



PROPOSED CHANGES TO PROVISIONAL STANDARDS

BASIS FOR CONCLUSIONS

Extractives & Minerals Processing Sector

Oil & Gas - Exploration & Production

Oil & Gas - Midstream

Oil & Gas - Refining & Marketing

Oil & Gas - Services

Coal Operations

Iron & Steel Producers

Metals & Mining

Construction Materials

Prepared by the
Sustainability Accounting Standards Board®

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Introduction

Robust and resilient sustainability accounting standards must not only address the sustainability-related risks and opportunities faced by reporting organizations, they must themselves be sustainable. That is, they must be designed to continually and systematically adapt to an ever-changing world. For this reason, the SASB engages in ongoing technical research and market consultation to ensure the maintenance of decision-useful, cost-effective standards. As changes occur in an industry's competitive context, in the broader sustainability landscape, or in the interests of the reasonable investor, this approach—bolstered by rigorous analysis and bottom-up, market-based input—is key to maintaining a set of standards that evolve to support market needs.

When potentially necessary or appropriate updates to the standards are identified by the SASB's own research or through engagement with corporate issuers, investors, or other subject matter experts, those items may be added to the SASB's Research Agenda or future Technical Agendas, indicating that such items are under review. For such items, the SASB staff prepares proposed updates intended to both incorporate its findings and to satisfy the essential concepts of sustainability accounting set forth in the [SASB Conceptual Framework](#). These updates are then proposed to the SASB Standards Board for review and approval.

The Basis for Conclusions for the proposed changes to provisional standards details the SASB staff's considerations in developing the updates included in the published 2017 Technical Agenda, helping users to better understand the updates and the reasoning behind them. The Basis for Conclusions go hand-in hand with the Exposure Draft of the standard, and highlight the specific proposed updates and associated changes per industry per sector. An explanation and rationale for each change is included herein.

About the SASB

Established in 2011, the Sustainability Accounting Standards Board (SASB) is the independent standards-setting organization for sustainability accounting standards that meet the needs of investors by fostering high-quality disclosure of material sustainability information. The standards focus on known trends and uncertainties that are reasonably likely to affect the financial condition or operating performance of a company and therefore would be required to be disclosed under Regulation S-K. The standards are designed to improve the effectiveness and comparability of corporate disclosure on material environmental, social, and governance (ESG) factors in Securities and Exchange Commission filings such as Forms 8-K, 10-K, 20-F, and 40-F. Based on a rigorous process that includes evidence-based research and broad, balanced stakeholder participation, the SASB currently maintains provisional standards for 79 industries across 11 sectors.¹

The SASB Standards Board, seated in 2017, comprises nine members, representing a diversity of key perspectives, including standards-setting, corporate reporting, and investing and financial analysis. The Standards Board is responsible for guiding the standard-setting process and for the quality of its outcomes. The SASB operates in accordance with its primary governance documents, the [SASB Rules of Procedure](#) and [SASB Conceptual Framework](#). The [SASB Conceptual Framework](#) sets out the basic concepts, principles, definitions, and objectives that guide the SASB in its approach to setting standards for sustainability-related matters. The [SASB Rules of Procedure](#) establish the

¹ Where traditional industry classification systems group companies by sources of revenue, the SASB's approach considers the resource intensity of firms, and groups industries with like sustainability characteristics, including risks and opportunities, within SASB's Sustainable Industry Classification System™ (SICS™) found at: <https://www.sasb.org/sics/>. SASB has proposed a number of amendments to SICS, and the revised classification system will go into effect when the standards are codified in early 2018. [Proposed changes](#) to SICS are on SASB's website and the Updates proposed herein are based on the amended classification.

processes and practices followed by the SASB in its standard-setting activities, and in its oversight of related work undertaken by the SASB staff. The following fundamental tenets underpin the SASB's efforts:

- **Materiality-Focused:** SASB standards address the sustainability topics that are reasonably likely to have material impacts on the financial condition or operating performance of companies in an industry. In identifying sustainability topics that are reasonably likely to have material impacts, the SASB applies the definition of "materiality" established under the U.S. securities laws.² For more information, see the staff bulletin [SASB's Approach to Materiality for the Purpose of Standards Development](#).
- **Evidence-Based:** The SASB takes an evidence-based approach to assess whether sustainability topics are likely to be of interest to the reasonable investor, and whether they are reasonably likely to have material impacts on the financial condition or operating performance of a company. Evidence is drawn from both internal research and from credible external sources, such as financial filings, earnings calls, databases of U.S. government agencies, industry research products, and academic studies, among others.
- **Market-Informed:** The SASB standards are shaped in large part by feedback from participants in the capital markets—primarily corporate issuers and mainstream investors. The SASB actively solicits input and carefully weighs all stakeholder perspectives in considering which aspects of a sustainability topic warrant standardized disclosure and in determining how to frame, describe, and measure those aspects for the purposes of standardization. The SASB's consultation efforts have involved engagement through Industry Working Groups over a four-year period with more than 2,800 experts, representing \$23.4 trillion in assets under management and more than \$11 trillion market capitalization. Recently, deep consultation on the provisional standards included 141 companies (along with 19 industry associations, representing hundreds of companies) and 38 institutional investors (who consulted on 271 industries). Additionally, the SASB's Investor Advisory Group (IAG) comprises 28 organizations, representing more than \$20 trillion in assets under management, including BlackRock, California Public Employees' Retirement System (CalPERS), California State Teachers' Retirement System (CalSTRS), State Street Global Advisors, and others. This market feedback has played a significant role in shaping the SASB's 2017 Technical Agenda.

In its guidance and oversight role, the SASB operates in a sector committee structure, which assigns a minimum of three Standards Board members to each sector for review, discussion, and liaising with staff. The committees are structured as follows:

² TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438 (1976).

