IFRS Sustainability

March 2022

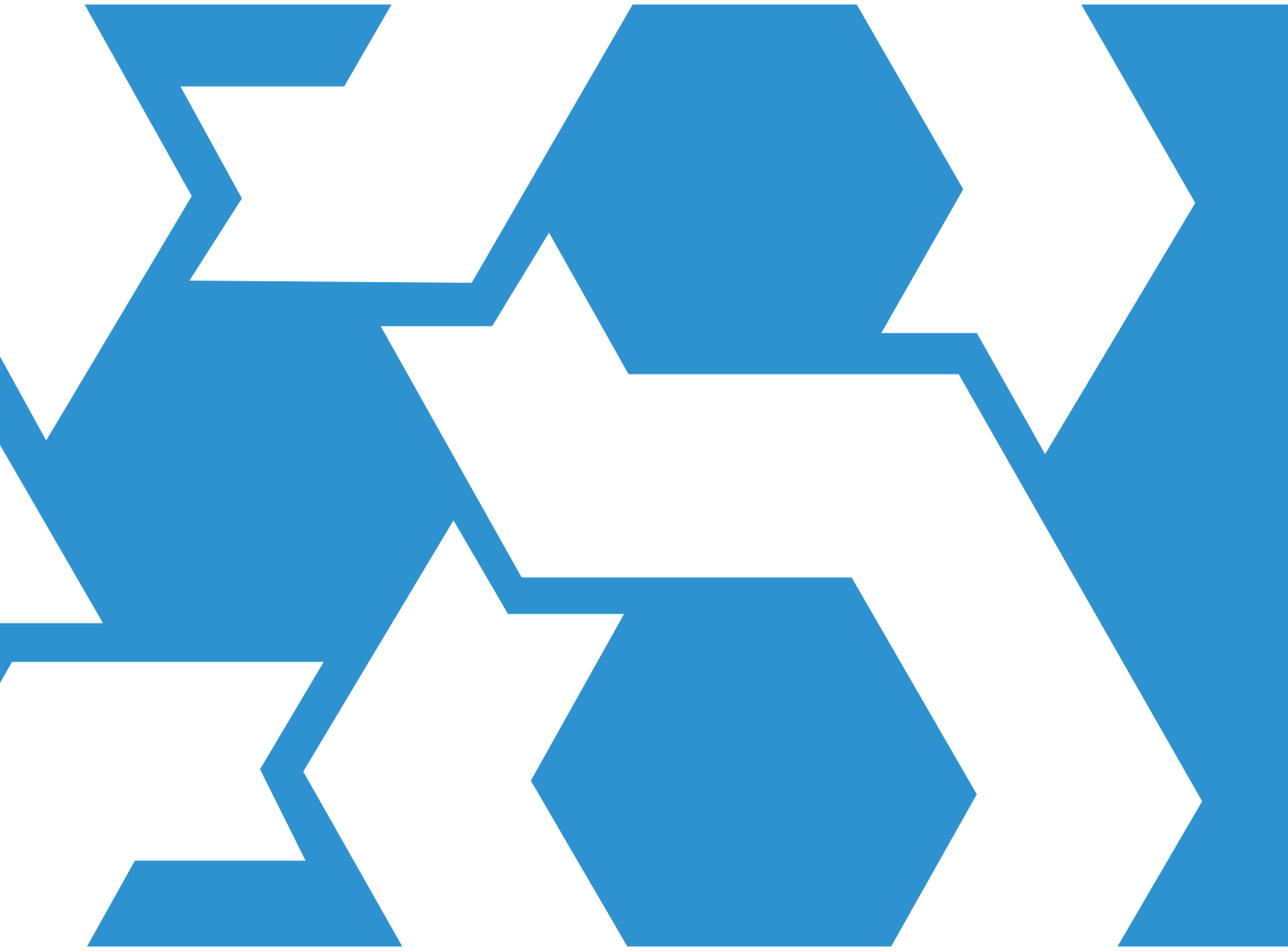
Exposure Draft

IFRS® Sustainability Disclosure Standard

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

Volume B8—Construction Materials

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.

