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[Draft] IFRS S2 Climate-related Disclosures Appendix B Industry-based disclosure requirements

Volume B9—Iron & Steel Producers

Comments to be received by 29 July 2022



International Sustainability Standards Board

ED/2022/S2

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Introduction

This volume is part of Appendix B of [draft] IFRS S2 Climate-related Disclosures and is an integral part of that [draft] Standard. It has the same authority as the other parts of that [draft] Standard.

This volume sets out the requirements for identifying, measuring and disclosing information related to an entity's significant climate-related risks and opportunities that are associated with specific business models, economic activities and other common features that characterise participation in this industry.

The industry-based disclosure requirements are derived from SASB Standards (see paragraphs B10–B12 of [Draft] IFRS S2 *Climate-related Disclosures*). Amendments to the SASB Standards, described in paragraph B11, are marked up for ease of reference. New text is underlined and deleted text is struck through. The metric codes used in SASB Standards have also been included, where applicable, for ease of reference. For additional context regarding the industry-based disclosure requirements contained in this volume, including structure and terminology, application and illustrative examples, refer to Appendix B paragraphs B3–B17.

Iron & Steel Producers

Industry Description

The Iron & Steel Producers industry consists of steel producers with iron and steel mills and companies with iron and steel foundries. The steel producers segment consists of companies that produce iron and steel products from their own mills. These products include flat-rolled sheets, tin plates, pipes, tubes, and products made of stainless steel, titanium, and high alloy steels. Iron and steel foundries, which cast various products, typically purchase iron and steel from other firms. The industry also includes metal service centers and other metal merchant wholesalers, which distribute, import, or export ferrous products. Steel production occurs via two primary methods: the Basic Oxygen Furnace (BOF), which uses iron ore as an input, and the Electric Arc Furnace (EAF), which uses scrap steel. Many companies in the industry operate on an international scale. Note: With a few exceptions, most companies do not mine their own ore to manufacture steel and iron products. There are separate SASB standards for the Metals & Mining (EM-MM) industry.

Sustainability Disclosure Topics & Metrics

ΤΟΡΙΟ	METRIC	CATEGORY	UNIT OF MEASURE	CODE
Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions- limiting regulations	Quantitative	Metric tons (t) CO ₂ -e, Percentage (%)	EM-IS-110a.1
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	n/a	EM-IS-110a.2
Energy Management	(1) Total energy consumed, (2) percent- age grid electricity, (3) percentage renewable	Quantitative	Gigajoules (GJ), Percent- age (%)	EM-IS-130a.1
	(1) Total fuel consumed, (2) percentagecoal, (3) percentage natural gas,(4) percentage renewable	Quantitative	Gigajoules (GJ), Percent- age (%)	EM-IS-130a.2
Water Management	(1) Total fresh water withdrawn,(2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand cubic meters (m ³), Percent- age (%)	EM-IS-140a.1
Supply Chain Management	Discussion of the process for managing iron ore and/or coking coal sourcing risks arising from environmental and social issues	Discussion and Analysis	n/a	EM-IS-430a.1

Table 1. Sustainability Disclosure Topics & Metrics

Table 2. Activity Metrics

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Raw steel production, percentage from: (1) basic oxygen furnace processes, (2) electric arc furnace processes	Quantitative	Metric tons (t), Percentage (%)	EM-IS-000.A
Total iron ore production ¹¹	Quantitative	Metric tons (t)	EM-IS-000.B
Total coking coal production ¹²	Quantitative	Metric tons (t)	EM-IS-000.C

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¹¹

Note to EM-IS-000.B – The scope of production includes iron ore consumed internally and that which is made available for sale. Note to EM-IS-000.C – The scope of production includes coking coal consumed internally and that which is made available for sale. 12

Greenhouse Gas Emissions

Topic Summary

Iron and steel production generates significant direct greenhouse gas (GHG) emissions, primarily of carbon dioxide and methane, from production processes and on-site fuel combustion. While technological improvements have reduced the GHG emissions per ton of steel produced, steel production remains carbon-intensive relative to other industries. Regulatory efforts to reduce GHG emissions in response to the risks posed by climate change may result additional regulatory compliance costs and risks for iron and steel companies due to climate change mitigation policies. Operational efficiencies can be achieved through the cost-effective reduction of GHG emissions. Such efficiencies can mitigate the potential financial impact of increased fuel costs from regulations that seek to limit—or put a price on—GHG emissions.