SASB Sector Committees

| | | |
|---|--|---|
| <p>Health Care <u>Industries:</u> Biotechnology & Pharmaceuticals; Medical Equipment & Supplies; Health Care Delivery; Health Care Distributors; Managed Care; Drug Retailers <u>Committee Members:</u> Lloyd Kurtz*, Bob Hirth, Jean Rogers</p> | <p>Renewable Resources & Alternative Energy <u>Industries:</u> Biofuels; Solar Technology & Project Developers; Wind Technology & Project Developers; Fuel Cells & Industrial Batteries; Forestry Management; Pulp & Paper Products <u>Committee Members:</u> Stephanie Tang*, Jeff Hales, Kurt Kuehn</p> | <p>Food & Beverage (formerly Consumption I) <u>Industries:</u> Agricultural Products; Meat, Poultry, & Dairy; Processed Foods; Non-Alcoholic Beverages; Alcoholic Beverages; Tobacco; Food Retailers & Distributors; Restaurants <u>Committee Members:</u> Stephanie Tang*, Elizabeth Seeger, Lloyd Kurtz</p> |
| <p>Financials <u>Industries:</u> Commercial Banks; Investment Banking & Brokerage; Asset Management & Custody Activities; Consumer Finance; Mortgage Finance; Security & Commodity Exchanges; Insurance <u>Committee Members:</u> Jeff Hales*, Dan Goelzer, Verity Chegar</p> | <p>Transportation <u>Industries:</u> Automobiles; Auto Parts; Car Rental & Leasing; Airlines; Air Freight & Logistics; Marine Transportation; Cruise Lines; Rail Transportation; Road Transportation <u>Committee Members:</u> Kurt Kuehn*, Jean Rogers, Jeff Hales</p> | <p>Consumer Goods (formerly Consumption II) <u>Industries:</u> Apparel, Accessories & Footwear; Appliance Manufacturing; Household & Personal Products; Building Products & Furnishings; Toys & Sporting Goods; Multiline and Specialty Retailers & Distributors; E-commerce <u>Committee Members:</u> Elizabeth Seeger*, Stephanie Tang, Kurt Kuehn</p> |
| <p>Technology & Communications <u>Industries:</u> Electronic Manufacturing Services & Original Design Manufacturing; Software & IT Services; Hardware; Semiconductors; Telecommunication Services; Internet Media & Services <u>Committee Members:</u> Bob Hirth*, Lloyd Kurtz, Verity Chegar</p> | <p>Services <u>Industries:</u> Education; Professional & Commercial Services; Hotels & Lodging; Casinos & Gaming; Leisure Facilities; Advertising & Marketing; Media & Entertainment <u>Committee Members:</u> Dan Goelzer*, Jeff Hales, Bob Hirth</p> | <p>Infrastructure <u>Industries:</u> Electric Utilities & Power Generators; Gas Utilities & Distributors; Water Utilities & Services; Waste Management; Engineering & Construction Services; Home Builders; Real Estate; Real Estate Services <u>Committee Members:</u> Jean Rogers*, Kurt Kuehn, Verity Chegar</p> |
| <p>Extractives & Minerals Processing (formerly Non-Renewable Resources) <u>Industries:</u> Oil & Gas - Exploration & Production; Oil & Gas – Midstream; Oil & Gas - Refining & Marketing; Oil & Gas – Services; Coal Operations; Iron & Steel Producers; Metals & Mining; Construction Materials <u>Committee Members:</u> Verity Chegar*, Elizabeth Seeger, Bob Hirth</p> | <p>Resource Transformation <u>Industries:</u> Chemicals; Aerospace & Defense; Electrical & Electronic Equipment; Industrial Machinery & Goods; Containers & Packaging <u>Committee Members:</u> Lloyd Kurtz*, Dan Goelzer, Jean Rogers</p> | <p style="text-align: right;">* Sector chair</p> |

The Standards Board sector committees have reviewed proposed changes to the provisional standards, based on the Technical Agenda, in anticipation of ratifying the standards in Q1 2018.

Commenting

The SASB has voted to release the Proposed Changes to Provisional Standards: Basis for Conclusions compendium and the Exposure Drafts of the standards, thus initiating a 90-day Public Comment Period. The Public Comment Period will occur from October 2, 2017, to December 31, 2017. During this time, the public may submit comments to the SASB on the proposed updates to the standards. Public comments will be evaluated in the process to ratify the standards, expected in early 2018. Further guidance on the Public Comment Period, including instructions to submit comments and accessing the Basis for Conclusions and Exposure Drafts, is available at: <http://www.sasb.org/public-comment>. Other questions on the SASB or the Public Comment Period may be sent to: info@sasb.org.

Proposed Changes to Provisional Standards: Basis for Conclusion Overview

The following provides a detailed description of—and rationale for—each change proposed to the SASB Provisional Standard for the industries within the Extractives & Minerals Processing sector. Changes may be related to content, including adding, removing, or reframing a topic or adding, removing, or revising a metric. Changes may also be technical in nature, including updates to a metric’s scope, definitions, third-party references, or harmonization across SASB’s standards and/or with external initiatives. Typographical and other editorial changes have not been included below but can be provided to interested parties or reviewed in the redline Public Comment Standard.

Guidance Used to Determine Proposed Updates

In preparing its proposed updates, the SASB is guided by the *Fundamental Tenets of the SASB Approach to Standards-Setting*, which are designed to better achieve the *Core Objectives of the SASB*, as established by the *SASB Conceptual Framework*.

Topic-Level Proposed Updates

Proposed updates that relate to the addition, removal, or reframing of a topic are based on the following *Principles for Topic Selection* (“Principles”), as established by the *SASB Conceptual Framework*:

- **Potential to affect corporate value:** Through research and stakeholder input, the SASB identifies topics that can or do affect operational and financial performance through three channels of impact: (1) revenues and costs, (2) assets and liabilities, and (3) cost of capital or risk profile.
- **Of interest to investors:** The SASB addresses issues likely to be of interest to investors by assessing whether a topic emerges from the “total mix” of information available through the existence of, or potential for, impacts on five factors: (1) direct financial impacts and risk; (2) legal, regulatory, and policy drivers; (3) industry norms, best practices, and competitive drivers; (4) stakeholder concerns that could lead to financial impacts; and (5) opportunities for innovation.
- **Relevant across an industry:** The SASB addresses topics that are systemic to an industry and/or represent risks and opportunities unique to the industry and which, therefore, are likely to apply to many companies within the industry.

- **Actionable by companies:** The SASB assesses whether broad sustainability trends can be translated into industry-specific topics that are within the control or influence of individual companies.
- **Reflective of stakeholder (investor and issuer) consensus:** The SASB considers whether there is consensus among issuers and investors that each disclosure topic is reasonably likely to constitute material information for most companies in the industry.

Metric-Level Proposed Updates

Proposed updates that relate to the addition, removal, or revision of a metric are based on the following Criteria for Accounting Metrics (“Criteria”), as established by the *SASB Conceptual Framework*:

- **Fair Representation:** A metric adequately and accurately describes performance related to the aspect of the disclosure topic it is intended to address, or is a proxy for performance on that aspect of the disclosure topic.
- **Useful:** A metric will provide useful information to companies in managing operational performance on the associated topic and to investors in performing financial analysis.
- **Applicable:** Metrics are based on definitions, principles, and methodologies that are applicable to most companies in the industry based on their typical operating context.
- **Comparable:** Metrics will yield primarily (a) quantitative data that allow for peer-to-peer benchmarking within the industry and year-on-year benchmarking for an issuer, but also (b) qualitative information that facilitates comparison of disclosure.
- **Complete:** Individually, or as a set, the metrics provide enough data and information to understand and interpret performance associated with all aspects of the sustainability topic.
- **Verifiable:** Metrics are capable of supporting effective internal controls for the purposes of data verification and assurance.
- **Aligned:** Metrics are based on those already in use by issuers or are derived from standards, definitions, and concepts already in use by issuers, governments, industry associations, and others.
- **Neutral:** Metrics are free from bias and value judgment on behalf of the SASB, so that they yield an objective disclosure of performance that investors can use regardless of their worldview or outlook.
- **Distributive:** Metrics are designed to yield a discernable range of data for companies within an industry or across industries allowing users to differentiate performance on the topic or an aspect of the topic.

Technical-Protocol Proposed Updates

Proposed updates that relate to the revision of technical protocols are based on the following attributes, designed to enable the technical protocols to serve as the basis for “suitable criteria,” as defined by the PCAOB’s AT Section 101³ and as referenced in the *SASB Conceptual Framework*:

- **Objectivity:** Criteria should be free from bias.

³ “AT Section 101, Attest Engagements,” Public Company Accounting Oversight Board, accessed August 28, 2017, <https://pcaobus.org/Standards/Attestation/Pages/AT101.aspx>.

