IFRS Sustainability

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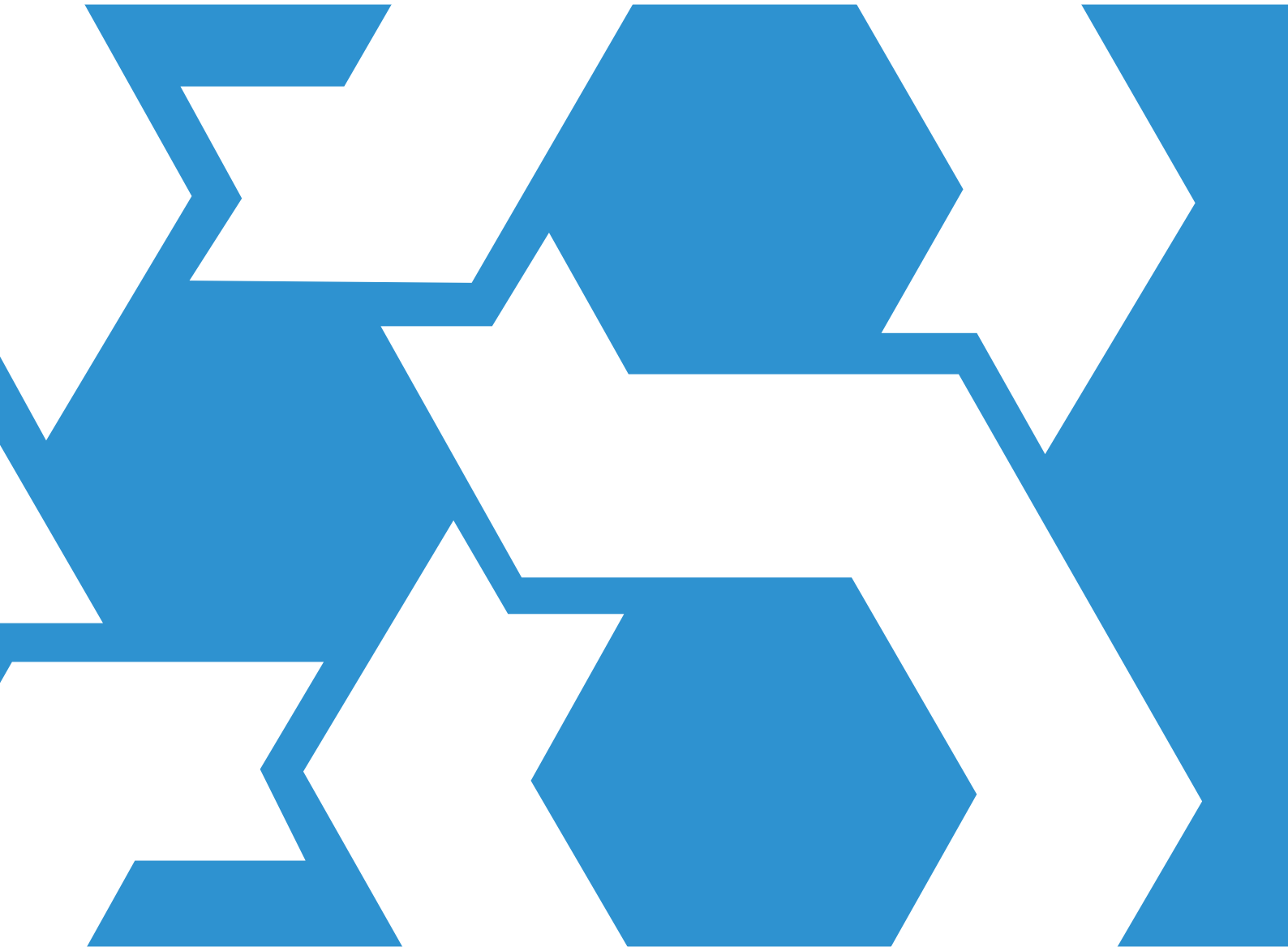
Exposure Draft

IFRS® Sustainability Disclosure Standard

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

Volume B50—Industrial Machinery & Goods

Comments to be received by 29 July 2022



International Sustainability Standards Board

ED/2022/S2

This industry from Appendix B Industry-based disclosure requirements accompanies the Exposure Draft ED/2022/S2 *Climate-related Disclosures* (published March 2022; see separate booklet). It is published by the International Sustainability Standards Board (ISSB) for comment only. Comments need to be received by 29 July 2022 and should be submitted by email to commentletters@ifrs.org or online at https://www.ifrs.org/projects/open-for-comment/.

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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.