Metrics

EM-IS-110a.1. Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations

- 1 The entity shall disclose its gross global Scope 1 greenhouse gas (GHG) emissions to the atmosphere of the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).
 - 1.1 Emissions of all GHGs shall be consolidated and disclosed in metric tons of carbon dioxide equivalents (CO₂-e), and calculated in accordance with published 100-year time horizon global warming potential (GWP) values. To date, the preferred source for GWP values is the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (2014).
 - 1.2 Gross emissions are GHGs emitted into the atmosphere before accounting for offsets, credits, or other similar mechanisms that have reduced or compensated for emissions.
- 2 Scope 1 emissions are defined and shall be calculated according to the methodology contained in *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* (GHG Protocol), Revised Edition, March 2004, published by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD).
 - 2.1 These emissions include direct emissions of GHGs from stationary or mobiles sources that include, but are not limited to, production facilities, office buildings, and iron and steel transportation (marine, road, and rail).
 - 2.2 Acceptable calculation methodologies include those that conform to the GHG Protocol as the base reference, but provide additional guidance, such as industry- or region-specific guidance. Examples include, but are not limited to:
 - 2.2.1 GHG Reporting Guidance for the Aerospace Industry published by International Aerospace Environmental Group (IAEG)

- 2.2.2 Greenhouse Gas Inventory Guidance: Direct Emissions from Stationary Combustion Sources published by the U.S. Environmental Protection Agency (EPA)
- 2.2.3 India GHG Inventory Program
- 2.2.4 ISO 14064-1
- 2.2.5 Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011, published by IPIECA
- 2.2.6 Protocol for the quantification of greenhouse gas emissions from waste management activities published by Entreprises pour l'Environnement (EpE)
- 2.3 GHG emissions data shall be consolidated and disclosed according to the approach with which the entity consolidates its financial reporting data, which is generally aligned with the "financial control" approach defined by the GHG Protocol, and the approach published by the Climate Disclosure Standards Board (CDSB) described in REQ-07, "Organisational boundary," of the CDSB Framework for reporting environmental information, natural capital and associated business impacts (April 2018).
- 3 The entity shall disclose the percentage of its gross global Scope 1 GHG emissions that are covered under an emissions-limiting regulation or program that is intended to directly limit or reduce emissions, such as cap-and-trade schemes, carbon tax/fee systems, and other emissions control (e.g., command-and-control approach) and permit-based mechanisms.
 - 3.1 Examples of emissions-limiting regulations include, but are not limited to:
 - 3.1.1 California Cap-and-Trade (California Global Warming Solutions Act)
 - 3.1.2 European Union Emissions Trading Scheme (EU ETS)
 - 3.1.3 Quebec Cap-and-Trade (Draft Bill 42 of 2009)
 - 3.2 The percentage shall be calculated as the total amount of gross global Scope 1 GHG emissions (CO₂-e) that are covered under emissions-limiting regulations divided by the total amount of gross global Scope 1 GHG emissions (CO₂-e).
 - 3.2.1 For emissions that are subject to multiple emissions-limiting regulations, the entity shall not account for those emissions more than once.
 - 3.3 The scope of emissions-limiting regulations excludes emissions covered under voluntary emissions-limiting regulations (e.g., voluntary trading systems), as well as reporting-based regulations—[e.g., the U.S. Environmental Protection Agency (EPA) GHG Reporting Program].
- 4 The entity may discuss any change in its emissions from the previous reporting period, including whether the change was due to emissions reductions, divestment, acquisition, mergers, changes in output, and/or changes in calculation methodology.
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- 5 In the case that current reporting of GHG emissions to the CDP or other entity (e.g., a national regulatory disclosure program) differs in terms of the scope and consolidation approach used, the entity may disclose those emissions. However, primary disclosure shall be according to the guidelines described above.
- 6 The entity may discuss the calculation methodology for its emissions disclosure, such as if data are from continuous emissions monitoring systems (CEMS), engineering calculations, or mass balance calculations.