- **Measurability:** Criteria should permit reasonably consistent measurements, qualitative or quantitative, of subject matter.
- **Completeness:** Criteria should be sufficiently complete so that those relevant factors that would alter a conclusion about subject matter are not omitted.
- **Relevance:** Criteria should be relevant to the subject matter.

Proposed Updates Related to Other Elements of Standardized Presentation

Each SASB standard is presented in a structured manner to ensure consistent application and to facilitate the cost-effective preparation of material, decision-useful information. These core objectives guide the preparation of proposed changes that involve the revision of specific elements of standardized presentation. Such revisions—including those made to general disclosure guidance, industry descriptions, topic descriptions, and activity metrics—are based on the stated objectives and key characteristics of the element, as established by the *SASB Conceptual Framework*.



EXTRACTIVES & MINERALS PROCESSING SECTOR

OIL & GAS – EXPLORATION & PRODUCTION INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #EM0101

Prepared by the
Sustainability Accounting Standards Board®

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Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #4-1 – **Industry:** Oil & Gas - Exploration & Production; **Topic Name:** Greenhouse Gas Emissions

2017 Technical Agenda Item #4-1 Description

SASB is evaluating the revision of metric NR0101-01⁴ to ensure the usefulness and alignment with external standards of the metrics associated with the topic.

Summary of Change – Revise Metrics

The SASB proposes changing metric NR0101-01 from “Gross global Scope 1 emissions, percentage covered under a regulatory program, percentage by hydrocarbon resource” to “Gross global Scope 1 emissions, percentage methane, and percentage covered under a regulatory program”.

Adherence to Criteria for Accounting Metrics

The provisional Oil and Gas – Exploration and Production SASB industry standard includes a topic for Greenhouse Gas (GHG) emissions with associated metrics to describe a company’s direct emissions, a characterization of emissions by source, and a description of the company’s strategy for managing GHG emissions. With respect to GHG emissions, metric NR0101-01 currently describes the company’s direct GHG emissions, as well as that which is covered under a regulatory program and the amount per type of hydrocarbon resource. While this indicator is comparable and distributive with respect to company exposure to GHG emissions and associated regulatory and/or reputational risks, metric NR0101-01 does not provide a complete view of specific channels of regulatory and/or reputational risk associated with methane emissions specifically. Further, the breakout of emissions by conventional versus unconventional resource is not aligned with existing industry norms and/or reporting methodologies and does not increase the usefulness of the disclosure relative to the cost of reporting. The revision of the metric to include an additional disclosure element related to methane will improve the completeness, representativeness, and alignment of GHG emission risks, while the elimination of the portion related to conventional/unconventional resources will improve the alignment and cost-effectiveness of the disclosure, thereby better accomplishing the core objectives of the standard by offering investors a more decision-useful set of disclosures that are simultaneously more cost-effective for issuers.

Supporting Analysis

Methane (CH₄) emitted intentionally and unintentionally from natural gas and oil wells is an extremely potent GHG with a global warming potential 34x that of CO₂ over a 100-year time horizon and 84x over a 20-year time horizon, per the U.S. Environmental Protection Agency (EPA). As a result, fugitive methane gas emissions have been the target of industry regulation as part of larger efforts related to climate regulation. Methane emissions are already the subject of regulation by some oil-producing nations, and are likely to receive additional attention per Intended Nationally Determined Commitments (INDCs) associated with the Conference of Paris (COP) Agreement. A review of the COP INDCs of Saudi Arabia and Canada, two of the top six oil-producing nations, identified methane reduction specifically. Reducing methane emissions may require both capital and operational expenditures to address, and therefore creates potentially material financial impacts for operators. Further, company actions to limit methane emissions (e.g., routine maintenance, capital expenditures, lead detection protocols) are different than those used to manage CO₂ emissions (e.g., carbon capture and sequestration, energy efficiency, flaring reduction). Methane emissions have broad and

⁴ NR0101-01: Gross global Scope 1 emissions, percentage covered under a regulatory program, percentage by hydrocarbon resource

significant implications as 34 of the 47 U.S. Oil & Gas Exploration and Production companies tracked by the SASB currently report methane emissions to CDP where these companies' methane emissions account for 43 percent of U.S. methane emissions. Of the five largest integrated oil and gas companies by market capitalization, four currently report their direct methane emissions through sustainability reports or other communication media, and three discuss specific strategies for reducing methane emissions. Thus, the revision of the metric to include methane emissions will result in a more representative and complete disclosure of company management of GHG emission related risks.

The proposed disclosure would be harmonized with the EPA's Greenhouse Gas Reporting Program, IPECA (reporting element C1), CDP guidance (OG2.3) and CDP's Oil and Gas module (OG7.3a), which could decrease issuer reporting burden, particularly those with significant activities in the United States. Lastly, these frameworks do not recommend disclosure of GHG emissions by unconventional versus conventional asset type. Therefore, the addition of the disclosure of methane emissions as well as the elimination of the disclosure of emissions by asset type will improve the alignment of the metric with existing disclosure frameworks.

Stakeholder Consultation

Investors: Multiple investors expressed an interest in additional granularity with respect to GHG emissions and specifically noted methane emissions as decision-useful. Feedback highlighted that such disclosures should include company policies and procedures to identify and mitigate such emissions. Investors noted that methane emission reductions are one of the most cost-effective methods to reduce GHG emissions, as such reductions are typically not capital-intensive and result in additional product sales. Investors noted the importance of research, such as that performed by Climate Central that identified that the net benefit of the transition from coal to natural gas with respect to GHG emissions is highly sensitive to the leakage rate of natural gas. Investors did not express a preference with respect to the decision-usefulness of reporting GHG emissions by unconventional versus conventional resource type.

Issuers: Multiple issuers noted the importance of methane emissions and management of such emissions through maintenance and operating procedures across the sector. Issuers cautioned that additional disclosures may increase the cost burden of reporting. Feedback also suggested that breaking out the disclosure by unconventional versus conventional assets would be burdensome to collect, and that such granularity would not provide material or decision-useful information to investors.

Benefits

Improves the SASB standard: The proposed SASB standard provides a distinction between types of GHG emissions (CO₂ versus CH₄), thereby improving representativeness and completeness while improving cost-effectiveness by eliminating the distinction between conventional and unconventional assets.

Improves cost-effectiveness: Many issuers currently have policies and procedures related to the identification and management of fugitive methane emissions. Issuers do not currently break out their reporting of GHG emissions by conventional versus unconventional asset type.

Improves decision-usefulness: Adding a breakdown for methane emissions to the existing SASB CO₂ metric improves decision-usefulness as it enhances the completeness of GHG emissions disclosures and would allow investors to differentiate among companies potentially exposed to higher further expenditures due to outsized methane emissions, reputational harm, and regulatory scrutiny.

Proposed Update #4-2 – **Industry:** Oil & Gas - Exploration & Production; **Topic Name:** Greenhouse Gas Emissions

2017 Technical Agenda Item #4-2 Description

SASB is evaluating the revision of the technical protocol associated with metric NR0101-02⁵ to ensure the metric offers a representative measurement of performance on the topic.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol associated with metric NR0101-02 to better define and differentiate “directly vented releases” versus “fugitive emissions/leaks”.

