Basis of
Reporting 2022

ArcelorMittal

#smartersteels

Our Reporting

Our Basis of Reporting 2022 is a central element in our commitment to engage stakeholders and communicate our financial and non-financial performance.

It forms part of our wider approach to reporting at a global and local level, supported by reports that provide details on specific areas of our work or are designed for the use of specific stakeholder groups. Please find details of our other reporting below.

Access our other reporting:

- Integrated Annual Review
- Climate Action Report 2
- Reporting Index
- Form 20-F
- Fact Book
- Annual Report

Our local sustainability reports are available on country websites:

annualreview2022.arcelormittal.com

Section 1 – Basis of Reporting

Basis of Reporting

Guidelines for ArcelorMittal sustainable development indicators

This document sets out the main principles and methodologies used by ArcelorMittal in reporting data relating to our corporate responsibility and sustainability performance in the Fact Book ▶.

We provide guidelines for our operations to help them understand how to report this data both for internal reporting and consolidation at group level, and for their own local sustainability reporting. We seek to follow best practice in reporting. We draw on the standards of the Global Reporting Initiative and the Sustainability Accounting Standards Board, as well as industry guidelines from the World Steel Association (worldsteel).

Scope of reporting criteria

We report on our performance against those indicators that best communicate the most material aspects of our sustainability performance at the level where it is most meaningful to report – global or local – as outlined in our Reporting Index ▶.

Boundary of data reported

All data are reported for the period 1 January 2022 – 31 December 2022. All financial figures refer to United States Dollars ($) unless stated otherwise. All other currencies have been converted to $ using an average exchange rate for the year, as used in preparing our Form 20-F ▶.

The Basis of Reporting covers ArcelorMittal and its consolidated entities, unless indicated differently in the outcome and Key Performance Indicator (KPI) boundary description. While the outcome boundary is applicable to the whole section of the outcome, the boundary of indicators may be more specific based on relevance (Figure 1), which will be highlighted in the boundary column. Any acquisitions or divestments are included within the scope of reporting from/until the date of the transaction.
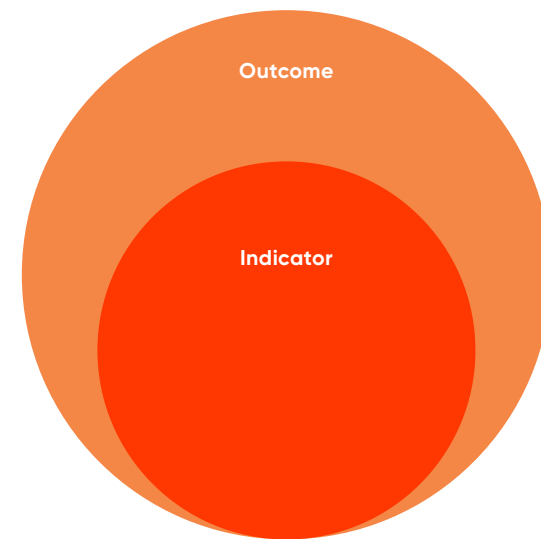

Figure 1: Outcome and indicator boundary.

A list of our significant operating subsidiaries, joint ventures and associates can be found in ArcelorMittal's Form 20-F ▶.

Definitions

When there is a difference between the boundary of the outcome and the boundary of the indicators, it will be highlighted in the 'additional boundary' column (**Green** = included; **Red** = excluded). Below are the definitions of boundary abbreviations used in this document.

Major steel plants: major steel plants, including those with a coke battery, blast furnace/convertor and electric arc furnace, direct reduced iron (DRI) and power plant.

Mining operations: mining operations, including beneficiation plants, pellets and boilers and power plants.

Transportation: materials and product transportation to and from sites, including internal exchange (as per Greenhouse Gas (GHG) Protocol Scope 3).

Major sites: sites where more than five million hours are worked during the year and therefore excludes small sites and non-industrial sites such as London and St Denis, Paris.

Other data, unless otherwise stated in this Basis of Reporting document, covers both our steel and mining operations. The boundary of operations that such data covers is broader for health and safety data than environmental data. The latter covers only major industrial operations, since we believe this is where our material impacts lie.

Environmental indicators only include data from material joint ventures of which ArcelorMittal has operational control, which only includes Peña Colorada. This reflects the guidance of the GHG protocol, which ArcelorMittal aims to align with, following a full review of joint ventures in 2022.

More details on the boundary for each outcome and specific KPIs are provided in this document and our Reporting Index.

Restating data

Each year the environmental data we publish is provisional with the best available data at the time of publication. We restate previous year's data each following year after a full review of our data is complete.

Section 2 – Reporting methodology by indicator

Reporting methodology by indicator

Outcome 1: Safe, healthy, quality working lives for our people

Outcome boundary

Safety indicators boundary includes all companies within the ArcelorMittal Group and permanent or temporary employees, as well as contractors (direct or indirect) who perform work on ArcelorMittal sites. Almost all operational sites within our consolidated financial statements are included within the perimeter for health and safety data.

The following sites were not included in health and safety data: London office and Paris–St Denis office.

The total number of employees and total number of contractors represent employees and contractors from all of ArcelorMittal's consolidated entities. Other Human Resources (HR) KPIs, incorporate data from all sites where ArcelorMittal manages HR processes, including the following joint ventures: AMNS India, AMNS Calvert, Belgo Bekaert Arames, LLP Kurilismet LLP Power Networks, and Siderurgica Tres Lagoas Ltda.

Temporary employment: Employees hired on a temporary basis by the company are included in all health and safety statistics. Temporary employment may include: contracts limited in time, temporary jobs, holiday jobs, student jobs or traineeships.

Contractor: ArcelorMittal considers contractors to be all companies contracted (directly or indirectly) by ArcelorMittal to perform work on a site where ArcelorMittal has operating control. This definition includes the personnel of a service provider, subcontractors, etc, whether with a permanent or temporary employment. This also includes transport of incoming and outgoing products as far as ArcelorMittal has a direct or indirect contract with the transporting company (i.e. loading, unloading and transport on ArcelorMittal sites).

Indicator	Definition	Additional boundary	Unit
Fatalities	A death caused by work that occurs on company property or while travelling on company business. This also includes contractors on our site or when transporting our products when these products are being transported in accordance with a service contract, that results in a fatality. If as a result of an official enquiry or medical investigation the cause of death is declared as not work–related the figure will not be included in our reporting. An incident that occurs while travelling to or from the normal place of work is not to be included in the statistics. An incident that occurs while travelling on company business is to be included in the statistics, wherever this is happening and thus covers all the time from leaving home or normal working place, wherever the business trip is starting, until returning home or to the normal place of work, unless due to specific activities that are not linked to the business trip.	**Same boundary as outcome**	Number of people Independently assured by DNV
Fatality rate	Number of fatalities as defined above per 1 million hours worked including employees and contractors. $$\frac{\text{Number of fatalities}}{\text{worked hours}} \times 10^6$$	**Same boundary as outcome**	Per 1 million hours worked

Section 2 – Reporting methodology by indicator
Outcome 1: Safe, healthy, quality working lives for our people