Construction Materials

Industry Description

Construction materials companies have global operations and produce construction materials for sale to construction firms or wholesale distributors. These primarily include cement and aggregates, but also glass, plastic materials, insulation, bricks, and roofing material. Materials producers operate their own quarries, mining crushed stone or sand and gravel. They may also purchase raw materials from the mining and petroleum industries.

Note: Companies producing wood-building products are included the Building Products & Furnishings (CG-BF) industry, Forestry Management industry (RR-FM), and Pulp & Paper Products industry (RR-PP) under the Sustainable Industry Classification System (SICS) and are not included in the Construction Materials standard.

Sustainability Disclosure Topics & Metrics

Table 1. Sustainability Disclosure Topics & Metrics

TOPIC	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-CM-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-CM-110a.2
Air Quality	Air emissions of the following pollutants: (1) NO_x (excluding N_2O), (2) SO_x, (3) particulate matter (PM_{10}), (4) dioxins/furans, (5) volatile organic compounds (VOCs), (6) polycyclic aromatic hydrocarbons (PAHs), and (7) heavy metals	Quantitative	Metric tons (t)	EM-CM-120a.1
Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage alternative, (4) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	EM-CM-130a.1
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), Percentage (%)	EM-CM-140a.1
Waste Management	Amount of waste generated, percentage hazardous, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	EM-CM-150a.1

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TOPIC	METRIC	CATEGORY	UNIT OF MEASURE	CODE
Product Innovation	Percentage of products that qualify for credits in sustainable building design and construction certifications	Quantitative	Percentage (%) by annual sales revenue	EM-CM-410a.1
	Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production	Quantitative	Reporting currency, Percentage (%)	EM-CM-410a.2

Table 2. Activity Metrics

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Production by major product line [9]	Quantitative	Metric tons (t)	EM-CM-000.A

[9] Note to **EM-CM-000.A –** Determination of major product line (e.g., cement and aggregates, composites, roofing materials, fiberglass, brick, and tile, or others) should be based on revenue generation, and may include a category of "other" construction materials products that combines multiple smaller revenue streams.

Greenhouse Gas Emissions

Topic Summary

The production of construction materials, particularly cement, generates significant direct greenhouse gas (GHG) emissions from on-site fuel combustion and chemical processes. The industry has achieved gains in efficiency for reducing emissions per ton of materials produced. At the same time, increasing production is associated with an increase in absolute emissions from cement production. The production of construction materials remains carbon-intensive relative to other industries, exposing the industry to higher operating and capital expenditures from emissions regulations. Strategies to reduce GHG emissions include: energy efficiency, use of alternative and renewable fuels, carbon sequestration, and clinker substitution. 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 as well as direct emissions from regulations that seek to limit—or put a price on—GHG emissions.

Metrics

EM-CM-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 (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

1.1 Emissions of all GHGs shall be consolidated and disclosed in metric tons of carbon dioxide equivalent (CO_2-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 products 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) that is 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 (CO_2-e) that are covered under emissions-limiting regulations divided by the total amount of gross global Scope 1 GHG emissions (CO_2-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.

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-CM-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 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).

1.2 The scope of GHG emissions includes the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

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.

Air Quality

Topic Summary

On-site fuel combustion and production processes in the Construction Materials industry emit criteria air pollutants and hazardous chemicals, including small quantities of organic compounds and heavy metals. Emissions of particular concern include nitrogen oxides, sulfur dioxides, particulate matter, heavy metals (e.g., mercury), dioxins, and volatile organic compounds, among others. These air emissions can have significant, localized human health and environmental impacts. Financial impacts resulting from air emissions will vary depending on the specific location of operations and the applicable air emissions regulations, but could include higher operating or capital expenditures and regulatory or legal penalties. Active management of the issue—through technological and process improvements—could allow companies to limit the impact of regulations and benefit from operational efficiencies that could lead to a lower cost structure over time.