Adherence to Attributes of Technical Protocols

The provisional Oil and Gas – Exploration and Production SASB industry standard includes a topic for GHG emissions with associated metrics to describe a company’s management of risks and opportunities associated with a company’s management of direct GHG emissions. Specifically, metric NR0101-02 specifies that issuers should disclose the amount of GHG emissions by emissions source, including those related to combustion, flared hydrocarbons, process emissions, directly vented releases, and fugitive emissions/leaks. The current technical protocol defines “directly vented releases” as “. . . the intentional (or designed), controlled release of gas to the atmosphere during normal operations” whereas “fugitive emissions/leaks” is defined as “. . . including leaks from piping and other equipment, well leaks, and non-routine events (e.g., pipeline maintenance, un-controlled gas releases, equipment maintenance).” While the current technical protocol provides an objective, relevant view of a company’s management of risks and opportunities related to GHG emissions, the current definitions of vented versus fugitive emissions may not sufficiently ensure measurability. To address this, the protocol will be updated to clearly define those emission that should be considered as fugitive emissions.

Supporting Analysis

Metric NR0101-02 recommends disclosure of emissions from various emissions sources, including combustion, flaring, process emissions, venting, and fugitive emissions/leaks. The distinction between the various sources of emissions identified in metric NR0101-02 are an important element of the decision-usefulness of the disclosures, as they relate to different regulatory or operational risks as well as control or mitigation measures. A critical element of these categorical definitions is the distinction between vented emissions, which are typically controlled or planned events, versus fugitive emissions/leaks, which are uncontrolled and/or unplanned.

In the 2006 International Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, the IPCC defines fugitive emissions as “intentional or unintentional release of greenhouse gases . . . during the extraction, processing and delivery of fossil fuels to the point of final use.” The EPA defines fugitive emissions as, “those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening.” As such, fugitive emissions per these definitions are vapors that escape to atmosphere, which do not pass through a device designed to emit these vapors.

By the above definition, “fugitive emissions” would include some process emissions, venting, and leaks.

⁵ NR0101-02: Amount of gross global Scope 1 emissions from: (1) combustion, (2) flared hydrocarbons, (3) process emissions, (4) directly vented releases, (5) fugitive emissions/leaks

IPIECA's Industry Guidance on Voluntary Sustainability Reporting distinguishes between combustion emissions, flaring, process emissions, fugitive emissions, and non-routine events. It further defines fugitive emissions as "including piping and equipment leaks" and non-routine events as "pipeline maintenance, gas releases, equipment maintenance." In its reporting elements, element O1 describes disclosure of a "breakdown of major source categories for CO₂ and CH₄ emissions (e.g., combustion [stationary], flaring, venting, process, product transport)." This element mentions neither fugitive emissions nor leaks explicitly.

In order to clearly define the distinction between fugitive and non-fugitive emissions, the language of the technical protocol will be updated to distinguish between controlled and uncontrolled emissions, and will describe the former as process emissions or venting, and the latter as "other fugitive emissions." This will provide issuers with clearer guidance when reporting the metric, thereby improving the measurability of the reported data.

Stakeholder Consultation

Investors: Multiple investors expressed support of the current metric as material and decision-useful. Feedback indicated the usefulness of an operational break down of emissions by category, further supporting the need to accurately define each in order to provide measurable results.

Issuers: Issuer feedback received during consultation highlighted the concern about potential reporting inconsistencies based on the current technical protocol of fugitive and controlled versus uncontrolled emissions.

Benefits

Improves the SASB standard: Enhances the measurability of the metric, improving both the accuracy and decision-usefulness of the metric for investors as well as the clarity and verifiability for issuers preparing the data.

Improves alignment: Aligns with the IPCC, the EPA, and IPIECA definitions for fugitive emissions.

Proposed Update #4-3 – **Industry:** Oil & Gas – Exploration & Production; **Topic Name:** Water Management

2017 Technical Agenda Item #4-3 Description

SASB is evaluating the revision of the technical protocol associated with metric NR0101-08⁶ to improve the measurability.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol associated with metric NR0101-08 to eliminate redundancy with respect to water sampling methodologies.

Adherence to Attributes of Technical Protocols

The provisional Oil and Gas – Exploration and Production SASB industry standard includes a topic for Water Management associated metrics, describing company management of risks and opportunities related to water withdrawals and wastewater effluents. Specifically, metric NR0101-08 specifies that issuers should disclose the percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline measurement. When defining the methodology for baseline testing, the current technical protocol references the Wyoming Oil and Gas Conservation Commission (WOGCC) Rules and Regulations as well as the Colorado Oil and Gas Conservation Commission’s (COGCC) Rule 609. In addition, it notes that sampling should include the testing of any water sources located within the anticipated fracture radius plus a safety factor. While the protocol provides objective, complete, and relevant guidance, the redundancy of the WOGCC/COGCC definition of baseline sampling requirements with the subsequent statement regarding the hydraulic fracturing radius plus a safety factor may result in inconsistent measurements. Therefore, the removal of the latter statement will improve the measurability of the disclosed data.

Supporting Analysis

Technical protocol item number 39 defines the testing requirements with respect to the proximity of water resources to a hydraulic fracturing site. Specifically, it calls for testing of any water sources near a hydraulically fractured well site prior to drilling, and further defines that water samples, plus a safety factor within the anticipated fracture radius should be sampled. Technical protocol item 38, on the other hand, references the WOGCC’s General Agency, Board, or Commission Rules, for which Chapter 3: Operational Rules, Drilling Rules Section 46, items (a)-(c) that define the sampling requirements for baseline water testing. Similarly, COGCC’s Rule 609 (b) defines the sampling location requirements. As such, technical protocol item number 39 is redundant with item 38, as both define the sampling requirements for baseline and subsequent water quality testing.

Further, protocol item 39 leaves room for interpretation by the registrant, by defining the zone for which samples must be taken as within the “anticipated fracture radius, plus a safety factor.” Differing interpretations by issuers as to the distance of the anticipated fracture radius as well as the magnitude of the safety factor that should be applied will limit the comparability of the disclosure. By contrast, the WOGCC and COGCC explicitly define sampling requirements as “up to a maximum of four samples within a ½ mile radius of the oil and gas development site.” The proposed revision will eliminate this uncertainty, thereby improving the measurability of resultant disclosures.

⁶ NR0101-08: Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline

Stakeholder Consultation

Investors: Investors supported the materiality of this disclosure topic and usefulness of the metric were generally supportive of changes that improved the comparability of the data generated by the standard.

Issuers: Issuers generally expressed concerns regarding the cost associated with performing baseline water monitoring and ongoing testing as well as concerns about the accuracy and therefore decision-usefulness of the reported data for investors. One aspect of these concerns was that the technical protocol was unclear with respect to the baseline testing requirements. The WOGCC and/or COGCC regulations were identified as existing rules that were consistent, clearly defined, and with which at least some industry participants would be familiar, thereby improving comparability and reducing the cost burden. Issuers also questioned the decision-usefulness of this disclosure item due to the challenge in linking water quality deterioration to oil and gas activities due to inherent variability and/or inaccuracies in such data. It was suggested that a more useful approach may be for companies to disclose their processes and procedures for the prevention of ground or surface water deterioration.

Benefits

Improves the SASB standard: Eliminates uncertainty with respect to issuer estimates of likely fracture lengths and potential inconsistencies when applying safety factors with respect to determining baseline water sampling requirements. Referring to the WOGCC and COGCC guidance ensures all issuers conduct sampling using consistent methodology, thereby enhancing the measurability of the disclosure.

Improves alignment: Aligns the disclosure with existing regulatory frameworks.