Indicator	Definition	Additional boundary	Unit
Lost time injury rate	Figures reported express the frequency of injuries per million hours worked. A work-related injury is one that results in the loss of at least one full working day (beyond the date of the injury) and is measured from the first day after the event. Any absence, beyond the day of the injury occurring or the consequence of the incident, is automatically a lost-time injury. This is independent of medical advice to stay at home or do adapted work – the reality is to be used for reporting. The injury must be caused by a sudden, single instantaneous event, caused by the work and not the result of any pre-existing underlying medical conditions with a history of like symptoms – this is to be determined only by medical professional. An incident with lost time which spans over several months is only counted once, in the month of start of the absence. In case of a lost time injury which spans over a longer period, there is no limit to the number of absence days to be counted, unless limited by local legislation. An incident that occurs while travelling to or from the normal place of work is not to be included in the statistics. An incident that occurs while travelling on company business is to be included in the statistics, wherever this is happening and thus covers all the time from leaving home or normal working place, wherever the business trip is starting, until returning home or to the normal place of work, unless due to specific activities that are not linked to the business trip. Worked hours are calculated based on the number of actual hours worked or scheduled hours to be worked. The hours actually worked and those regarded as such include the time spent for training or other work required activities, but does not take into account holidays or other days off. Methodologies for calculating hours worked may differ for employees and contractors.	**Same boundary as outcome**	Per million hours worked Independently assured by DNV

Indicator	Definition	Additional boundary	Unit
Total recordable injury rate	The total recordable injury rate (TRIR) includes a broader set of incidents than lost time injury frequency rate (LTIFR), and does not require someone to be absent from work for their injury to be included. Calculation: the number of fatalities, lost time injuries, restricted work injuries (the person is still at work but cannot perform his usual work) and injuries for which people keep on performing his usual work but had to go through some medical care.	**Same boundary as outcome**	Rate is number of cases per million of worked hours
Proactive potential serious injuries and fatalities (proactive PSIFs)	Potential serious occurrences that were reported proactively that could have resulted in a permanent disability or a fatality. This is a leading indicator, and should be differentiated from those serious occurrences that were reported reactively i.e. after the accident took place. The higher the number, the more likely fatalities will be avoided.	**Same boundary as outcome**	Number
Accident severity rate	$$\frac{\text{Number of days lost for injury}}{\text{Person hours worked}} \times 10^3$$ Figures reported express the rate of accident severity per thousand hours worked. Injuries are defined as for lost time injuries above. Worked hours are calculated as for lost time injury.	**Same boundary as outcome**	Days per thousand hours worked

Section 2 – Reporting methodology by indicator
Outcome 1: Safe, healthy, quality working lives for our people

Indicator	Definition	Additional boundary	Unit
Industrial operations (including mining) certified to OHSAS 18001 (sites certified to ISO 45001 included, excl. AMNS India)	Calculation: % of major steel and mining sites which, through audit by an external certified body, have been granted the OHSAS 18001:2007 or the new ISO 45001 certificate from an authorised certification body. 'Major sites' refers to sites where more than five million hours are worked during the year and therefore excludes small sites and non-industrial sites such as London and St Denis, Paris. All major sites report figures on a monthly basis. This data is recorded and extracted from the databases H&S Cube (MD4BI)/REX server. OHSAS 18001 and ISO 45001 certification is renewed every 3 years.	**Major sites**	% Independently assured by DNV
Employees covered by collective bargaining agreements	Percentage of employees, being exempts or non-exempts, covered by a Collective Labour Agreement (CLA).	**Sites where ArcelorMittal manages HR processes**	%
Number of strikes exceeding 1 week in duration	A strike is defined as a work stoppage caused by mass refusal of employees to perform work, in response to a labour dispute.	**Sites where ArcelorMittal manages HR processes**	Number

Indicator	Definition	Additional boundary	Unit
Training hours per employee	The number of employee training hours divided by the full-time equivalent number of employees. This figure is derived from the total number of hours spent on training initiatives occurring across the whole group divided by the total full-time equivalent number of employees at those sites from which data has been consolidated. It includes ArcelorMittal University, online, on the job, onsite and external training programmes. This number excludes subcontractors and apprentices. It includes health and safety, leadership and management, induction, language, compliance, vocational, technical and functional training. Other training types are additionally specified.	**Sites where ArcelorMittal manages HR processes**	Hours
Women in management positions (manager and above positions)	Percentage of Managers and above positions (Managers, General Managers, Vice Presidents and Executive Vice Presidents) with women incumbent. $\dfrac{\text{Number of female incumbents in manager positions}}{\text{Total number of incumbents in manager positions}} \times 100$	**Sites where ArcelorMittal manages HR processes**	% Independently assured by DNV
Women on the Group management committee	Percentage of women on the Group management committee. $\dfrac{\text{Number of women on the Group management committee}}{\text{Total number of members of the group management committee}} \times 100$	**Group management committee**	%
Manager turnover rate	Percentage of Managers and above people who have left the company on a voluntary basis during the year. $\dfrac{\text{Managers who left on a voluntary basis}}{\text{Average management population during the year}} \times 100$	**Sites where ArcelorMittal manages HR processes**	%

Section 2 – Reporting methodology by indicator
Outcome 1: Safe, healthy, quality working lives for our people

Indicator	Definition	Additional boundary	Unit
Women recruited (exempt population)	Percentage of women recruited in exempt and above population during the year. Exempts and above include: Exempts, Managers, General Managers, Vice Presidents and Executive Vice Presidents. $$\frac{\text{Women all new hires (exempt and above)}}{\text{all new hires (exempt and above)}} \times 100$$ Exempt employees are monthly salaried employees, paid an agreed amount for the whole job, not eligible for overtime regardless the amount of time or efforts required to complete the work. Employees having their working time measured through clock machine or equivalent system are not exempts.	**Sites where ArcelorMittal manages HR processes**	Hours
Women on key positions succession plans (general managers and above positions)	Percentage of Managers and above positions with women incumbent. $$\frac{\text{Number of female candidates on General Managers and above succession plans}}{\text{Total number of candidates on General Managers and above succession plans}} \times 100$$	**Sites where ArcelorMittal manages HR processes**	% Independently assured by DNV
Women in the workforce	Percentage of women out of total workforce. $$\frac{\text{Women in the workforce}}{\text{Total workforce}} \times 100$$	**Sites where ArcelorMittal manages HR processes**	%

Section 2 – Reporting methodology by indicator

Outcome 4, 5, 6: Environmental indicators

Outcome boundary

The scope of our environmental data includes all companies within the ArcelorMittal Group conducting operations that generate impacts that are considered material to our environmental footprint This means all operational industrial sites listed in the ArcelorMittal Form 20-F, with the exclusion of: US Tubular; Mexico Tubular; Canada Tubular; France Tubular; Kazakhstan Tubular (Aktau); Venezuela; Iasi (Romania); Downstream Industeel plants: Saint-Chamond, Seraing, and Dunkirk (Europe North); and Hochfeld. All joint ventures are excluded from the scope of reporting with the exception of Peña Colorada.

Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data, unless otherwise stated. 2020 data for divested ArcelorMittal US operations is based on an estimate based on production to emission ratio for 11 months (until the date of their sale).

Data is collected from ArcelorMittal production sites by means of a standard template, which requests information on the annual generation.

Data is submitted by local site management to the Group Environment department. ArcelorMittal considers ISO 14001 certification a factor that supports the quality of the data recorded at site level.