Metrics

EM-CM-120a.1. Air emissions of the following pollutants: (1) NO_x (excluding N_2O), (2) SO_x, (3) particulate matter (PM_{10}), (4) dioxins/furans, (5) volatile organic compounds (VOCs), (6) polycyclic aromatic hydrocarbons (PAHs), and (7) heavy metals

1 The entity shall disclose its emissions of air pollutants, in metric tons per pollutant, that are released into the atmosphere.

1.1 The scope of disclosure includes air pollutants associated with the entity's direct air emissions resulting from all of the entity's activities and sources of emissions, including, but not limited to, stationary and mobile sources, production facilities, office buildings, and transportation fleets.

2 The entity shall disclose its emissions of (1) oxides of nitrogen (NO_X), reported as NO_X.

2.1 The scope of NO_X includes NO and NO_2, but excludes N_2O.

3 The entity shall disclose its emissions of (2) oxides of sulfur (SO_X), reported as SO_X.

3.1 The scope of SO_X includes SO_2 and SO_3.

4 The entity shall disclose its emissions of (3) particulate matter 10 micrometers or less in diameter (PM_{10}), reported as PM_{10}.

4.1 PM_{10} is defined~~, according to U.S. 40 CFR Part 51.100,~~ as any airborne finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

5 The entity shall disclose its emissions of (4) dioxins/furans.

5.1 Dioxins/furans include, but are not limited to the sum of the 17 congeners of polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) that contain chlorine

6 The entity shall disclose its emissions of (5) non-methane volatile organic compounds (VOCs).

6.1 VOCs are defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and methane, that participates in atmospheric photochemical reactions, except those designated by ~~the U.S. Environmental Protection Agency (EPA)~~ the relevant jurisdictional regulator as having negligible photochemical reactivity.

~~6.1.1 This definition is aligned with U.S. 40 CFR Part 51.100, where a list of compounds that have been determined to have negligible photochemical reactivity can be obtained.~~

6.1.1 ~~6.1.2~~ Where applicable regulatory definitions of VOCs may conflict with this definition, such as the EU Paints Directive (Directive 2004/42/EC), and Schedule 1 of the Canadian Environmental Protection Act 1999, the entity may define VOCs as per the applicable regulatory definition.

7 The entity shall disclose its emissions of (6) polycyclic aromatic hydrocarbons (PAHs).

7.1 PAHs include, but are not limited to those listed in Table 1 of the European Commission Joint Research Centre's Institute for Reference Materials and Measurements PAH Factsheet.

7.1.1 These include compounds frequently monitored by the Scientific Committee for Food (SCF), the European Union (EU), and the U.S. EPA.

8 The entity shall disclose its emissions of (7) heavy metals.

8.1 The scope of heavy metals includes Lead (Pb), mercury (Hg), and cadmium (Cd).

9 The entity may discuss the calculation methodology for its emissions disclosure, such as whether data are from continuous emissions monitoring systems (CEMS), engineering calculations, or mass balance calculations.

Energy Management

Topic Summary

The production of construction materials requires a significant quantity of energy, sourced primarily from direct combustion of fossil fuels as well as from purchased electricity. Energy-intense production has implications for climate change, and electricity purchases from the grid can create indirect Scope 2 emissions. Construction materials companies also use alternative fuels for their kilns, such as scrap tires and waste oil—often waste generated by other industries. If properly managed, these can lower energy costs and greenhouse gas (GHG) emissions. However, there could be potentially negative impacts, such as releases of harmful air pollutants that companies need to minimize in order to obtain net benefits from using such fuels. Decisions about use of alternative fuels, renewable energy, and on-site generation of electricity (versus purchases from the grid) 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 purchased fuels and electricity accounting for a significant proportion of total production costs. The way in which a construction materials 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-CM-130a.1. (1) Total energy consumed, (2) percentage grid electricity, (3) percentage alternative, (4) 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 was from alternative sources, in terms of its energy content.

