per tonne crude steel; \*\* CO2 savings certificates, verified by an independent auditor, directly relate to CO2 savings from the Group's investments in decarbonization technologies implemented across a number of its European sites; GSC refers to green steel certificates; SBTI refers to Science Based Targets Initiative

# Sustainable development (SD) progress in our Integrated Annual Review & Factbook

communities in Ukraine

Supporting our colleagues and

Fact Book

2021

Smarter steels for people and planet

Published April 2022, covering:

- Driving a relentless focus on safety
- Transforming for long-term growth strategic growth and new products
- Our Roadmap to Net Zero
- Sustainability leadership
- Strong governance

**lity** 



True leadership carries deep responsibility



In 2021, ArcelorMittal's IAC has approved expected capital expenditures totaling

Smarter steels

for people and planet

ArcelorMittal Integrated

#smartersteel

\$565 million

for 40 projects with environmental benefits



~

ArcelorMittal

# Policy conditions needed to make low-CO2 steel as cost-competitive as high-CO2 steel

Policy support and rising carbon prices need to work in tandem for ArcelorMittal to accelerate its decarbonisation to 1.5C alignment



production of low-

carbon emissions

steel (e.g. ETS,

carbon tax)

and near zero

Measures to

incentivise





Public funding support to help o innovation and el long-term investments ) (e.g. Carbon contracts for difference).



Access to sufficient amounts of clean energy and infrastructure at affordable prices: clean electricity, green hydrogen, sustainable biomass, CCS. Market drivers for <u>consumption</u> of low- and near zero carbon emissions steel (e.g. public procurement standard, buyer commitments)



Mapping ArcelorMittal's advocacy alignment with the goal of net zero by 2050

January 2022

# Zero carbon-emissions steel needs policy support to be competitive

Different regions of the world are moving at different paces, affecting the conditions for decarbonisation

Confidence that policy conditions will materialise within 5 years				ArcelorMittal's expected response		Resultant risk				
Jurisdiction	CO <sub>2</sub> e price risk	Condition 1 Measures to incentivise production of zero carbon- emissions steel	<b>Condition 2</b> Fair competitive landscape	Condition 3 Financial support to make long-term investments	Condition 4 Access to sufficient, affordable clean energy	Condition 5 Incentivised consumption of zero carbon- emissions steel	2021-25	2026-30	2031-35	ArcelorMittal 5 year outlook on financial risk from carbon prices
EU*	$\uparrow$						Accelerate	Accelerate	Accelerate	Mitigating
Canada**	$\uparrow$						Accelerate	Accelerate	Accelerate	Mitigating
USA	N/A						Move	Accelerate	Accelerate	Low
Mexico	$\uparrow$						Move	Move	Accelerate	Mitigating
Kazakhstan	$\rightarrow$						Move	Move	Accelerate	Low
Ukraine	$\uparrow$						Move	Move	Accelerate	Low
Brazil	$\rightarrow$						Move	Accelerate	Accelerate	High
South Africa	$\uparrow$						Move	Accelerate	Accelerate	Mitigating

- Different regions of the world will continue to move at very different paces and the level of climate ambition will differ between jurisdictions.
- Where these conditions are anticipated in next five years, ArcelorMittal has plans to accelerate its decarbonisation projects (EU and Canada)
- The introduction of climatefriendly policies in other regions could be 5-10 years behind Europe.

Green – policy exists; high confidence in its effectiveness; Amber/Green – policy exists; medium confidence in its effectiveness; Amber – policy is in development;

Red - no policy is currently planned

\* Will be impacted by final design of ETS allocation system and CBAM, and assumes additional support from individual member states is forthcoming.

\*\* Federal + Ontario, Quebec.