Each year the environmental data we publish is provisional with the best available data at the time of publication. We restate previous year's data each following year after a full review of our data is complete.

All intensity metrics, calculated on a 'per tonne of steel' basis refer to crude steel rather than finished steel.

Section 2 – Reporting methodology by indicator

Outcome 4: Efficient use of resources and high recycling rates

Indicator	Description	Additional boundary	Unit
Steel scrap recycled	External scrap (pre- and post-consumer scrap) and internal scrap generated are used internally during the process of steelmaking. The perimeter includes all steel sites within our perimeter for environmental data, except mining sites, which are excluded. Data is collected from ArcelorMittal production sites by means of a standard template, which requests information on production/use as yearly flow.	**Major steel plants**	Tonnes
Blast furnace slag re-used	The amount of slag re-used denotes in absolute terms that portion of our residues that was slag and was reused in the blast furnace (BF) stage of our steelmaking operations in place of raw materials. This has the effect of avoiding the emissions of an estimated 550 kg CO_2 per tonne of steel. This is based on an integrated steel plant and includes all direct and indirect CO_2 associated with the decarbonation of limestone at sinter plant, and the blast furnace (Read more here). The 550 kg CO_2 per tonne emitted in the formation of slag is already included in the carbon emissions associated with steel production. However, when it is used in place of Portland cement, CO_2 is avoided since that amount of Portland cement is no longer produced (see below).	**Major steel plants**	Tonnes (of BF slag)
Blast furnace slag to cement industry	Blast furnace slag is used by the cement industry in place of clinker. This averts the emission of 766 kg CO_2 per tonne of cement (see here) from the production process of clinker. The data is collected from the by-product sales team and their sales data system.	**N/A**	Tonnes (of BF slag)

Indicator	Description	Additional boundary	Unit
Production residues and by-products reused (steel)	ArcelorMittal's production residues and by-products reused is the quantity in tonnes of residues used or re-used during the year compared to the total annual production of residues.	**Major steel plants** **Transportation**	%
Production residues and by-products reused (mining)	ArcelorMittal's production residues and by-products reused is the quantity in tonnes of residues re-used at site level and externally compared to the annual production of residues.	**Mining operations** **Major steel plants**	%
Waste (non-used residues) landfilled (steel)	Residues put in landfill internal or external to the site or sent to destruction. It is the final and definitive destination of the residues.	**Major steel plants**	Tonnes Independently assured by DNV
Waste (non-used residues) in storage (steel)	Residues put in temporary internal and external storage. These residues should be re-used for internal or external use or sent to landfill or destruction after a certain time. In any case temporary storage corresponds to final destination (landfill/destruction).	**Major steel plants**	Tonnes Independently assured by DNV

Section 2 – Reporting methodology by indicator

Outcome 5: Trusted user of air, land and water

Data coverage is not always 100% of steel producing sites because some sites may not provide data. In this case we divide total emission by the production of the sites that have provided data; therefore, it is in 'xx' per tonne of crude steel of 'responding' sites.

Indicator	Description	Additional boundary	Unit
Industrial operations certified to ISO 14001 (steel and mining)	The % of our steel or mining plants certified to ISO 14001. This figure is validated periodically, most recently in 2019, and before that in 2014, through individual correspondence with each site.	**Same boundary as outcome**	%
Approvals for environmental capital investment projects	Any investment in projects that deliver environmental benefits, such as water treatment facilities, de-dusting equipment and technology upgrades approved during the reporting year.

Following capex budget approval, the Investment Allocation Committee (IAC) is responsible for final approval of investment files and allocates capex to be spent. The investment figure refers to allocations made in the year towards multi-year investment projects. The figure cannot be related to the annual capex spend of one given year.

This excludes environmental operating expenditures that are incurred as a result of maintenance.

Capex allocations to projects delivering carbon and/or energy benefits are reported separately under outcome 6. | **Same boundary as outcome** | USD (million) |

Indicator	Description	Additional boundary	Unit
Absolute dust emissions (steel)	ArcelorMittal's dust emission (steel) include all emissions of ducted dust (i.e. from stacks and chimneys).

Data is collected from ArcelorMittal production sites by means of a standard template, which requests information on emission as yearly flow process by process and covers the whole site.

Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data.

Data is submitted by local site management to the Group Environment department. | **Major steel plants**

Mining operations

External transportation Diffuse emissions | Tonnes |
| Dust intensity (steel) | Dust intensity is calculated by dividing absolute dust emissions (steel) by total steel production. | **Major steel plants**

Mining operations

External transportation Diffuse emissions | kg per tonne of crude steel produced

Independently assured by DNV |
| Absolute dust emissions (mining) | ArcelorMittal's dust emission (mining) include all emissions of ducted dust (i.e. from stacks and chimneys).

Data is collected from ArcelorMittal mine sites by means of a standard template, which requests information on emission as yearly flow process by process and covers the whole site.

Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data.

Data is submitted by local site management to the Group Environment department. | **Mining operations**

Major steel plants | Tonnes |

Section 2 – Reporting methodology by indicator
Outcome 5: Trusted user of air, land and water

Indicator	Description	Additional boundary	Unit
Absolute SO_x emissions (steel)	ArcelorMittal's SO_x emissions (steel) include all emissions of ducted SO_x (i.e. from stacks and chimneys). SO_x or sulfur oxide refers to many types of sulfur and oxygen containing compounds such as, SO_2, SO_3, etc. Data is collected from ArcelorMittal production sites by means of a standard template, which requests information on emission as yearly flow process by process and cover the whole site. Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data. Data is submitted by local site management to the Group Environment department.	**Major steel plants** **Mining operations** **External transportation**	Tonnes
SO_x intensity (steel)	SO_x intensity is calculated by dividing absolute SO_x emissions (steel) by total steel production.	**Major steel plants** **Mining operations** **External transportation** **Diffuse emissions**	kg per tonne of crude steel produced Independently assured by DNV
Absolute SO_x emissions (mining)	SO_x or sulphur oxide refers to many types of sulfur and oxygen containing compounds such as, SO_2, SO_3, etc. ArcelorMittal's SO_x emissions (mining) include all ducted emissions (i.e. from stacks and chimneys). Data is collected from ArcelorMittal mine sites by means of a standard template, which requests information on emission as yearly flow process by process and cover the whole site. Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data. Data is submitted by local site management to the Group Environment department.	**Mining operations** **Major steel plants**	Tonnes

Indicator	Description	Additional boundary	Unit
Absolute NO_x emissions (steel)	ArcelorMittal's NO_x emissions (steel) include all ducted emissions (i.e. from stacks and chimneys). NO_x is a generic term for mononitrogen oxides NO (nitric oxide) and NO_2 (nitrogen dioxide). Data is collected from ArcelorMittal production sites by means of a standard template, which requests information on emission as yearly flow process by process and cover the whole site. Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data. Data is submitted by local site management to the Group Environment department.	**Major steel plants** **Mining operations** **External transportation**	kg per tonne of crude steel produced Independently assured by DNV
NO_x intensity (steel)	NO_x intensity is calculated by dividing absolute NO_x emissions (steel) by total steel production.	**Major steel plants** **Mining operations** **External transportation** **Diffuse emissions**	kg per tonne of crude steel produced Independently assured by DNV
Absolute NO_x emissions (mining)	NO_x is a generic term for mono-nitrogen oxides NO and NO_2 (nitric oxide and nitrogen dioxide). ArcelorMittal's NO_x emissions (mining) include all ducted emissions (i.e. from stacks and chimneys). Data is collected from ArcelorMittal mine sites by means of a standard template, which requests information on emission as yearly flow process by process and cover the whole site. Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data.	**Mining operations** **Major steel plants**	Tonnes