Industrial Machinery & Goods

Industry Description

The Industrial Machinery & Goods industry manufactures equipment for a variety of industries including construction, agriculture, energy, utility, mining, manufacturing, automotive, and transportation. Products include engines, earth-moving equipment, trucks, tractors, ships, industrial pumps, locomotives, and turbines. Machinery manufacturers utilize large amounts of raw materials for production, including steel, plastics, rubber, paints, and glass. Manufacturers may also perform the machining and casting of parts before final assembly. Demand in the industry is closely tied to industrial production, while government emissions standards and customer demand are driving innovations to improve energy efficiency and limit air emissions during product use.

Sustainability Disclosure Topics & Metrics

Table 1. Sustainability Disclosure Topics & Metrics

TOPIC	METRIC	CATEGORY	UNIT OF MEASURE	CODE
Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	RT-IG-130a.1
Fuel Economy & Emissions in Use-phase	Sales-weighted fleet fuel efficiency for medium- and heavy-duty vehicles	Quantitative	Gallons per 1,000 ton-miles	RT-IG-410a.1
	Sales-weighted fuel efficiency for non-road equipment	Quantitative	Gallons per hour	RT-IG-410a.2
	Sales-weighted fuel efficiency for stationary generators	Quantitative	Watts per gallon	RT-IG-410a.3
	Sales-weighted emissions of: (1) nitrogen oxides (NO_x) and (2) particulate matter (PM) for: (a) marine diesel engines, (b) locomotive diesel engines, (c) on-road medium- and heavy-duty engines, and (d) other non-road diesel engines [88]	Quantitative	Grams per kilowatt-hour	RT-IG-410a.4

Table 2. Activity Metrics

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Number of units produced by product category [89]	Quantitative	Number	RT-IG-000.A
Number of employees	Quantitative	Number	RT-IG-000.B

[88] Note to **RT-IG-410a.4 –** The entity shall discuss its strategies and approach to managing fleet fuel economy and emissions risks and opportunities.

[89] Note to **RT-IG-000.A –** At a minimum, the entity should indicate the number of units produced for the following product categories: (1) vehicles and agricultural and construction equipment, (2) engines and power generation equipment, and (3) parts and components.

Energy Management

Topic Summary

Energy is a critical input in industrial machinery manufacturing. Purchased electricity represents the largest share of energy expenditures in the industry, followed by purchased fuels. The type of energy used, magnitude of consumption, and energy management strategies depends on the type of products manufactured. A company's energy mix, including the use of electricity generated on-site, grid-sourced electricity, and the use of alternative energy, can play an important role in influencing the cost and reliability of energy supply, and ultimately affect the company's cost structure and regulatory risk.

Metrics

RT-IG-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 is limited to those that are certified by the Low Impact Hydropower Institute or that are eligible for a state Renewable Portfolio Standard;~~

~~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).

Fuel Economy & Emissions in Use-phase

Topic Summary

Many of the Industrial Machinery & Goods industry's products are powered by fossil fuels and therefore release greenhouse gases (GHGs) and other air emissions during use. Customer preferences for improved fuel economy combined with regulations addressing emissions are increasing the demand for energy-efficient and lower-emission products in the industry. As such, companies that develop products with these characteristics may be well-positioned to capture expanding market share, reduce regulatory risk, and improve brand value.

Metrics

RT-IG-410a.1. Sales-weighted fleet fuel efficiency for medium- and heavy-duty vehicles

1 The entity shall disclose its sales-weighted average fleet fuel efficiency for medium- and heavy-duty vehicles, where:

1.1 Fleet fuel efficiency is defined as the average fuel economy of its medium- and heavy-duty commercial vehicles, weighted by the number of each sold during the reporting period and measured in gallons per 1,000 ton-miles.

1.2 The scope of disclosure includes ~~vehicles in the fleet that weigh 8,500 pounds or more, and which are covered under the U.S. Heavy Duty (HD) National Program, including~~ combination tractors (commonly known as semi-trucks or lorries), heavy duty ~~heavy-duty~~ pickup trucks and vans, and vocational vehicles.

1.3 The scope of disclosure includes vehicles in the fleet that weigh a minimum of: 3.5 metric tons or 8,500 pounds.

1.4 ~~1.3~~ Where fleet averages are calculated by model year for regulatory purposes, the entity shall use these performance data.

1.5 ~~1.4~~ In the absence of regulatory guidance on calculating a fleet average, the entity shall calculate performance based on the fuel economy of vehicles sold during the reporting period, weighted by sales volume.

2 The entity shall disclose the sales-weighted fuel efficiency requirement for its medium- and heavy-duty vehicles pursuant to the entity's jurisdictional heavy-duty vehicle fuel emissions standards or regulations~~, pursuant to U.S. HD National Program Fuel Consumption Standards, as issued and regulated by the U.S. National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (EPA)~~.

3 If the entity operates in more than one jurisdiction, the entity shall disclose the standard or regulation used to determine if a fuel is renewable.