Proposed Update #4-4 – **Industry:** Oil & Gas – Exploration & Production; **Topic Name:** Security, Human Rights, and the Rights of Indigenous Peoples

2017 Technical Agenda Item #4-4 Description

SASB is evaluating the revision of the technical protocol associated with metric NR0101-13⁷ to improve the measurability.

Summary of Change – Revise Technical Protocol

The SASB proposes modifying the technical protocol for metric NR0101-13 to include a reference to the United Nations Declaration on the Rights of indigenous peoples and International Labour Organization (ILO) with respect to the identification of indigenous peoples.

Adherence to Attributes of Technical Protocols

The provisional Oil and Gas – Exploration and Production SASB industry standard includes a topic for Security, Human Rights, and the Rights of Indigenous Peoples with three associated metrics describing company exposure to and management of associated risks and opportunities. Specifically, metric NR0101-13 specifies that issuers should disclose proved and probable reserves in or near indigenous lands. The current technical protocol notes that “indigenous lands are those occupied by those who self-identify as indigenous” as well as a reference to a United Nations working definition of indigenous peoples. While the current technical protocol provides relevant, measurable, and complete guidance, it does not explicitly refer to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and/or the ILO No. 169 that include “self-identification” as a criterion for identifying Indigenous groups. To address this, the protocol will be updated to reference these frameworks to ensure the objectivity of associated disclosures.

Supporting Analysis

To ensure objectivity with respect to the identification of indigenous peoples for the purposes of issuer disclosures related to metric NR0101-13, the SASB proposes to revise the provisional standard to directly reference the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP) as well as the ILO Convention No. 169. The UNDRIP notes in Article 33 that, “Indigenous peoples have the right to determine their own identity or membership in accordance with their customs and traditions. This does not impair the right of indigenous individuals to obtain citizenship of the States in which they live.” The ILO Convention No. 169 notes in Article 1, Section 2 that, “Self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply.” IPIECA, the global oil and gas industry association for environmental and social issues, references the UN and ILO frameworks in its Industry Guidance on Voluntary Sustainability Reporting, noting that these sources provide guidance on, “characteristics considered to be party and/or fully attributable to Indigenous Peoples” including “self-identification as indigenous.” To ensure the SASB is aligned with these internationally recognized organizations and therefore provides an objective definition for the identification of indigenous peoples, the technical protocol will be updated to directly refer to the UN and ILO frameworks.

⁷ NR0101-13: (1) Proved and (2) probable reserves in or near indigenous land

Stakeholder Consultation

Investors: Multiple investors agreed with the materiality and decision-usefulness of the topic and metrics. In some cases, investors expressed a desire for additional disclosures quantifying the number of assets and/or percentage of reserves for which formal agreements were in place with indigenous groups.

Issuers: Multiple issuers across the sector expressed concerns regarding the identification of groups as “indigenous peoples” as challenging due to the lack of a universally accepted definition of the term.

Benefits

Improves the SASB standard: Clarifies the technical protocol by referencing internationally recognized frameworks whereby the issuer can determine the scope of reserves included in the disclosure basis, thereby improving the objectivity of associated disclosures.

Proposed Update #4-5 – **Industry:** Oil & Gas – Exploration & Production; **Topic Name:** Health, Safety, and Emergency Management

2017 Technical Agenda Item #4-5 Description

SASB is evaluating the revision of metric NR0101-17⁸ associated with the topic to improve its usefulness and to align with external standards.

Summary of Change – Revise Metrics

The SASB proposes revising metric NR0101-17 from “(1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees, (b) contract employees, and (c) short-service employees,” to “(1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate (3) Near Miss Frequency Rate and (4) Average hours of Health, Safety, and Emergency Response Training for (a) full-time employees, (b) contract employees, and (c) short-service employees”.

Adherence to Criteria for Accounting Metrics

The provisional Oil and Gas – Exploration and Production SASB industry standard includes a topic for Health, Safety, and Emergency Management with associated metrics to describe a company’s management of risks related to the health and well-being of its employees as well as its governance processes to prevent and/or manage accidents and incidents. With respect to employee health and well-being, metric NR0101-17 currently includes the total recordable injury rate, fatality rate, and near miss frequency rate for full time, contract, and short-service employees. These quantitative indicators are aligned with existing issuer norms for the management of employee health and safety and are distributive, useful, and comparable, but they do not provide a complete view of a company’s efforts to manage employee health and safety risk and therefore may not be fully representative of company performance. The revision of the metric to include an additional disclosure element related to employee safety training will improve the completeness of associated disclosures with respect to company actions taken to manage employee health and safety risk. Thus, it will more fairly represent performance and better accomplish the core objectives of the standard by offering investors a more decision-useful set of disclosures when combined with the existing metrics related to the topic.

Supporting Analysis

Health and safety incidents can have material financial impacts for industry participants. The *Oil and Gas – Exploration and Production Industry Research Brief* prepared by the SASB, notes that the five deadliest offshore incidents resulted in 546 deaths and the five costliest offshore incidents resulted in total costs of \$2.9 billion (2002 dollars). The brief further notes that investigations of major accidents often identify “lack of a safety culture in the organization” as well as “management commitment to safety” as root causes for these events.

An important measure of management commitment to safety culture is the priority placed on providing safety training for the workforce. In its voluntary guidance on sustainability reporting, IPIECA identifies “health and safety orientation and training” as one form of “workforce participation” per reporting issue HS1. Workforce participation is described as “health and safety management programs and processes to facilitate participation of the workforce in health and

⁸ NR0101-17: (1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees, (b) contract employees, and (c) short-service employees

safety dialogues" and that such programs "can enhance cooperative attitudes and culture, which in turn contributes towards identifying and addressing potential health and safety problems and ensuring management system effectiveness."

The ILO identifies training as a key element of a strong health and safety culture. In its Promotional Framework for Occupational Safety and Health Recommendation (OSH), the ILO states, "In promoting a national preventative safety and health culture as defined in Article 1(d) of the Convention, Members should seek . . . (b) to promote mechanisms for delivery of occupational education and training, in particular for management, supervisors, workers and their representatives . . . (c) to introduce occupational and safety health concepts and, where appropriate, competencies, in educational and vocational training programs..."

Across the sector, several issuers report metrics related to employee training. In a review of the five largest industry participants by market capitalization, all five discuss training in their voluntary sustainability reports, four provide metrics, and one reports the average training hours per employee. The extent of existing reporting on this topic will reduce the marginal burden of collecting and/or reporting this data.

In a 2009 study on the relationship between safety training and incident rates from The Ergonomics Open Journal, the authors found from a literature review that of the "23 studies with quasi-experimental designs that evaluated the effects of worker safety health and training on OHS outcomes... all but two of the studies found significant positive effects." The paper concludes that, "safety training increases the reporting of injuries [and] also has real safety effects on days-away-from-work injuries . . ."

Thus, the revision of the metric to include a measure of worker training will improve the representativeness and completeness of the full scope of issuer efforts to ensure worker health and safety.

To ensure the additional disclosure element is comparable and verifiable, the OSHA regulation for occupational health and safety (29 CFR 1910) has been referenced to define which employee training programs may qualify to be included when reporting the proposed indicator. This regulation defines the safety requirements and aspects worker health and safety that are subject to OSHA oversight, including means of egress, occupational health, hazardous materials management, personal protective equipment, fire protection, electrical systems, and other topics. If safety training does not fall under the topics listed in 29 CFR 1910, the technical protocol requires registrants to disclose the scope of such trainings and the specific occupational risks or hazards the training is intended to address.