Section 2 – Reporting methodology by indicator
Outcome 5: Trusted user of air, land and water

Indicator	Description	Additional boundary	Unit
Freshwater intake (steel)	Fresh water refers to all the sources of water intake: • Fresh surface water • Fresh groundwater • Brackish surface water • Brackish ground water • Rain water • Piped water (industrial – non-potable) • Piped water potable Water data is collected per water network. Data is collected from ArcelorMittal production sites by means of a standard template, which requests information on emission as yearly flow process by process and covers the whole site. Some sites are permitted to extract groundwater without measurement, so these data are not reported. When local site data for intake is not available and when site data for discharge water is known, water intake flow if considered equal to discharge flow plus a standard amount depending on the site category (integrated/EAF). Data is submitted by local site management to the Environment team, Chief Technology Officer's department (CTO).	**Major steel plants** **Mining operations**	Metric cubic meter per tonne of crude steel produced

Indicator	Description	Additional boundary	Unit
Net water use (steel)	Net water use is the difference between the water intake per tonne of crude steel and the water discharge per tonne of crude steel, not including sea water and domestic water use. Water use data is related to production only. Data is collected from ArcelorMittal production sites by means of a standard template, which requests information on emission as yearly flow process by process and covers the whole site. Data is submitted by local site management to the Environment team, Chief Technology Officer's department (CTO).	**Major steel plants** **Mining operations**	m^3/tonne of steel Independently assured by DNV

Section 2 – Reporting methodology by indicator

Outcome 6: Responsible energy user that helps create a lower carbon future

Indicator	Description	Additional boundary	Unit
Approvals for energy efficiency capital investment projects	All capital investments aimed at energy or CO_2e improvements. This excludes energy operating expenditures. This is reported separately to environmental investments to improve air, land and water outcomes, reported in outcome 5.	**Same boundary as outcome**	USD (million)
Primary energy consumption (steel)	ArcelorMittal's primary energy consumption (or 'energy footprint') = energy from fuels + equivalent energy for pre-processed flows (electricity, industrial gas pellets and burnt fluxes). Data is collected from ArcelorMittal production sites by means of a standard template, which requests information on material use, energy and utility flows at the site level. Site level data is obtained from procurement, delivery and inventory information. This data is used to calculate net use, and converted to energy with standard factors from energy contents or equivalent energy value for preprocessed flows (electricity, steam, hot water, compressed air, industrial gases, pellets and burnt fluxes). These standard factors are preferably measured or otherwise derived from standard values from ArcelorMittal's experience. The data is collated at group level and reviewed by the Group Environment department. Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data.	**Major steel plants** **Mining operations** **External transportation**	Petajoules (PJ) Independently assured by DNV

Indicator	Description	Additional boundary	Unit
Primary energy consumption (steel) continued	**Reporting method:** The net use of materials and energies at site level (procurements – deliveries – inventory change) associated with net calorific values or equivalent energy value for pre-processed flows (electricity, steam, hot water, compressed air, industrial gases, pellets and burnt fluxes) gives an estimate of the energy impact of the Group. In particular: • Energy from fuels (condensed and gases) is accounted with their net calorific value, also named lower heating value (LHV) or lower calorific value (LCV). • Electricity is accounted with a standard equivalent energy, taking into account power plant efficiency and not only unit conversion from MWh to GJ. • Steam and hot water are accounted with a standard equivalent energy based on ArcelorMittal experience. • Energy from pellet is accounted with a standard value based on IISI study on 'Energy use in the steel industry'. • Energy for industrial gas and burnt fluxes is accounted with standard values based on ArcelorMittal experience.		
Energy intensity (steel)	Energy intensity is calculated by dividing primary energy consumption (steel) by total steel production.	**Major steel plants** **Mining operations** **External transportation**	GJ/tonne of steel

Section 2 – Reporting methodology by indicator
Outcome 6: Responsible energy user that helps create a lower carbon future

Indicator	Description	Additional boundary	Unit
Energy recovered and reused on site as % of total primary energy consumed (steel)	We measure the amount of energy we recover from various stages in the steelmaking process in the form of waste gases for reuse, electricity from Turbine Top Gas Recovery at some blast furnaces, energy recovered from low temperature source like sinter cooler and express this as a % of the total primary energy consumed. This metric is an indication of energy efficiency: it demonstrates the extent to which the energy from fuels used in the steelmaking process for a chemical purpose are reused for their energy content rather than wasted. The recovery of waste gases for further use is a prime example not only of energy efficiency, but of CO_2 avoidance, since where such gases are not recovered they must be flared.	**Major steel sites** **Mining operations**	%
Energy from renewable sources as % of total primary energy consumed (steel)	Electricity generated from wind, solar, hydropower and other renewable sources expressed as a % of the total primary energy consumed.	**Same boundary as outcome**	%

Indicator	Description	Additional boundary	Unit
Electricity from renewable and recovered energy sources as % of total electricity consumed (steel)	Most of the energy consumed in steelmaking is not electricity but primary energy in the iron ore reduction process, where it is currently not feasible to reduce iron ore using renewable electricity. Therefore, this indicator provides a narrower focus on the type of electricity used rather than primary energy. As well electricity from renewable sources, this indicator also includes that generated from other responsible sources: waste gases transferred to power plants, which would otherwise be flared emitting CO_2; pressure from blast furnace top gas (TRT); steam from the dry quenching of coke. We believe this is a good indicator of the use of renewable and responsible electricity. Calculation: Electricity from wind, solar, hydropower and other renewable sources (as per indicator above) plus electricity generated from energy recovered from waste gases, steam, top gas recovery or coke dry quenching processes, expressed as a % of total electricity consumed.	**Same boundary as outcome**	%
Energy sold by type (heat, steam or electricity) as % of total primary energy consumed (steel)	Heat and steam are produced on site at the boilers. A % of this is not required for use on site and therefore it is sold or given to local communities. At certain sites the power plant is owned by the steel mill, again only % of the electricity produced is required by the steel mill and the balance is sold for local requirements.	**Same boundary as outcome**	%

Section 2 – Reporting methodology by indicator
Outcome 6: Responsible energy user that helps create a lower carbon future

Indicator	Description	Additional boundary	Unit
Absolute CO_2e footprint (steel)	**Description of significant CO_2e emissions during steelmaking process:** An integrated steel mill has all the functions for primary steel production: iron making (conversion of ore to liquid iron), steelmaking (conversion of pig iron to liquid steel), casting (solidification of the liquid steel) and product rolling (finished shapes). Waste gases are produced mainly by the coke plant, blast furnace and basic oxygen furnace and contribute to the heat balance of the site. The only material GHG thus emitted is CO_2. Therefore, all references to CO_2e (steel) refer in practice to CO_2. These waste gases burnt internally (reused within the site); burnt in a power plant (internal or external) to produce electricity or, where this is not possible, they must be flared. Since these gases must be emitted within a short time (some minutes) after production, the decision on how they are emitted is driven entirely by the level of activity of the steel plant. We therefore consider the emissions from our waste gases to always be within our operational control. We differentiate as follows: **'Direct emissions'** are the actual emissions coming out of the chimneys of the sites. This data is based on a carbon balance at site level.	**Major steel plants** **Mining operations** **Transportation**	Million tonnes CO_2e Independently assured by DNV