# Our decarbonisation strategy: ArcelorMittal's net-zero roadmap

For the first time, we have disclosed a roadmap that shows our journey to net-zero

Our roadmap features five groupings of actions and initiatives ('**levers**') that act as stepping stones to achieving carbonneutrality by 2050:





# **Climate leadership: Transformation plan**

### Developing zero emissions plans at integrated sites:

Spain	<ul> <li>MoU signed with govt for €1.0bn investment &gt; Build ~2Mt new green Hydrogen DRI plant and hybrid-EAF (Gijon)</li> <li>Transfer DRI feedstock from Gijon to Sestao (to use in its 2 EAFs) &gt; enables1.6Mt zero emissions steel to be produced by 2025</li> </ul>
NAFTA	<ul> <li>Plans for a 2.9Mt CO2 reduction at Dofasco; C\$1.8bn investment (50% support provided by local/provincial govts). To be built by 2028</li> <li>AMMC to invest CAD\$205m at Port-Cartier pellet plant, to convert its entire 10Mtpa annual pellet production to DRI pellets by end of 2025, reducing plant CO2 emissions by 20%. Quebec province financial support secured</li> <li>Advancing DRI-EAF position with plans to increase DR pellet-feed capacity in Brazil and Mexico</li> </ul>
Belgium	<ul> <li>Carbalyst &amp; Torero smart carbon technologies (Ghent) expected completion in 2022 (0.9Mt of CO2 emissions reduction each year)</li> <li>€1.1bn project at Gent. New 2.5Mt DRI plant and 2 new electric furnaces. Gradual transition from BF to the DRI &amp; EF (replacing one BF reaching end of life by 2030) &gt; 3.0Mt of CO2 emissions reduction each year</li> </ul>
Germany	<ul> <li>Hamburg: German Federal Government commits its intention to provide €55m (50%) of funding for ArcelorMittal's Hydrogen DRI plant</li> </ul>
France	<ul> <li>Pilot project in Dunkirk aims to capture CO2 off-gases at a rate of 0.5t of CO2 per hour for transport and storage</li> <li>€1.7bn investment project in Fos-sur-Mer &amp; Dunkirk to build DRI/EAF + partnership with Air Liquide to supply hydrogen and CCS</li> <li>Target reduction of ~40% or 7.8Mtpa CO2 emissions by 2030</li> </ul>

# \$300m decarbonisation capex in 2022

(net of government funding support)\*

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- Europe decarbonization underway:
  - > Adapting existing tools to increase use of scrap and enable gas injection
  - Targeted completion of 2 smart carbon initiatives in Gent by end 2022
  - DRI-EAF footprint transformation initiated:
    - Start of detailed engineering and site preparation work (demolition, power network)
    - Ordering of long lead time equipment expected for 2 locations (subject to government funding)
- Feasibility and basic engineering for Canada DRI-EAF project initiated









# Climate Leadership: clean energy technology and infrastructure





- Torero
- Carbalyst
- 3D
- CarbHFlex



- Hydeal España
- Breakthrough Energy Catalyst
- H2Pro
- PPAs ...



# Climate Leadership: XCarb <sup>™</sup> innovation funding



**Arcelor**Mittal

Investment	XCarb <sup>™</sup> Innovation Fund – investments to date	Amount	Breakthrough Energy Catalyst:
Heliogen	Technology company focusing on 'unlocking the power of sunlight to replace fossil fuels'	\$20m	BILL GATES
Form Energy	Technology company developing a breakthrough low-cost iron-air battery storage technology	\$25m	HOW TO AVOID A CLIMATE
Breakthrough Energy Catalyst	Breakthrough Energy's Catalyst program: an initiative Bill Gates founded to scale the technologies the world needs to reach net- zero emissions by 2050, including green hydrogen, direct air capture, energy storage + sustainable aviation fuels	\$100m over five years	DISASTER Breathroughs we have and the Breathroughs we need
LanzaTech	Technology company developing carbon recycling technologies including conversion of carbon waste gases to ethanol and textiles	\$30m	ArcelorMittal
H2Pro	Technology company developing innovative H2 electrolysis using thermally activated electro-chemistry	\$5m	American Airlines 🍾 BANK OF AMERICA 🢖