Stakeholder Consultation

Investors: Multiple investors expressed a consistent, strong interest in the inclusion of additional forward-looking or predictive indicators with respect to health and safety, noting that the current metrics in the standard are largely backward-looking. Investors suggested that this would improve several aspects of the decision-usefulness of the disclosure by making the metric a more representative, complete, and distributive indicator of Health and Safety performance.

Issuers: Issuers across the sector agreed with the materiality of Health, Safety, and Emergency Preparedness, and some identified employee training as a performance indicator used by management to assess performance.

Benefits

Improves the SASB standard: The proposed SASB standard provides a more complete description of company performance with respect to health, safety, and emergency management.

Improves decision-usefulness: Issuer disclosure of employee training provides a forward-looking indicator to enhance investor understanding of the strength of a company's safety culture and therefore its exposure to health, safety, and emergency management risk.

Proposed Update #4-6 – **Industry:** Oil & Gas – Exploration & Production; **Topic Name:** Health, Safety, and Emergency Management

2017 Technical Agenda Item #4-6 Description

SASB is evaluating splitting the topic to improve the quality and clarity of the standard.

Summary of Change – Split Topic

The SASB proposes splitting the topic “Health, Safety, and Emergency Management” into “Employee Health and Safety,” related to Human Capital and “Critical Incident Risk Management,” related to Leadership and Governance.

For the Employee Health and Safety topic, metric NR0101-19 will be modified from, “Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout the exploration and production lifecycle,” to “Discussion of management systems used to integrate a culture of safety throughout the exploration and production lifecycle.” Metric NR0101-18 will be removed from this topic.

For the Critical Incident Risk Management topic, metric NR0101-18 will be added and renumbered appropriately. A new metric will be added describing, “Discussion of management systems used to identify and mitigate catastrophic and tail-end risks.”

Adherence to Principles for Topic Selection

To better represent the distinct, industry-specific risks and management strategies associated with different elements of the topic, the Health, Safety, and Emergency Management topic will be split into Employee Health and Safety relates to Human Capital and Critical Risk Management, which relates to Leadership and Governance.

While elements of these two topics are related, they represent different sustainability dimensions, and therefore require different metrics to fairly represent company performance in a way that is actionable by companies. While employee health and safety relates to human capital factors such as training, incident reporting and investigation, and personal protective equipment, critical risk management relates to corporate governance issues such as corporate risk management procedures, technological control measures, and emergency response. As such, actions taken by companies, and metrics designed to convey performance to investors, are different for these different topics.

Supporting Analysis

Both topics are likely to be material to the industry. With respect to Critical Risk Management, the *Oil & Gas – Exploration & Production Industry Research Brief* prepared by the SASB notes such catastrophic incidents can cause significant material harm for industry participants. The brief notes that the five deadliest offshore incidents resulted in 546 deaths and the five costliest offshore incidents resulted in total costs of \$2.9B (2002 dollars). The brief further notes that investigations of major accidents often identify “lack of a safety culture in the organization” as well as “management commitment to safety” as root causes for these events. In the Oil and Gas – Exploration and Production industry, the application of Process Safety principles is typically employed as a Critical Risk Management strategy. Process Safety aims to prevent unintentional releases of chemicals, energy, or other potentially dangerous materials through the design, maintenance, and verification of safety barriers that prevent incidents from escalating into major accidents. Safety barriers may include facility design, operational control devices, safety control devices, mechanical integrity, operating procedures for high-risk activities, and other elements. The application of these

principles is typically executed through a Process Safety Management program, for which the Occupational Safety and Health Administration has issued standards per 19 CFR 1910.119⁹. The successful application of Process Safety Management therefore primarily derives from the effectiveness of Leadership and Governance processes to ensure the successful application of its principles and requirements throughout a company's operations.

With respect to Employee Health and Safety, the brief notes that between 2003 and 2010, the U.S. Oil and Gas Extraction industry had a fatality rate seven times higher than for all U.S. workers (27.1 compared to 3.8 deaths per 100,000 workers). While the industry has made remarkable strides in reducing the rate of incidents and injuries, with the total recordable incident rate for the Oil and Gas Extraction industry falling from 3.6 in 2005 to 0.7 in 2015, according to data from the U.S. Bureau of Labor Statistics¹⁰, company focus on reducing and maintaining low incident rates is of critical importance. In an analysis of regulatory filings of the top ten companies in the industry by revenue performed by the SASB, 100 percent of them disclosed information related to the personal safety of employees, with the majority noting potential adverse financial impacts that may result from incidents or changes in applicable regulations. Actions taken by companies to manage risks related to Employee Health and Safety include employee safety training, the use of personal protective gear, the implementation of work control processes or permitting, and operating procedures, among other management strategies.

Stakeholder Consultation

Investors: No direct feedback was received from investors in the industry regarding the proposed change. However, investors who provided feedback for the sector generally supported changes that would improve the clarity of the information generated by standard.

Issuers: No direct feedback was received from issuers in the industry regarding the proposed change. However, issuers in the sector were generally supportive of changes that aligned topics with company strategies for managing associated risks or opportunities.

Benefits

Improves the SASB standard: Improves the quality and clarity of the standard by separating sustainability topics that are likely to be material and represent distinct, industry-specific sustainability risks.

⁹ "Process Safety Management" Occupational Safety and Health Administration, information accessed August 2017

<https://www.osha.gov/SLTC/processsafetymanagement/standards.html>.

¹⁰ "Industry Injury and Illness Data" Bureau of Labor Statistics, information accessed August 2017

https://www.bls.gov/iif/oshsum.htm#05Summary_News_Release.

Proposed Update #4-7 – **Industry:** Oil & Gas – Exploration & Production; **Topic Name:** Business Ethics and Payments Transparency

2017 Technical Agenda Item #4-7 Description

SASB is evaluating the addition of a metric based on the usefulness, completeness, distributiveness, and representativeness of the metrics associated with the topic.

No Proposed Change

Based upon additional research and the lack of a clear, quantifiable metric that would result in useful and distributive disclosures, no changes related to the provisional standard related to Technical Agenda item 4-7 have been proposed at this time.

Proposed Update #4-8 – **Industry:** Oil & Gas – Exploration & Production; **Topic Name:** Reserves Valuation and Capital Expenditures

2017 Technical Agenda Item #4-8 Description

SASB is evaluating the revision of the technical protocol associated with metric NR0101-22¹¹ to improve the completeness and relevance.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol associated with metric NR0101-22 to clarify the definition of the sensitivity analysis to be performed using the International Energy Agency's (IEA) published scenarios. In addition, the revised protocol will provide the issuer the opportunity to consider additional scenarios defined by the company if it chooses to disclose these supplemental scenarios.