Indicator	Description	Additional boundary	Unit
Absolute CO_2e footprint (steel) continued	**'Process emissions'** are the aggregate of direct emissions + emissions resulting from the combustion of exported waste gas used in the power plant to generate electricity. Operational boundary: we report on Scope 1, Scope 2 and Scope 3 of the GHG Protocol as follows: ArcelorMittal's total CO_2e emissions (or 'CO_2 footprint') is made up of the following categories: • **Scope 1** (all ArcelorMittal process emissions, as defined above) • **Scope 2 market-based** (indirect emissions from 'net' purchased electricity as defined below) • **Scope 3** (other indirect emissions as defined below) **Scope 1:** (Process emissions): Our reporting under Scope 1 is conservative in order to allow a fair comparison of carbon data between the reporting sites and includes all our process emissions under our control. If we only considered direct and not full process emissions (i.e. excluded the external power plant emissions) we would effectively transfer our process emissions to the power plant and replace them with Scope 2 emissions for all the electricity we import from the power plant, based on the average carbon content of grid electricity. But since our waste gases are five times more carbon intensive than the natural gas that power plants would normally utilise, we would be under-reporting the emissions for which we are responsible. The CO_2e per tonne of steel of a steel plant that report its direct emissions only can be half those of the one that reports its full process emissions including the ones used for power generation by an external power plant but which can be entirely consumed in the steel production operation.		

Section 2 – Reporting methodology by indicator
Outcome 6: Responsible energy user that helps create a lower carbon future

Indicator	Description	Additional boundary	Unit
Absolute CO$_2$e footprint (steel) continued	**Scope 2 market-based:** (Indirect emissions from 'net' purchased electricity): Electricity – related emissions are linked to the external procurement of electricity in excess of those quantities produced from waste gas exported to external power plants. For this calculation, country (or local if relevant) specific CO$_2$e equivalent emission factors of electricity are applied. **Scope 3:** (Other indirect emissions): the other upstream CO$_2$e included in our boundary emissions related to the procurements of pre-processed materials and utilities (such as, pellets, burnt fluxes, industrial gases) and exchange of intermediate products between sites (such as coke, DRI and pig iron). Upstream emissions do not include raw material extraction or transportation and only capture emissions produced during processing of certain materials. Transportation activities are currently excluded. ArcelorMittal is screening different scope 3 categories to identify the material ones, with the aim of aligning with existing scope 3 guidance. **Collection of data:** Data is submitted by local site management to the Environment department. ArcelorMittal requires production sites to fill in a standard template, which requests information on material use, energy and utility flows at the site level. This data is obtained from procurement, delivery and inventory information at site level and is used to calculate net use. **Data conversion:** Data collected is then converted to CO$_2$e with standard emission factors from carbon contents or upstream values for processed materials, utilities and intermediate products. These values are preferably measured directly; otherwise they are derived from standard values based on ArcelorMittal's experience (see Appendix 1). For scope 3 emissions, a unique upstream value is allocated to each pre-processed material, utility and intermediate product, based on the average performance of the producing sector. Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data.		

Indicator	Description	Additional boundary	Unit
Absolute CO$_2$e footprint (steel and mining)	Our CO$_2$ emissions relate predominantly to our use of electricity and our CH$_4$ emissions from coalbed methane. ArcelorMittal's total CO$_2$e emissions (or 'CO$_2$e footprint'): • Scope 1 (process CO$_2$e emissions from steel + CO$_2$ from mining + CH$_4$ from mining) + • Scope 2 (indirect emissions from 'net' purchased electricity + electricity purchased at mining sites) • Scope 3 (other indirect emissions as defined above) CH$_4$ emissions reported in tonnes of CH$_4$ are multiplied by the warming potential (for 2020 the Global Warming Potential of CH$_4$ was updated to the latest factor disclosed by IPCC of 28; the change was applied retroactively to avoid any discrepancy from one year to another) to get the equivalent CO$_2$e emissions in tonnes. Mining operations include activities that result in unmeasured and fugitive CH4 emissions. Coverage of emissions monitoring equipment continues to increase in accuracy. **Collection of data:** Data is submitted by local site management to the Environment department. ArcelorMittal requires production sites to fill in a standard template, which requests information on material use, energy, utility flows and CH$_4$ emissions (for coal mines) at the site level. This data is obtained from procurement, delivery, inventory information and air analysis (for CH$_4$) at site level and is used to calculate net use and then converted to CO$_2$ with standard emission factors from carbon contents or upstream values for processed materials, utilities and intermediate products. These values are preferably measured directly; otherwise they are derived from standard values based on ArcelorMittal's experience (see Appendix 1). A unique upstream value is allocated to each pre-processed material, utility and intermediate product (steel only), based on the average performance of the producing sector. Where local site data is not available, estimates are made based on the production to emissions ratio of the prior year, and applying this to the current year production data.	**Major steel plants** **Mining operations** **Transportation**	Million tonnes CO$_2$e Independently assured by DNV

Section 2 – Reporting methodology by indicator
Outcome 6: Responsible energy user that helps create a lower carbon future

Indicator	Description	Additional boundary	Unit
Location-based scope 2 (steel and mining)	As per the GHG protocol location-based reporting guidance, we calculate scope 2 emissions based on average grid factors, such as those published by IEA or local authorities, where available.	**Major steel plants** **Mining operations** **Transportation**	Million tonnes CO_2e

Indicator	Description	Additional boundary	Unit
CO_2e intensity (steel) – scopes 1, 2 and 3 – historical portfolio	This indicator demonstrates the average GHG emitted in the production of one tonne of crude steel. It includes all those emissions included in Total CO_2e emissions defined above – scopes 1, 2 and 3 – so as to include emissions from all the processes involved in the production of an 'average' tonne of steel. The data for each reporting year includes all sites that were within the portfolio at the end of each reporting year. For previous reporting years, this means that the performance includes some sites that are not now within the portfolio.	**Major steel plants** **Mining operations**	Tonnes of CO_2e per tonne of steel Independently assured by DNV
CO_2e intensity (steel) – scopes 1, 2 and 3 – adjusted to reporting year portfolio	This indicator demonstrates the average GHG emitted in the production of one tonne of crude steel. It includes all those emissions included in Total CO_2 e emissions defined in Absolute CO_2e footprint – scopes 1, 2 and 3 – so as to include emissions from all the processes involved in the production of an 'average' tonne of steel. This KPI has been adjusted for structural changes to the ArcelorMittal portfolio in the previous 12 months, and reflects emissions and production for ArcelorMittal's site portfolio as of December of the reporting year. This portfolio perimeter is applied retrospectively to allow like-for-like annual comparison of CO_2e intensity. This means that where sites have been sold and are no longer in the portfolio, their emissions are removed from previous years. Where new sites are acquired, data for these sites will be added to previous years if available. In some cases, performance data for years prior to acquisition may not be available.	**Major steel plants** **Mining operations**	Tonnes of CO_2e per tonne of steel Independently assured by DNV
Ratio between different production routes (steel)	The three main production routes require different raw materials and this significantly impacts on their level of carbon emissions: Primary steel making through the BF–BOF route uses coke and coal to reduce iron ore, the most carbon intensive route; Scrap EAF is a secondary steelmaking route where electricity is used to melt scrap, and the emissions are based on the carbon intensity of the electricity; this route relies on sufficient supplies of scrap; in between these two routes is the DRI EAF route, DRI is iron ore reduced using natural gas and because it is then turned into steel in the EAF it can be mixed with varying proportions of scrap enabling it to be more carbon efficient than the BF–BOF route.	**Major steel plants** **Mining operations**	Ratio