3.1 Alternative sources of energy include, but are not limited to: used tires, spent solvents and waste oils, processed municipal solid waste, household wastes, agricultural wastes such as rice, peanut shells and coffee husks, animal meal, and sewage sludge.

4 The entity shall disclose (4) the percentage of energy it consumed that is renewable energy.

4.1 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.

4.2 The percentage shall be calculated as renewable energy consumption divided by total energy consumption.

4.3 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.

4.3.1 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.

4.3.2 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.

4.3.3 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.

4.4 For the purposes of this disclosure, the scope of renewable energy from ~~hydro and~~ biomass sources is limited to ~~the following:~~

~~4.4.1 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;~~

~~4.4.2~~ ~~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.

5 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).

Water Management

Topic Summary

The production of construction materials requires substantial volumes of water for the production process. 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. Risks are likely to be higher 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-CM-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.

Waste Management

Topic Summary

Recycling rates in construction materials production are high. However, wastes from production processes, pollution control devices, and from hazardous waste management activities present a regulatory risk and can raise operating costs. Cement kiln dust (CKD)—consisting of fine-grained, solid, highly alkaline waste removed from cement kiln exhaust gas by air pollution control devices—is the most significant waste category in the industry. Regulatory risk remains from evolving environmental laws, including those at local and national levels and for other waste streams. Companies that reduce waste streams—hazardous waste streams in particular—and recycle by-products, can therefore lower regulatory and litigation risks and costs.

Metrics

EM-CM-150a.1. Amount of waste generated, percentage hazardous, percentage recycled

1 The entity shall disclose the amount of waste generated in metric tons.

1.1 Waste is defined as anything for which the entity has no further use and which is discarded or is released to the environment.

1.2 The scope includes slags, dusts, sludges, used oil, and other solid wastes that meet the above definition.

1.3 The scope excludes gaseous wastes.

2 The entity shall disclose the percentage of waste generated that was hazardous.

2.1 The percentage of hazardous waste shall be calculated as the weight ~~of waste that meets the definition of hazardous waste under~~hazardous waste as defined per the legal or regulatory framework(s) applicable within the jurisdiction(s) where the waste is generated divided by the total weight of waste material.

2.2 Hazardous waste generally includes those that display the following characteristics: ignitability, corrosivity, reactivity, or toxicity.

2.3 The entity may use Subtitle C of the U.S. Environmental Protection Agency's (EPA) Resource Conservation and Recovery Act (RCRA) or ~~under~~ the EU Waste Framework Directive (Directive 2008/98/EC on waste, including its subsequent amendments) ~~divided by the total weight of waste material~~ for the purposes of defining hazardous waste for operations located in jurisdictions that lack applicable legal or regulatory definitions.

~~2.2 Hazardous wastes include those that display the following characteristics: ignitability, corrosivity, reactivity, or toxicity.~~

2.4 The entity shall disclose the applicable jurisdictional standard or regulation used to define hazardous waste.

3 The entity shall disclose the percentage of waste generated that was recycled.

3.1 The percentage recycled shall be calculated as the weight of waste material that was reused, plus the weight recycled or remanufactured (through treatment or processing) by the entity, plus the amount sent externally for further recycling, divided by the total weight of waste material, where:

3.1.1 Reused materials are defined as those recovered products or components of products that are used for the same purpose for which they were conceived.

3.1.2 Recycled and remanufactured materials are defined as waste materials that have been reprocessed or treated by means of production or manufacturing processes and made into a final product or made into a component for incorporation into a product.

3.1.3 The scope of recycled and remanufactured products include primary recycled materials, co-products (outputs of equal value to primary recycled materials), and by-products (outputs of lesser value to primary recycled materials).

3.1.4 Portions of products and materials that are disposed of in landfills are not considered recycled; only the portions of products that are directly incorporated into new products, co-products, or by-products shall be included in the percentage recycled.