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# Carbalyst and Torero projects to complete by end 2022

**Carbalyst:** Technologies involving gas-fermentation using microbes to convert waste gases into advanced bioethanol for use in transport and to make plastics

- Continued progress in plant installation
- Construction started on mechanical erection of combustion chamber: Completion expected 1H 2022
- Training of project staff underway
- Gross investment ~€180m → Ready for initial operations by end 2022

**Torero:** 2 reactors will each produce 40,000t bio-coal per year for use in the BF as a substitute for coal

 Gross investment €55m → expected completion of reactor 1 in 2022 and reactor 2 in 2024

Combined EBITDA contribution from both projects estimated to generate €40m a year (from the sale of bioethanol fuels)







### **Net-zero roadmap** Updated to show announced projects in Europe and Canada



The waterfall chart 2030-2050 breakdown displayed on this slide is for illustrative purposes only.



# Climate Leadership: ArcelorMittal role in multiple initiatives to define carbon standards for the steel industry

ResponsibleSteel	SBTI	Mission Possible Partnership	
Multi stakeholder initiative aiming to maximise the contribution of steel to a sustainable society via the uptake of GHG and ESG standards.	Providing methodology for SBTs and net zero targets. Currently identifying GHG budget and methodology for steel sector companies.	Net Zero steel transition scenarios built with input from steelmakers, related projects. Key partners are ETC, RMI, WEF.	
CEM IDDI	Centre for Climate-Aligned Finance	IEA	
Working on a standard and data collection process to underpin a green public procurement campaign for low embodied CO2 steel and cement.	Led by Rocky Mountain Institute devising an approach for banks to assess Paris alignment of their portfolios. Adopted NZSPMP system boundary + primary/scrap GHG budget split.	Commissioned by COP26 to track steel sector progress against UN Steel Breakthroughs: a) production of near zero steel and near zero steel standard.	
PEF	Climate Bonds Initiative	NZSPMP	
PEF European Union initiative to develop product category standards for product environmental footprints.	Climate Bonds Initiative Establishing the eligibility criteria for all types of climate bonds for The Climate Bond Standard & Certification Scheme Adopted NZSPMP system boundary.	NZSPMP Steel sector recommendations on methodology for steel CO2 budgets and assessing alignment of net zero targets.	
PEF European Union initiative to develop product category standards for product environmental footprints. CDP	Climate Bonds Initiative Establishing the eligibility criteria for all types of climate bonds for The Climate Bond Standard & Certification Scheme Adopted NZSPMP system boundary. Climate Action 100 Net Zero Benchmark	NZSPMP Steel sector recommendations on methodology for steel CO2 budgets and assessing alignment of net zero targets. WBCSD Carbon Transparency Initiative	

### We aim to drive alignment as far as possible between different initiatives



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# Spain: the world's first full-scale zero carbon-emissions steel plant\* at Sestao

New DRI installation in Gijón coupled with EAF in Sestao will allow the plant to become carbon-neutral by 2025

#### **Project summary**

ArcelorMittal's Sestao plant in Spain will become the world's first full-scale zero carbon-emissions steel plant. Central to this development will be the construction of a 2.3Mt green hydrogen DRI unit in Gijón. Around 1Mt of DRI will be transported to Sestao to be used a feedstock for its two EAFs.

### Funding

ArcelorMittal signed a memorandum of understanding (MoU) with the Spanish Government in July 2021 that will see a €1bn investment in decarbonisation technologies at ArcelorMittal Asturias' plant in Gijón, including a 2.3Mt green hydrogen DRI plant and hybrid EAF.