Section 2 – Reporting methodology by indicator
Outcome 6: Responsible energy user that helps create a lower carbon future

Indicator	Description	Additional boundary	Unit
CO$_2$ avoided from steel scrap recycled	**Calculation:** quantity of steel scrap recycled 'X' upstream emission factor of 1.3 tCO$_2$/t scrap. The upstream emission factor corresponds to the energy consumption avoided in the basic oxygen furnace (BOF) as a result of the use of scrap. This energy is expressed in terms of the equivalent CO$_2$ from coke in the blast furnace (BF), since scrap used in the BOF corresponds to a reduction in metal production in the BF, and so a reduction in coke consumption.	**Major steel plants** **Mining operations**	Million metric tonnes
% sites performing better than ArcelorMittal carbon efficiency benchmark	The processes considered are those in the supply chain from raw materials to hot rolled products; cold process and finishing are excluded. The carbon efficiency KPI goes beyond the determination of an emissions inventory. An inventory gives a snapshot of the situation but, owing to the large influence of the production structure on the level of the emissions, falls short of providing reliable and fully comparable information in terms of CO$_2$ efficiency. KPIs need to establish a fair comparison between different sites and give reliable information on the actual variation of performance. A measure of carbon efficiency allows such a comparison of emission performance between sites and can give an estimate of the potential for improvement compared to a benchmark – which at ArcelorMittal we call the Achievable Reference Performance (ARP). For external disclosure purposes, we report the percentage of sites for which the carbon efficiency is better than (lower than) the ARP. **Calculation:** This KPI is calculated following standard EN 19694 for all worldwide ArcelorMittal sites participating. Data is collected from ArcelorMittal production sites by means of a standard template, which requests information on material use, energy and utility flows at the site and shop (process) levels; it is the same template used for the CO$_2$ and Energy data collection.	**Major steel plants** **Mining operations**	%

Indicator	Description	Additional boundary	Unit
Europe carbon reduction target: 35% reduction in carbon emissions intensity by 2030 (scope 1 and 2)	ArcelorMittal's current Europe target was established in 2019: to reduce emissions intensity by 35% by 2030 (scope 1 and 2) against a 2018 baseline. This target relates to those sites we operate today that we owned in 2018, as well as sites that were acquired since then. This indicator demonstrates the average scope 1 and 2 emissions in the production of one tonne of crude steel, and is based on steel production data for the year. Each year, the baseline scope 1 and 2 CO$_2$e per tonne of steel is recalculated according to the current boundary: when sites are sold, their scope 1 and 2 emissions and production volumes are removed from the data used. Where these are sites with above average scope 1 and 2 emissions intensity, the CO$_2$e intensity baseline falls and the target challenge intensifies. In addition, where new material streams or emission factors for specific materials are included in the calculations, the baseline and subsequent years' data will be recalculated.	**Major steel plants** **Mining operations** **Transportation**	Tonnes of CO$_2$e per tonne of steel Independently assured by DNV
Group carbon reduction target: 25% reduction in carbon emissions intensity by 2030 (scope 1 and 2 steel and mining)	ArcelorMittal's current group target was established in 2021: to reduce emissions intensity by 25% by 2030 (scope 1 and 2) against a 2018 baseline. This target relates to those sites we operate today that we owned in 2018, as well as sites that were acquired since then. This indicator demonstrates the average scope 1 and 2 emissions in the production of one tonne of crude steel, and is based on steel production data for the year. Each year, the baseline scope 1 and 2 CO$_2$e per tonne of steel is recalculated according to the current boundary: when sites are sold, their scope 1 and 2 emissions and production volumes are removed from the data used. Where these are sites with above average scope 1 and 2 emissions intensity, the CO$_2$e intensity baseline falls and the target challenge intensifies. In addition, where new material streams or emission factors for specific materials are included in the calculations, the baseline and subsequent years data will be recalculated.	**Major steel plants** **Mining operations** **Transportation**	Tonnes of CO$_2$e per tonne of steel Independently assured by DNV

Section 2 – Reporting methodology by indicator

Outcome 7: Supply chains that our customers trust

Indicator	Description	Additional boundary	Unit
Global procurement suppliers evaluated against code for responsible sourcing	Number of ArcelorMittal suppliers completing an annual responsible sourcing self-assessment questionnaire. Following a realignment of the company's purchasing structure in 2013, data on the companies we actively engage with on responsible sourcing now only cover our suppliers managed centrally via the European Purchasing Organisation.	**N/A**	Number

Outcome 8: Active and welcomed member of the community
Outcome 9: Pipeline of talented scientists and engineers for tomorrow

Outcome boundary

All sites and global R&D.

Indicator	Description	Additional boundary	Unit
Community investment spend (including Science, Technology, Engineering and Maths spend)	The amount invested by ArcelorMittal to carry out social projects to benefit our communities. This is broken down in when collected into voluntary spend, mandatory spend, in kind donations and Science, Technology, Engineering and Maths (STEM) spend. Mandatory spend is that which is required as part of contractual agreements with our host government, such as contributions to community development funds, resettlement-related programmes, and local infrastructure. STEM spend is the amount of money invested by ArcelorMittal to support educational projects to build skills needed for the 21st century economy e.g., science, maths, engineering, technology.	**Same boundary as outcome**	USD (million)

Section 2 – Reporting methodology by indicator

Outcome 10: Our contribution to society measured, shared and valued

Outcome boundary

In addition to sites in the consolidated financial statement, the scope of this is section includes Peña Colorada.