3.1.5 Materials sent for further recycling include those materials which are transferred to a third party for the expressed purpose of reuse, recycling, or refurbishment.

3.2 Materials incinerated, including for energy recovery, shall not be considered within the scope of recycled materials.

3.2.1 Energy recovery is defined as the use of combustible waste as a means to generate energy through direct incineration, with or without other waste, but with recovery of the heat.

3.2.2 The entity may separately disclose the percentage of hazardous waste generated that was incinerated.

Product Innovation

Topic Summary

Innovations in building materials are a key component in the growth of sustainable construction. Consumer and regulatory trends are largely driving adoption of sustainable building materials and processes that are more resource efficient and can reduce health impacts of buildings throughout their lifecycle. This is creating new business drivers for construction materials companies, with an opportunity to increase revenues. Furthermore, some new products require less energy to produce, or use largely recycled inputs, reducing production costs. Sustainable construction materials, therefore, can contribute to a company's long-term growth and competitiveness.

Metrics

EM-CM-410a.1. Percentage of products that qualify for credits in sustainable building design and construction certifications

1 The entity shall calculate the percentage as the revenue during the reporting period from products that qualify for credits in recognized sustainable design and construction certifications divided by the total revenue from building products.

1.1 The scope of products excludes raw or intermediate materials that would require additional manufacturing before being incorporated into a building; the entity shall exclude these products from the numerator and denominator of its calculations.

2 Recognized sustainable building design and construction certifications and guidelines include: BREEAM® (BRE Global), Green Globes® (Green Building Initiative), LEED® (U.S. Green Building Council), and ICC-700 National Green Building Standard® (National Association of Home Builders).[10]

2.1 If the entity's products can be used to obtain credits in certifications other than those described above, it shall provide the name of the certification and evidence of why it is equal to or more rigorous than those standards listed here.

3 The entity may disclose and discuss which specific products contribute to sustainable building practices and future plans to address market demand for these types of products.

EM-CM-410a.2. Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production

1 The entity shall provide an estimation of the total addressable market for products that show reduced environmental impacts at various lifecycle stages, including during material sourcing, manufacturing, and product usage (hereafter, "reduced environmental impact products").

[10] SASB is not affiliated with any of the standards or organization listed, and listing should not be taken as an endorsement of any standard or organization. Listing of standards is not meant to imply that standards are identical in scope, underlying requirements, or criteria, or that standards are interchangeable.

1.1 Total addressable market is defined as potential revenue ~~(in billions of U.S. dollars)~~ should the entity capture 100 percent of the market share of the product category (e.g., the global market for reduced environmental impact building products).

2 The scope of products includes those:

2.1 With product attributes that reduce energy consumption or increase energy efficiency for users, such as by providing improved insulation as compared to typical products

2.2 With process or product attributes that reduce the amount water required in manufacturing, during product assembly, or product usage

2.3 That use secondary or recycled materials in place of virgin materials such that upstream impacts are reduced

2.4 Made with design innovations that lower carbon emissions during manufacturing, such as use of renewable fuels, energy efficiency improvements, or the use of materials requiring less processing

3 If there is a significant difference between the total addressable market and the market that the entity can serve through its existing or planned capabilities, sales channels, or products (i.e., the serviceable available market) then the entity should disclose this information.

4 The entity shall disclose the share of the total addressable market for reduced environmental impact products that it currently captures with its products.

4.1 Market share shall be calculated as revenues from these products divided by the size of the total addressable market.

5 The entity may provide a projection of growth of this market, where the projected addressable market is represented – based on a reasonable set of assumptions about changes in market conditions – as a percentage of year-on-year growth or as an estimate of the market size after a defined period (i.e., the market size in 10 years).

5.1 The entity may disclose its target three-year market share as a measurement of targeted growth, where the target is the percentage of the total addressable market that the entity plans to address over a three-year time horizon.