Adherence to Attributes of Technical Protocols

The provisional Oil and Gas – Exploration and Production SASB industry standard includes a topic for Reserves Valuation and Capital Expenditures with three associated metrics describing the resilience of a company's assets with respect to climate transition risk. Specifically, metric NR0101-22 recommends that issuers disclose the sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions. The current technical protocol defines that the sensitivity study should be performed using the IEA's Current Policies, New Policies, and 450 Scenarios. While the technical protocol is currently objective and relevant, two specific changes have been proposed to improve its measurability and completeness. First, the technical protocol will be revised to directly reference the price projections associated with the scenarios. This will ensure the consistent measurability of the disclosure by eliminating the current illustrative examples and instead directly refer to the scenario results as published in the IEA's World Energy Outlook (WEO). Second, the technical protocol element that provides the opportunity for issuers to disclose additional scenarios shall be clarified to ensure it provides a complete disclosure such that relevant factors that would alter a conclusion about the subject matter are not omitted by referencing the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) elements related to scenario analysis.

Supporting Analysis

The provisional standard for the Oil and Gas – Exploration and Production industry currently refers to the IEA's scenarios per its WEO. In the WEO, the IEA provides three scenarios that represent potential outcomes of trends related to energy supply and demand. These three scenarios include:

- Current Policies Scenario: "... depicts a path for the global energy system shorn of the implementation of any new policies or measures beyond those already supported by specific implementing measures in place as of mid-2016."
- New Policies Scenario : "... reflects the way that governments, individually or collectively, see their energy sectors developing over the coming decades. Its starting point is the policies and measures that are already in place, but it also takes into account, (in full or in part) the aims, targets and intentions that have been announced, even if these have yet to be enshrined in legislation or the means for their implementation are still taking shape."

¹¹ NR0101-22: Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions

- 450 Scenario: “. . . [a] decarbonization scenario . . . which has the objective of limiting the average global temperature increase in 2100 to 2 degrees Celsius above pre-industrial levels.”

Associated with these Scenarios, the IEA presents a discussion of impacts to supply and demand of oil and gas and provides associated price projections for the years 2020, 2030, and 2040 for each scenario. The report also describes the inputs and assumptions for each scenario, including the major changes from previous revisions of the scenarios. As such, the WEO Scenarios provide an objective, measurable baseline to enable comparable sensitivity analyses to be performed on Oil and Gas – Exploration and Production company reserve levels based on its published price projection scenarios. To enhance the measurability, the language in the technical protocol will be clarified to more clearly and directly reference these scenarios when the issuer is performing a sensitivity analysis of its reserves.

While these scenarios are the product of significant research and academic rigor, the IEA notes that, “with so many uncertainties and (occasionally competing) priorities, no path of development of the global energy system can be confidently drawn to 2040.” In recognition of these uncertainties, the technical protocol will be revised to include a provision whereby issuers can disclose sensitivity results related to other scenarios the company may view as an important element of overall disclosure associated with the topic. To improve the completeness of this technical protocol element with respect to the information that should be provided in such a disclosure, the protocol will be revised to refer to the recommendations of the TFCF, which provides specific recommendations regarding disclosure elements associated with scenario analysis that organizations in the Energy sector should consider.

Stakeholder Consultation

Investors: Investors generally expressed strong support for the materiality of the topic and interest in SASB aligning its disclosures with the TFCF recommendations report. Investors expressed the importance of sensitivities and/or scenarios being well-defined to ensure comparability. Investors also suggested that the discussion of the likelihood of the scenario occurring and any potential strategic responses by management should be added to the quantitative disclosure. These additions will make the analysis more decision-useful. Some investors expressed the importance of companies having the opportunity to self-assess or define scenarios the company views as more likely than reference scenarios. However, it was also noted by some investors that this may be technically challenging and costly for smaller companies to perform.

Issuers: Multiple issuers expressed concerns regarding the materiality, cost-effectiveness, and decision-usefulness of the recommended disclosure. Issuers questioned whether the impacts of climate change on reserve valuation rises to the level of materiality. Issuers noted that most major publicly traded oil and gas companies will realize the majority of the value associated with their reserves in 10-15 years. The impacts of emerging technologies and/or regulation in 10-15 years may have limited implications for the current valuation of a company’s assets. With respect to cost-effectiveness, companies noted that significant resources may be required to perform scenario and/or sensitivity analyses, and this may be particularly burdensome for small to mid-size companies. With respect to decision-usefulness, issuers noted that scenario analysis that projects 20-25 years into the future may not communicate meaningful information to investors due to the significant uncertainties associated with the assumptions underlying such scenarios. At the same time, it was noted that over the same timeframe, the characteristics of a company’s reserves may be substantially different than they are today. Finally, issuers noted that the disclosure of a prescribed scenario does not necessarily represent a company’s views on what scenarios it thinks are likely to occur.

Others: Third parties suggest that the IEA scenarios may not be as decision-useful as a fixed-price sensitivity analysis, noting their tendencies to fluctuate over time, making comparisons across companies in a given year possible, but making comparisons across years for a single company challenging. To address this, third parties suggest that the

disclosure define fixed prices for oil and gas to allow companies to perform a sensitivity analysis along with a company discussion and analysis of its views of how prices may be impacted by future climate-related regulation and/or technological innovation.

Benefits

Improves the SASB standard: The proposed SASB standard clarifies the baseline sensitivity analysis requirements per the IEA's WEO as well as provides the opportunity for companies to disclosure results and discuss the implications of additional scenarios it views as material to its investors (per the TCFD recommendations and both issuer and investor feedback).

Improves decision-usefulness: Provides well-defined scenarios to allow comparisons across companies within a given reporting year. Provides issuers with the opportunity to disclose additional scenarios and present management's views of which pathway it sees as most likely to occur, as well as strategies to respond to these contingencies.

Improves alignment: Incorporates the Disclosure Considerations for Non-Financial Organizations from the Recommendations Report of the TCFD's Financial Disclosures.

Proposed Update #4-9 – **Industry:** Oil & Gas – Exploration & Production; **Topic Name:** Reserves Valuation and Capital Expenditures

2017 Technical Agenda Item #4-9 Description

SASB is evaluating the addition of a metric to improve the usefulness, representativeness, and completeness of the metrics associated with the topic.

Summary of Change – Add Metric

The SASB proposes adding a metric to the Reserves Valuation and Capital Expenditures topic, describing “Amount invested in renewable energy, revenue generated by renewable energy sales.”

Adherence to Criteria for Accounting Metrics

The provisional Oil and Gas – Exploration and Production SASB industry standard includes a topic for Reserves Valuation and Capital Expenditures, which describes a company’s business model resilience with respect to the transition to a climate-constrained economy. The associated metrics describe an individual company’s performance as it relates to this issue: specifically, metric NR0101-22 describes the resilience of a company’s portfolio of hydrocarbon assets to various scenarios that include the impacts of climate change. The metric NR0101-23 describes the average carbon content of a company’s reserves thereby capturing the effects of investment in “lower-carbon” fossil fuels such as natural gas. Finally, NR0101-24 provides a framework whereby the issuer can disclose its capital expenditure strategy with respect to the previous two disclosure metrics. However, the current metrics may not offer a complete and representative indication of issuer business model resiliency due to the lack of the disclosure of investments made by issuers in renewable or alternative energy research, development, and capital projects. The addition of a metric describing investments in and revenues from renewable or alternative energy technologies will better accomplish the core objectives of the standard by providing investors with a more complete, representative, and aligned view of company performance with respect to business model resilience.