Indicator	Description	Additional boundary	Unit
Estimated direct economic contribution	Direct economic contribution is the sum of the wages and salaries paid, supplier and contractor payments, taxes paid, capital reinvested in the business, dividends, interest payments and R&D. It does not include indirect contributions to the economy, such as through indirect job creation through the supply chain. Data is derived from financial records for the year in review, with additional data collection on specific elements as described below: **Employee salaries, wages and pensions** – comprises all employer costs as reported in our 20-F, plus payments to pension plans. excluding the amounts borne and collected by the employer in the form of payroll tax that are presented within the total tax contribution. **Supplier and contractor payments** – exclude any taxes, R&D or capital expenditure included in other categories. **R&D spend and capex** – although these are subcategories of certain other categories given, such as payments to suppliers, they are notable contributions to society in terms of intellectual, financial and manufactured capital, and are therefore extracted here in order to provide more detail. **Dividends** – includes dividends paid to ArcelorMittal shareholders and those dividends paid to non-controlling interests.	**Same boundary as outcome**	USD (million)

Indicator	Description	Additional boundary	Unit
Total tax contribution	Total tax contribution includes all tax payments borne by the company, or collected on behalf of third parties, which represent our contribution to the local economies where we operate. Details of the elements making up the figures, are set out below: **'Corporate income tax'** comprises all taxes that are based on the taxable profits of a company. **'Payroll taxes'** comprise two parts: (i) **employee payroll taxes:** payroll and employee taxes withheld from employee remuneration, and paid to governments, i.e. tax collected by ArcelorMittal and remitted to governments on behalf of employees. (ii) **employer payroll taxes:** payroll and employer taxes payable as a result of a company's capacity as an employer. **'Local taxes'** comprises: (i) **property tax:** taxes on the ownership and use of immovable property and other property (e.g. net asset). (ii) **environment tax:** any taxes with (potential) environmental effects that encourage behavioural changes and/or discourage environmental damage and/or a reduction in the use of natural resources; including Air emissions, Water emissions, Residues (elimination of waste, storage residues) etc. (iii) **energy tax:** taxes, contributions collected by energy suppliers, transport system operators net of any refund from government. (iv) **tax on activities:** taxes on turnover (other than VAT) and similar business taxes other than those levied on profits. **'Other taxes'** comprise: customs & excise duties, motor vehicle tax, government royalties, mining taxes (EBITDA part), taxes on salary (other than payroll taxes), business tax on surface/energy, irrecoverable indirect taxes, financial transaction tax and other minor taxes. **'Government royalties'** are calculated according to the scope of extractive industry reporting under the EU Accounting Directive 2013/34/EU.	**Same boundary as outcome**	USD (million)

Section 2 – Reporting methodology by indicator

Transparent good governance

Indicator	Description	Additional boundary	Unit
Number of Board self-assessments	The board self-assessment takes place at the level of the board of directors of the ArcelorMittal group's parent company.	**N/A**	Number
% of employees completed code of business conduct training	All employees are required to undertake this training every three years. The percentage reported for the year relates to the number of all employees who have a valid training certificate at the end of the period.	**Sites in consolidated financial statement**	%
% of employees completed anti-corruption training	Employees in relevant roles are required to undertake this training every three years. The percentage reported for the year relates to the number of relevant employees who have a valid training certificate at the end of the period.	**Sites in consolidated financial statement**	%
% of employees completed human rights training	Employees in relevant roles are required to undertake this training every three years. The percentage reported for the year relates to the number of relevant employees who have a valid training certificate at the end of the period. Relevant roles include CR, legal, HR, and all managers and above.	**Sites in consolidated financial statement**	%
Number of operations with a local confidential whistleblowing system	Our whistleblowing system globally is provided by a third party in the language of the participating country. The number of operations relates to a number of countries which have a whistle blowing line operated by this third party. One whistleblowing line may serve many sites in the country.	**Sites in consolidated financial statement**	Number
Whistleblowing complaints received via internal audit	Complaints received relate to those received via whistleblowing lines relating to fraud and corruption and referred to the Group Forensic team, which records and tracks each one until resolution.	**Sites in consolidated financial statement**	Number

Appendix

Table 1 — Electricity CO_2 equivalent

	Latest available yearly figure: 2020/2021	Electricity needed to produce the corresponding industrial gas (kWh/1,000Nm³)				
		710	500	200	200	110
	(kg CO₂/MWh)	Upstream CO₂ based on power consumption for production (kg CO₂/1,000Nm³)				
Reference year	Country/region	Ut–01 Electricity	Ut–05 High pressure oxygen	Ut–06 Low pressure oxygen	Ut–07 Nitrogen	Ut–08 Argon	Ut–09 Compressed air
2020	**World**	**436.7**	**310.06**	**218.35**	**87.34**	**87.34**	**48.04**
2021	Argentina	290.9	206.54	145.45	58.18	58.18	32
2021	Belgium	131.9	93.65	65.95	26.38	26.38	14.51
2021	Bosnia and Herzegovina	652.9	463.56	326.45	130.58	130.58	71.82
2022	Brazil	42.6	30.25	21.3	8.52	8.52	4.69
2021	Canada	122.1	86.69	61.05	24.42	24.42	13.43
2020	Canada – Ontario	28.0	19.88	14	5.6	5.6	3.08
2020	Canada – Quebec	1.9	1.4	1.0	0.4	0.4	0.2
2021	Costa Rica	0.2	0.1	0.1	0.0	0.0	0.0
2021	Czech Republic	393.5	279.39	196.75	78.7	78.7	43.29
2021	France	60.1	42.67	30.05	12.02	12.02	6.61
2021	Germany	333.9	237.07	166.95	66.78	66.78	36.73
2021	Italy	257.4	182.75	128.7	51.48	51.48	28.31
2020	India	689.3	489.4	344.65	137.86	137.86	75.82

Table 1 — Electricity CO_2 equivalent

	Latest available yearly figure: 2020/2021	Electricity needed to produce the corresponding industrial gas (kWh/1,000Nm³)				
		710	500	200	200	110
	(kg CO₂/MWh)	Upstream CO₂ based on power consumption for production (kg CO₂/1,000Nm³)				
Reference year	Country/region	Ut–01 Electricity	Ut–05 High pressure oxygen	Ut–06 Low pressure oxygen	Ut–07 Nitrogen	Ut–08 Argon	Ut–09 Compressed air
2020	Kazakhstan	479.4	340.37	239.7	95.88	95.88	52.73
2020	Liberia	393.9	279.67	196.95	78.78	78.78	43.33
2021	Luxembourg	57.7	40.97	28.85	11.54	11.54	6.35
2021	Macedonia	513.5	364.59	256.75	102.7	102.7	56.49
2020	Mexico	423.0	300.33	211.5	84.6	84.6	46.53
2021	Morocco	710.3	504.31	355.15	142.06	142.06	78.13
2021	Poland	546.4	387.94	273.2	109.28	109.28	60.1
2021	Romania	264.4	187.72	132.2	52.88	52.88	29.08
2021	South Africa	1040.0	738.4	520	208	208	114.4
2021	Spain	150.3	106.71	75.15	30.06	30.06	16.53
2021	Ukraine	286.2	203.2	143.1	57.24	57.24	31.48
2021	United States	362.4	257.3	181.2	72.48	72.48	39.86
2021	United States – Alabama	340.6	241.83	170.3	68.12	68.12	37.47
2021	United States – Ohio	388.5	275.84	194.25	77.7	77.7	42.74
2021	United States – Texas	548.0	389.08	274	109.6	109.6	60.28
2020	Venezuela	95.8	68.02	47.9	19.16	19.16	10.54

2020 (or 2021 estimation when available) country IEA data except for Brazil (2022 official country figure), For Mexico (Comisión Reguladora de Energía – 2020), for Ontario and Quebec (2020 province figures), for USA (Alabama, Ohio, texas - EPA 2020), for South Africa (figure from Eskom report 2020), and for Luxembourg (weighted average on consumption on France, Belgium and Germany IEA 2021EF). Some sites have PPA: Lazzaro cardenas flat and long (391 kg CO_2/MWh), Contrecoeurs Est & Ouest and mining (0.6 kg CO_2/MWh).