### Asset plan and strategy

- Metallic input into EAFs from zero carbon emission sources\*
- ✓ Increased % of circular, recycled scrap
- Green hydrogen-produced DRI from Gijon in Sestao's two existing EAFs
- Powering all steelmaking assets (EAFs, rolling mill, finishing lines) with renewable electricity, either by establishing a renewable energy power purchase agreement (PPA) or buying renewable energy guarantees of origin certificates (GOOs)
- Several key emerging technologies to replace the remaining use of fossil fuel with carbon-neutral energy inputs, e.g. sustainable biomass or green hydrogen



Cost	€1bn
Annual emission savings by 2025	4.8Mt CO2eq



# Hamburg: Europe's only EAF-DRI facility with ambitions to produce zero carbon emissions

Commitment of €55 million from Federal Government brings Hamburg closer to zero carbon-emissions steel production

#### **Project summary**

Europe's only DRI-EAF plant where the switch to using hydrogen instead of natural gas in the iron ore reduction process is being prepared. Further project underway to test the ability of hydrogen to reduce iron ore and form DRI on an industrial scale, as well as testing carbon-free DRI in the EAF steelmaking process. Aiming to reach industrial commercial maturity by 2025, initially producing 100,000 tonnes of DRI/year.

### Funding

The Federal Government has expressed its intention to provide €55 million of funding support towards the construction of the plant, which is half of the €110 million total capital expenditure required.

### Asset plan and strategy

- Collaborating with Shell, Mitsubishi and other cross-industry companies to form the Hamburg Green Hydrogen Hub, with the goal of generating energy from renewable sources.
- The process of reducing iron ore with hydrogen will first be tested using grey hydrogen generated from gas separation.
- In the future, the plant should also be able to run on green hydrogen when it is available in sufficient quantities at affordable prices, with the clean energy for hydrogen production potentially coming from wind farms off the coast of Northern Germany





## Canada: ArcelorMittal's first major decarbonization announcement outside of Europe

CAD\$1.8 billion investment at site in Hamilton will reduce 2.9Mt CO2 within the next seven years

### **Project summary**

ArcelorMittal Dofasco to reduce annual CO2 emissions at ArcelorMittal's Hamilton, Ontario operations by approximately 3Mt, within the next seven years. July 2021 the Government of Canada announced it would invest CAD\$400m in the project and on Feb 15, 2022, the Government of Ontario announced it would invest CAD\$500m in the project. This secured project funding and enabled ArcelorMittal to firm up the investment.

### Funding

Low emissions steelmaking in Canada; finalizing Government of Canada support and in discussions with Government of Ontario

### Employment

- Sustaining well-paying skilled positions in advanced manufacturing
- Approximately 160,000 training hours required to transition our workforce to the new footprint.
- ✓ Up to 2,500 jobs during the engineering + construction phases

### Asset Plan

- New 2Mt DRI plant and 2.4Mt EAF
- Modification of existing EAF and continuous casters to align productivity, quality and energy capabilities of all assets
- New DRI and EAF will be in production before the end of 2028
- High-quality steel products for automotive and packaging





### Canada: ArcelorMittal Mines Canada to produce 10Mtpa DRI pellets by end 2025

Announcement of a CAD\$205m investment with the government of Quebec to create one of world's largest DRI pellet plants

#### **Project summary**

ArcelorMittal Mines Canada (AMMC) to invest CAD\$205m in its Port-Cartier pellet plant, enabling this facility to convert its entire 10Mtpa annual pellet production to direct reduced iron (DRI) pellets by the end of 2025, delivering 200,000t direct CO2 savings for AMMC  $\rightarrow$ , important role in ArcelorMittal's efforts to reduce our group's CO<sub>2</sub>e emissions intensity by 25% by 2030

### Funding

The Government of Quebec will contribute through an electricity rebate of up to CAD\$80m

### Employment

~250 jobs are expected to be created during the construction phase, from mid-2023 - end 2025