EM-IS-110a.2. Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets

- 1 The entity shall discuss its long-term and short-term strategy or plan to manage its Scope 1 greenhouse gas (GHG) emissions.
 - 1.1 Scope 1 emissions are defined according to The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (GHG Protocol), Revised Edition, March 2004, published by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD).
 - 1.2 The scope of GHG emissions includes the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).
- 2 The entity shall discuss its emission reduction target(s) and analyze its performance against the target(s), including the following, where relevant:
 - 2.1 The scope of the emission reduction target (e.g., the percentage of total emissions to which the target is applicable);
 - 2.2 Whether the target is absolute- or intensity-based, and the metric denominator, if it is an intensity-based target;
 - 2.3 The percentage reduction against the base year, with the base year representing the first year against which emissions are evaluated toward the achievement of the target;
 - 2.4 The timelines for the reduction activity, including the start year, the target year, and the base year;
 - 2.5 The mechanism(s) for achieving the target; and
 - 2.6 Any circumstances in which the target or base year emissions have been, or may be, recalculated retrospectively or the target or base year has been reset.
- 3 The entity shall discuss the activities and investments required to achieve the plans and/or targets, and any risks or limiting factors that might affect achievement of the plans and/or targets.
- 4 The entity shall discuss the scope of its strategies, plans, and/or reduction targets, such as whether they pertain differently to different business units, geographies, or emissions sources.

- 5 The entity shall discuss whether its strategies, plans, and/or reduction targets are related to, or associated with, emissions limiting and/or emissions reporting-based programs or regulations (e.g., the EU Emissions Trading Scheme, Quebec Cap-and-Trade System, California Cap-and-Trade Program), including regional, national, international, or sectoral programs.
- 6 Disclosure of strategies, plans, and/or reduction targets shall be limited to activities that were ongoing (active) or reached completion during the reporting period.

Energy Management

Topic Summary

The production of steel requires significant quantities of energy, sourced primarily from the direct combustion of fossil fuels as well as energy purchased from the grid. Energyintense production has implications for climate change and electricity purchases from the grid can result in indirect Scope 2 emissions. The choice between different production processes—electric arc furnaces and integrated basic oxygen furnace—can influence whether a company uses fossil fuels or purchases electricity. This decision, together with the choice between using coal versus natural gas or on-site versus gridsourced electricity, can play an important role in influencing both the costs and reliability of energy supply. Affordable, easily accessible, and reliable energy is an important competitive factor in this industry, with energy costs accounting for a substantial portion of manufacturing costs. The way in which an iron and steel company manages its overall energy efficiency, its reliance on different types of energy and associated sustainability risks, and its ability to access alternative sources of energy can influence its profitability.

Metrics

EM-IS-130a.1. (1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable

- 1 The entity shall disclose (1) the total amount of energy it consumed as an aggregate figure, in gigajoules (GJ).
 - 1.1 The scope of energy consumption includes energy from all sources, including energy purchased from sources external to the entity and energy produced by the entity itself (self-generated). For example, direct fuel usage, purchased electricity, and heating, cooling, and steam energy are all included within the scope of energy consumption.
 - 1.2 The scope of energy consumption includes only energy directly consumed by the entity during the reporting period.
 - 1.3 In calculating energy consumption from fuels and biofuels, the entity shall use higher heating values (HHV), also known as gross calorific values (GCV), which are directly measured or taken from the Intergovernmental Panel on Climate Change (IPCC), the U.S. Department of Energy (DOE), or the U.S. Energy Information Administration (EIA).
- 2 The entity shall disclose (2) the percentage of energy it consumed that was supplied from grid electricity.
 - 2.1 The percentage shall be calculated as purchased grid electricity consumption divided by total energy consumption.
- 3 The entity shall disclose (3) the percentage of energy it consumed that is renewable energy.
 - 3.1 Renewable energy is defined as energy from sources that are replenished at a rate greater than or equal to their rate of depletion, such as geothermal, wind, solar, hydro, and biomass.