Appendix continued

Table 2 – Upstream emission streams	
Code	Stream name
	Products
Pr–01	Merchant sinter
Pr–40	Pellets
Pr–02	BF pig iron
Pr–02a	Bio charcoal pig iron
Pr–02b	Non–Bio charcoal pig iron
Pr–03	DRI
Pr–04	SR pig iron
	Condensed Fuels
CF–01a	Home coke
CF–01b	Purchased coke
CF–01c	Purchased small coke
CF–02	Coke breeze
CF–03	Coking coal
CF–04	Anthracite
CF–05	BF injection coal
CF–06	SR/Steam coal
CF–07	EAF coal
CF–08	Petroleum coke
CF–09	Heavy oil
CF–10	Light oil
CF–11	Diesel oil
CF–11a	Gasoline
CF–12	LPG
CF–13	Charcoal
CF–13a	Internal organic charcoal
CF–13b	External organic charcoal
CF–13c	Charcoal fines

Code	Stream name
	Gas Fuels
GF–05	Natural gas
GF–05	Natural gas – Europe
GF–05	Natural gas – Spain
GF–05	Natural gas – Belgium
GF–05	Natural gas – France
GF–05	Natural gas – Germany
GF–05	Natural gas – Poland
	Utilities
Ut–01	Electricity
Ut–02	HP steam
Ut–03	LP steam
Ut–04	Hot water
Ut–05	High purity oxygen
Ut–06	Low purity oxygen
Ut–07	Nitrogen
Ut–08	Argon
Ut–09	Compressed air

Code	Stream name
	Materials
Ma–01	EAF electrodes
Ma–02	SR electrodes
Ma–08	Limestone
Ma–09	Burnt lime
Ma–10	Raw dolomite
Ma–11	Burnt dolomite
Ma–12	Fine iron ore
Ma–13	Lump ore
Ma–14	Pellets
Ma–03	Ferro-chromium
Ma–04	Ferro-manganese
Ma–05	Nickel
Ma–27	FerroNobium
Ma–28	Ferro Titanium
Ma–31	FerroSilicium 100mm
Ma–33	SilicoMaganese
Ma–36	FerroMolybdenum
Ma–47	FerroVanadium
Ma–50	Zinc (for coating)
Ma–51	Magnesium (for coating)
Ma–52	Tin (for coating)
Ma–53	Aluminium
Ma–54	Silicium (for coating)
Ma–55	Chromium (for tin-free plating)
Ma–56	Paint
Ma–57	Solvents (for organic coating)
Ma–58	Acids (for cold rolling)
Ma–59	Nitrogen Fertilizers 8%
Ma–60	Nitrogen Fertilizers 10%
Ma–61	Nitrogen Fertilizers 18%

Note: for the current reporting year, ArcelorMittal has used its own scope 3 emission factors. In future years, ArcelorMittal will switch to using GaBi/Sphera emission factors.

Appendix continued

Table 3 – C content and ncv's (net calorific value) – (CO_2 = 3.66 * C content)

Product code	Stream	C content	C content	Calorific value	Calorific value
	Products	**C (t/t)**			
PR-01	Merchant Sinter	0.0000			
PR-02 | PR-04	Pig Iron	0.0470			
PR-03	DRI	0.0200			
PR-05 to Pr-34	Flat Steel	0.0004			
PR-05 to Pr-34	Long Steel	0.0010			
	Cond Fuels	**C (t/t)**	**C (t/m³)**	**ncv (MJ/t)**	**ncv (MJ/m³)**
CF-01a to CF-01c	Coke	0.8800		30,135	
CF-02	Coke Breeze	0.8500		29,925	
CF-03	Coking coal	0.8200		32,230	
CF-04	Anthracite	0.7900		29,300	
CF-05 to CF-07	BF injection Coal	0.8000		31,140	
CF-08	Petroleum Coke	0.8500		31,935	
CF-09 | CF-14 | CF-15	Heavy oil (d=0.85)	0.8650		39,845	
CF-10 | CF-11	Light oil (d=0.85)	0.8450	0.7183	41,982	35,685
CF-12	LPG	0.8218	0.0179 t C/GJ	46,030	1,000 MJ/GJ
CF-13	Charcoal (d=0.25)	0.7000	0.1800	18,810	4,703
CF-16	Used Plastics	0.7200		46,000	
CF-17	Used Tyres	0.6000		35,000	
CF-18	Bio fuel	0.7778		37,800	
CF-19	Other combustible (LCV burn)	0.8042		40,200	
	Gas Fuels	**C (kg/m³N)**		**ncv (MJ/m³N)**	
GF-01	Coke Oven Gas	0.2390		19.685	
GF-02	Blast Furnace Gas	0.2390		3.185	
GF-03	Smelting Reduction Gas	0.4287		7.660	
GF-04	BOF Gas	0.4662		9.190	
GF-05	Natural Gas	0.5495		35.920	

Table 3 – C content, CO_2 and ncv's (net calorific value)

Product code	Stream	C content	C content	Calorific value	Calorific value
	Materials	**C (t/t)**		**Eq. Energy (MJ/t)**	
Ma-01 | Ma-02	EAF Electrodes	0.9990			
Ma-03	Ferro Chromium	0.0650			
Ma-04	Ferro Manganese	0.0750			
Ma-31	Ferro Silicon	0.0001			
Ma-33	Silico Manganese	0.0179			
Ma-47	Ferro Vanadium	0.0019			
Ma-36	Ferro Molybdenum	0.0005			
Ma-28	Ferro Titanium	0.0026			
Ma-27	Ferro Nobium	0.0009			
Ma-06 | Ma-07	Scraps	0.0010			
Ma-08	Limestone	0.1200			
Ma-09	Burnt Lime	0.0065		3,600	
Ma-10	Crude Dolomite	0.1300			
Ma-11	Burnt Dolomite	0.0065		3,600	
Ma-12	Fine Iron Ore	0.0005			
Ma-13	Lump Ore	0.0015			
Ma-14	Pellets	0.0001			
Ma-15	Bedding				
	Residues	**C (t/t)**	**C (t/m³)**	**ncv (MJ/t)**	**ncv (MJ/m³)**
Res-01	Tar	0.9250		37,670	
Res-02	Benzole	0.9185		46,040	
Res-03	Naphtalenic oil		0.7183		35,685
Res-04	CDQ Dust	0.8800		30,135	
Res-05	Coke quenching breeze	0.8800		29,925	
Res-06 | Res-10	BF gas cleaning dust	0.4000		13,698	
Res-07	BF gas sludge	0.4000		13,698	
Res-09	DRI screening fines	0.0200			
Res-13	Flat steel scraps	0.0004			
Res-13	Long steel scraps	0.0010			

Appendix continued

Table 4 – Energy equivalent for the different streams	(figures updated 04/03/21)	
Stream type	**Equivalent energy**	**Unit**
Burnt lime	3,600	MJ/t
Burnt dolomite	3,600	MJ/t
Pellets	1,250	MJ/t
Electricity	9.208	GJ/MWh
HP steam	3,350	MJ/t
LP steam	3,050	MJ/t
Hot water	850	MJ/t
Low purity oxygen	4.6	GJ/10³m³
High purity oxygen	6.54	GJ/10³m³
Nitrogen	1.84	GJ/10³m³
Argon	1.84	GJ/10³m³
Compressed air	1.01	GJ/10³m³

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