### Asset Plan

- expands ArcelorMittal's ability to produce high-quality DRI-ready pellets
- shift from current mix of 7Mtpa blast furnace pellets / 3Mtpa DRI-ready pellets to 10Mtpa DRI-ready pellets annually
- ✓ will feed significant demand for DRI pellets in ArcelorMittal's planned DRI-EAF steelmaking plants in Canada and Europe

### Carbon reduction

- ✓ direct annual CO₂e reduction of ~200,000 tonnes at Port-Cartier pellet plant via reduction in the energy required during the pelletizing process
- $\checkmark$  equivalent to >20% of the plant's total annual CO<sub>2</sub>e



Cost	CAD\$205m
Annual emission savings by 2028 (tCO2eq)	200,000



# Belgium: €1.1bn project for decarbonisation technologies at Gent

ArcelorMittal Belgium to reduce CO2 emissions by c.3.9Mtpa by 2030\*

### **Project summary**

ArcelorMittal Belgium will reduce CO2 emissions by 3.9Mtpa by 2030, by building a 2.5Mt direct reduced iron (DRI) plant and two electric furnaces at its Gent site, to operate alongside its state-of-the-art blast furnace that is ready to take waste wood and plastics as a substitute for fossil carbon.

### Funding

ArcelorMittal has signed a letter of intent with the Governments of Belgium and Flanders, supporting a €1.1bn project (EC approval still required).

### Asset Plan

- ✓ New 2.5Mt DRI plant and 2 new electric furnaces (EF)
- Gradual transition from BF to the DRI & EF (replacing one BF reaching end of life by 2030) resulting in 3Mt of CO2 emissions reduction each year
- ✓ New capacity to operate alongside Gents state-of-the-art BF B (restarted Mar'2021 with €195m investment). BF B ready to take waste wood and plastics as a substitute for fossil carbon
- ✓ DRI plant to operate alongside various decarbonisation projects including Gent's Steelanol/Carbalyst and Torero projects (commissioned in 2022) – annual CO2 emissions reduction of ~900Kt by 2030
- Hybrid model of Smart Carbon and Innovative DRI steelmaking in Gent fits into ArcelorMittal Belgium's CO2 roadmap





# Belgium: using innovative technology to leverage circular carbon and achieve net-zero steel

Transforming waste into energy and off-gases into renewable fuels and chemicals

### Carbalyst

A family of technologies involving gasfermentation technology using microbes to convert waste gases into advanced bioethanol for use in transport and to make plastics.

### **Bioethanol**

Status	Industrial scale demonstration plant
Cost	~€180m gross investment
Capacity	80 million litres of bioethanol
Expected completion	2022

Combined EBITDA contribution from both projects to generate €40m a year (from the sale of bioethanol fuels)

### CarbHFlex – *bioplastics*

A technology that uses microbes to produce from its waste carbon acetone and isopropanol, both basic chemicals used to make plastics.

#### Status Shortlisted for IPCEI funding in 2021



### Torero

The pyrolysis of biomass and waste at low temperature (2-300°C) to produce renewable energy in form of biocoal, biofuels, biogases.

This source of waste wood is considered hazardous material if burnt in an incinerator as it emits harmful gases. However, in a blast furnace no such pollutants can be formed.

Status	Industrial sca	le demonstration plant		
Cost	€55m gross investment			
Capacity	2 reactors will each produce 40,000t bio-coal pa for use in the blast furnace as a substitute for coal			
Expected completion	2022 (reactor 1) & 2024 (reactor 2)			
Total cost Cart	oalyst/Torero	€235m		
	n savinas	Lin to 350kt CO2ea		



# Sector-leading record of disclosure on climate and sustainability

- Three comprehensive Climate Action reports two global and one Europe
- TCFD index and Climate Action 100 Net Zero Benchmark index
- >20 GHG metrics published each year in ArcelorMittal Factbook







TCFD







Integrated Annual Review 2021



### Factbook 2021