- 3.2 The percentage shall be calculated as renewable energy consumption divided by total energy consumption.
- 3.3 The scope of renewable energy includes renewable fuel the entity consumed, renewable energy the entity directly produced, and renewable energy the entity purchased, if purchased through a renewable power purchase agreement (PPA) that explicitly includes renewable energy certificates (RECs) or Guarantees of Origin (GOs), a Green-e Energy Certified utility or supplier program, or other green power products that explicitly include RECs or GOs, or for which Green-e Energy Certified RECs are paired with grid electricity.
 - 3.3.1 For any renewable electricity generated on-site, any RECs and GOs must be retained (i.e., not sold) and retired or cancelled on behalf of the entity in order for the entity to claim them as renewable energy.
 - 3.3.2 For renewable PPAs and green power products, the agreement must explicitly include and convey that RECs and GOs be retained or replaced and retired or cancelled on behalf of the entity in order for the entity to claim them as renewable energy.
 - 3.3.3 The renewable portion of the electricity grid mix that is outside of the control or influence of the entity is excluded from the scope of renewable energy.
- 3.4 For the purposes of this disclosure, the scope of renewable energy from hydro and biomass sources is limited to the following:
 - 3.4.1 Energy from hydro sources that are certified by the Low Impact Hydropower Institute or that are eligible for a state Renewable Portfolio Standard; and
 - **3.4.2** Energy from biomass sources is limited to materials certified to a third-party standard (e.g., Forest Stewardship Council, Sustainable Forest Initiative, Programme for the Endorsement of Forest Certification, or American Tree Farm System), materials considered eligible sources of supply according to the Green-e Framework for Renewable Energy Certification, Version 1.0 (2017) or Green-e regional standards, and/or materials that are eligible for an applicable state renewable portfolio standard.
- 4 The entity shall apply conversion factors consistently for all data reported under this disclosure, such as the use of HHVs for fuel usage (including biofuels) and conversion of kilowatt hours (kWh) to GJ (for energy data including electricity from solar or wind energy).

EM-IS-130a.2. (1) Total fuel consumed, (2) percentage coal, (3) percentage natural gas, (4) percentage renewable

- 1 The entity shall disclose (1) the total amount of energy it consumed as an aggregate figure, in gigajoules (GJ).
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- 1.1 The calculation methodology for fuel consumed shall be based on actual fuel consumed as opposed to design parameters.
- 1.2 Acceptable calculation methodologies for fuel consumed include, but are not limited to, methodologies based on:
 - 1.2.1 Adding fuel purchases made during the reporting period to beginning inventory at the start of the reporting period, less any fuel inventory at the end of the reporting period
 - 1.2.2 Tracking fuel consumed by vehicles
 - 1.2.3 Tracking fuel expenses
- 2 The entity shall disclose (2) the percentage of fuel consumed that is coal.
 - 2.1 The percentage shall be calculated as the amount of coal consumed (in GJ) divided by the total amount of fuel consumed (in GJ).
 - 2.2 The scope of coal consumed includes, but is not limited to, thermal coal, metallurgical coal, coke, and coke breeze.
- 3 The entity shall disclose (3) the percentage of fuel consumed that is natural gas.
 - 3.1 The percentage shall be calculated as the amount of natural gas consumed (in GJ) divided by the total amount of fuel consumed (in GJ).
- 4 The entity shall disclose (4) the percentage of fuel consumed that is renewable fuel.
 - 4.1 Renewable fuel is <u>generally</u> defined, consistent with the U.S. Renewable Fuel Standard (U.S. 40 CFR 80.1401), as fuel that meets all of the following requirements:
 - 4.1.1 Produced from renewable biomass;
 - 4.1.2 Used to replace or reduce the quantity of fossil fuel present in a transportation fuel, heating oil, or jet fuel; and
 - 4.1.3 <u>Achieved net Has lifecycle</u> greenhouse gas (GHG) emissions reduction on a lifecycle basis-that are at least 20 percent less than baseline lifecycle GHG emissions, unless the fuel is exempt from this requirement pursuant to U.S. 40 CFR 80.1403.
 - 4.2 <u>The entity shall disclose the standard or regulation used to determine if a fuel is renewable.</u>

The scope of renewable fuel includes fuel that qualifies for Renewable Identification Numbers (RINs) under the U.S. Renewable Fuel Standard.