RT-IG-410a.2. Sales-weighted fuel efficiency for non-road equipment

1 The entity shall disclose its sales-weighted average fuel efficiency for its non-road equipment and vehicles, where:

1.1 Fuel efficiency is defined as the average fuel economy of its non-road equipment, weighted by the number of each unit sold during the reporting period and measured in gallons of fuel consumed per hour of operation (gallons per hour).

1.1.1 In calculating gallons per hour, the entity shall use the model-rated fuel efficiency value for each piece of equipment where available.

1.1.2 Where model-rated fuel efficiency values are not available, the entity shall calculate a gallons-per-hour operational efficiency for the equipment, assuming normal, reasonable operating conditions (e.g., for load factor, speed, and environmental conditions).

1.2 Non-road equipment includes, but is not limited to, excavators and other construction equipment, farm tractors and other agricultural equipment, heavy forklifts, airport ground service equipment, and utility equipment such as generators, pumps, and compressors.

RT-IG-410a.3. Sales-weighted fuel efficiency for stationary generators

1 The entity shall disclose the sales-weighted average fuel efficiency of its stationary generators, where:

1.1 Sales-weighted fuel efficiency is the average fuel efficiency of stationary generators sold during the reporting period, measured in watts per gallon.

2 Sales-weighted fuel efficiency is calculated as the harmonic mean of design fuel efficiency in watts per gallon, where:

2.1 The harmonic mean captures the average amount of fuel needed by each generator to produce a given amount of power.

2.2 The harmonic mean is the reciprocal of the average of the reciprocal values.

RT-IG-410a.4. Sales-weighted emissions of: (1) nitrogen oxides (NO_x) and (2) particulate matter (PM) for: (a) marine diesel engines, (b) locomotive diesel engines, (c) on-road medium- and heavy-duty engines, and (d) other non-road diesel engines

1 The entity shall disclose the sales-weighted average emissions of (1) nitrogen oxides (NO_x) and (2) particulate matter (PM) for each of the following product categories: (a) marine diesel engines, (b) locomotive diesel engines, (c) on-road medium- and heavy-duty engines, and (d) other non-road diesel engines, where:

1.1 Emissions are calculated as the average emissions of (1) NO_x and (2) PM for engines, weighted by the number of each sold during the reporting period and measured in grams per kilowatt hour.

1.2 Marine diesel engines, locomotive diesel engines, on-road medium- and heavy-duty engines, and other non-road diesel engines shall be defined based on the applicable jurisdictional standard, guideline, or regulation.

~~Marine diesel engines are defined as those that are addressed within the scope of U.S. 40 CFR Part 1042, 40 CFR Part 94, 40 CFR Part 89, or non-U.S. equivalent.~~

~~1.3~~ ~~Locomotive diesel engines are defined as those that are addressed within the scope of U.S. 40 CFR Part 1033, or non-U.S. equivalent.~~

~~1.4~~ ~~On-road heavy-duty engines are defined as those that are addressed within the scope of U.S. 40 CFR Chapter 1 Subchapter C Part 86, or non-U.S. equivalent.~~

1.2.1 ~~1.5~~ ~~Other non-road diesel engines are defined as those that are addressed within the scope of U.S. 40 CFR Part 1039, or non-U.S. equivalent, and typically include~~Other non-road diesel engines include but are not limited to: excavators and other construction equipment, farm tractors and other agricultural equipment, heavy forklifts, airport ground service equipment, and utility equipment such as generators, pumps, and compressors.

1.3 ~~1.6~~ The entity shall state the calculation method used to calculate emissions.

~~Emissions shall be calculated according to the test method described in U.S. 40 CFR Part 1065, or non-U.S. equivalent.~~

1.4 ~~1.7~~ The entity may disclose if any products do not meet current emission standards established in jurisdictional standards or regulations ~~the above-referenced U.S. 40 CFR Part 1042, 40 CFR Part 94, and 40 CFR Part 89 for marine diesel engines; 40 CFR Part 1033 for locomotive diesel engines; 40 CFR Part 86 Subpart A for heavy-duty on-road engines; 40 CFR Part 1039 for other non-road diesel engines, or non-U.S. equivalents~~.

2 The entity may discuss its progress toward, and readiness for, future jurisdictional ~~U.S. federal- and state-level, or non-U.S. equivalent,~~ emissions standards that could affect its products.

Note to **RT-IG-410a.4**

1 The entity shall discuss its strategies and approach to managing fleet fuel economy and emissions risks and opportunities.

2 Relevant aspects of the approach and strategy to discuss include improvements to existing products and technologies, the introduction of new technologies, research and development efforts into advanced technologies, and partnerships with peers, academic institutions, and/or customers (including governmental customers).