- 4.3 The percentage shall be calculated as the amount of renewable fuel consumed (in GJ) divided by the total amount of fuel consumed (in GJ).
- 5 In calculating energy consumption from fuels, the entity shall use higher heating values (HHV), also known as gross calorific values (GCV), which are directly measured or taken from the Intergovernmental Panel on Climate Change, the U.S. Department of Energy, or the U.S. Energy Information Agency.

6 The entity shall apply conversion factors consistently for all data reported under this disclosure, such as the use of HHVs for fuel usage.

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Water Management

Topic Summary

Steel production requires a substantial amount of water. Companies face operational, regulatory, and reputational risks due to water scarcity, costs of water acquisition, regulations on effluents or amount of water used, and competition with local communities and other industries for limited water resources. This is the case especially in regions of water scarcity, due to potential water availability constraints and price volatility. Companies that are unable to secure a stable water supply could face production disruptions, while rising water prices could directly increase production costs. Consequently, the adoption of technologies and processes that reduce water consumption could lower operating risks and costs for companies by minimizing the impact of regulations, water supply shortages, and community-related disruptions on company operations.

Metrics

EM-IS-140a.1. (1) Total fresh water withdrawn, (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress

- 1 The entity shall disclose the amount of water, in thousands of cubic meters, that was withdrawn from freshwater sources:
 - 1.1 Fresh water may be defined according to the local statutes and regulations where the entity operates. Where there is no regulatory definition, fresh water shall be considered to be water that has less than 1000 parts per million of dissolved solids per the U.S. Geological Survey.
 - 1.2 Water obtained from a water utility in compliance with U.S. National Primary Drinking Water Regulations jurisdictional drinking water regulations can be assumed to meet the definition of fresh water.
- 2 The entity shall disclose the percentage of water recycled as the volume, in thousands of cubic meters, recycled divided by the volume of water withdrawn.
 - 2.1 Any volume of water reused multiple times shall be counted as recycled each time it is recycled and reused.
- 3 The entity shall analyze all of its operations for water risks and identify activities that withdraw and consume water in locations with High (40–80%) or Extremely High (>80%) Baseline Water Stress as classified by the World Resources Institute's (WRI) Water Risk Atlas tool, Aqueduct.
- 4 The entity shall disclose its water withdrawn in locations with High or Extremely High Baseline Water Stress as a percentage of the total water withdrawn.
- 5 The entity shall disclose its water consumed in locations with High or Extremely High Baseline Water Stress as a percentage of the total water consumed.

Supply Chain Management

Topic Summary

Iron ore and coal are critical raw material inputs to the steel production process. Iron ore mining and coal production are resource-intensive processes. Extraction of these materials often has substantial environmental and social externalities affecting local communities, workers, and ecosystems. Such impacts can result in disruptions to mining operations due to community protests, legal or regulatory action, or increased costs of extraction as a result of regulatory compliance costs or penalties. Iron and steel companies could face disruptions as a result, or in some cases, may also be subject to regulatory penalties associated with the environmental or social impact of the mining company supplier. In order to minimize such risks, iron and steel producers may proactively manage their direct suppliers of critical raw materials to ensure that they are not engaged in illegal or otherwise environmentally or socially damaging practices, through appropriate supplier screening, monitoring, and engagement.

Metrics

EM-IS-430a.1. Discussion of the process for managing iron ore and/or coking coal sourcing risks arising from environmental and social issues

- 1 The entity shall discuss its policies and procedures for managing environmental and social risks that may affect sourcing that are present in its iron ore and/or coking coal supply chain.
 - 1.1 Discussion shall include any existing or projected risks or constraints in obtaining raw materials (e.g., iron ore, or coking coal) within the supply chain, including those related to restricted/limited availability, political situations, local labor conditions, natural disasters, climate change, or regulations.
 - 1.2 The scope of disclosure may include description of the use of screening, codes of conduct, audits, and certifications.
- 2 If audits are discussed, the entity may indicate whether audits are internal (first party), independent (third party), or administered by peers (e.g., trade organizations).