Supporting Analysis

In response to shifts in the energy landscape related to the potential impacts of regulatory and transition climate risks, large oil and gas industry participants have increasingly identified the strategic importance of investments in energy efficiency as well as renewable and alternative energy sources. In a report on the impacts on climate change, one major oil and gas company states that it is “embedding climate into our strategy” by “building a high value oil and gas portfolio with a lower carbon footprint” and “building a material industrial position in new energy solutions” including “renewables and low carbon energy solutions.” In a similar report, another major company in the industry notes that it has “undertaken a number of steps to manage GHGs, including investments in flare reduction, investments in CO₂ injection, improved energy efficiency and activity in biofuels.” In its Annual Report, one major oil and gas company notes, “We seek to contribute to reducing global GHG emissions in four areas: supplying more natural gas to replace coal for power generation; developing alternative energies; progressing CCS technologies; and implementing energy-efficiency measures in our operations where reasonably practical.” In its 2016 Sustainability Report, the CEO of another major oil and gas company notes four priorities for its strategic framework, all of which relate to the management of transition risk, and one of which explicitly mentions investments in renewable energy: “First, we plan to run a highly competitive upstream business with an expanding gas portfolio. Second, we will have a market-led downstream business providing fuels and lubricants that help make vehicles more efficient and lessen their

carbon impact. Third, we will run a growing renewable energy business, alongside a dynamic venturing arm. Fourth, we will underpin all of these businesses with an ongoing drive to modernize [the company] and maximize efficiency in ways that are good for business and good for the environment.” Including a metric for investments and revenues derived from renewable or alternative energy sources therefore offers a more representative view of company performance with respect to risks related to climate resiliency, as per the intent of the Reserves Valuation and Capital Expenditures topic.

Integrated oil and gas companies emphasize various activities related to investments in the research, development, and deployment of alternative and renewable energy sources and a review of the regulatory filings and sustainability reports of the five largest U.S.-based pure play Oil and Gas Exploration and Production company shows that none of these companies currently report significant investments in or strategies related to the such activities. Some note risk factors related to the potential financial implications in regard to greater penetration of renewable and/or alternative fuels in their filings. As such, the proposed metric, when combined with the other metrics proposed for the sector, will provide a more complete and differentiating view with respect to strategies employed by Oil and Gas Exploration and Production to address the climate transition risk. This will be achieved either through the acquisition of more climate-resilient assets as measured by metrics NR0101-22 and NR0101-23, or the diversification to renewable or alternative energy sources, as measured by the proposed metric.

The proposed revision would allow companies the opportunity to fully describe their efforts to manage transition risk in a comparable, decision-useful way. The current set of quantitative metrics focuses entirely on the value of hydrocarbon reserves and do not take into account capital investments in climate-resilient assets, such as offshore wind, geothermal, biofuels, or other technologies. As such, the additional metric will provide investors with a more complete view of company management of business model resiliency risks and opportunities.

The proposed metric includes the reporting of investments in renewable or alternative energy technologies as well as revenues generated from such investments. With respect to the topic name, Reserves Valuation and Capital Expenditures, the proposed change is intended to provide investors a sense of the size, scope, and scale of capital investments in renewable or alternative energy production. To provide a fair representation of the size, scope, and scale of such investments, the reporting of both of investment in and revenues derived from renewable or alternative energy will provide investors with a view of the relative importance of renewable or alternative energy operating segments compared to the overall scope of a company’s business.

Such disclosures would be in alignment with several international reporting frameworks, including the TCFD, IPIECA’s Voluntary Reporting Guidance, and the CDP. In its annex for the Energy Sector, the TCFD notes that disclosures “should focus on qualitative and quantitative assessments and potential impacts . . . ” of “changes in investment strategies (e.g., opportunities for increased investment in renewable energy, carbon-capture technologies, and more efficient water usage)” among other disclosures. IPIECA’s Guidance on sustainability reporting notes that, “to meet global energy demand, a variety of commercially viable energy sources, combined with energy efficiency, will be needed” and developed reporting elements to, “[facilitate] reporting of company activities in research, development, supply, and/or use of non-fossil fuel energy, particularly of alternative and renewable energy resources.” Specifically, supplemental reporting element S2 describes the, “Amount of alternative/renewable energy produced for sale.” In its Oil and Gas Sector Module, CDP recommends companies disclose their current capital investments in and sales generated from Renewable Energy as well as future capital expenditure plans in renewable energy technologies (OG6.1, OG6.2).

Stakeholder Consultation

Investors: The investors expressed support for the inclusion of additional disclosures related to investments in renewable energy or other technologies related to business model resiliency as being material and decision-useful. Several investors indicated that they consider renewable and/or alternative energy exposure in their investment decision-making process when evaluating Oil and Gas – Exploration and Production companies. It was noted that disclosing alternative/renewable energy metrics would improve the completeness and representativeness of company performance with respect to their capital expenditure strategy and its resilience to climate-related impacts.

Issuers: Issuers expressed concern regarding the materiality, cost-effectiveness, and decision-usefulness of the current disclosures related to Reserves Valuation and Capital Expenditures. With respect to the current set of disclosures, issuers expressed doubt about the materiality of climate change to the value of their reserves in a 10-15 year time frame as emerging technologies and/or regulation may have limited implications for the current valuation of company assets. Additional disclosures related to investments in renewable, alternative, or low-carbon energy sources were not extensively discussed during consultation.

Benefits

Improves the SASB standard: Provides investors with a more representative and complete view of company management of risks and opportunities associated with Reserves Valuation and Capital Expenditures, thereby enhancing the decision-usefulness of the standard.

Improves decision-usefulness: The proposed disclosure would be harmonized with IPIECA's Industry Guidance on Voluntary Sustainability Reporting, CDP's Oil and Gas and the recommendations of the Task Force on Climate-related Financial disclosures Supplemental Guidance for the Energy Sector.

Proposed Update #4-10 – **Industry:** Oil & Gas – Exploration & Production; **Topic Name:** Management of the Legal & Regulatory Environment

2017 Technical Agenda Item #4-10 Description

SASB is evaluating revisions to metrics NR0101-25¹² and NR0101-26¹³ to improve the cost-effectiveness and materiality of the standard.

Summary of Change – Revise Metrics

The SASB proposes replacing the two quantitative metrics associated with the Management of the Legal and Regulatory Environment topic:

- NR0101-25 – Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations
- NR0101-26 – Five largest political, lobbying, or tax-exempt group expenditures

With the following qualitative metric:

- Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry

The technical protocol of the revised metric will describe the scope of the disclosure, including the risks and opportunities that may result from legislation or regulation related to environmental and social factors that are likely to be material based on industry-specific characteristics.

Adherence to Criteria for Accounting Metrics

The provisional topic, Management of the Legal & Regulatory Environment, is focused on how Oil & Gas – Exploration & Production companies engage with regulators and policymakers to influence regulations and policies to align shareholder interests with long-term societal interests, or the lack thereof. Provisional metric NR0101-25 and NR0101-26 (both proposed for removal) are intended to provide information regarding political and regulatory relations and influence. The proposal to replace the current quantitative metrics with a single qualitative metric is based on a lack of industry-specific evidence that demonstrates these metrics are a fair representation of issuer exposure to and/or management of risks associated with the topic. Furthermore, the proposed change will improve the cost-effectiveness of the standard.

The revised, qualitative metric will provide a fairer representation of performance on the topic by specifically focusing the discussion on a limited number of underlying sustainability topics that are currently included in the provisional standard. Interactions with regulators and policymakers is proposed for inclusion within the provisional topic, Greenhouse Gas Emissions. The proposed revised metric includes a discussion of the risks and opportunities related to legislation or regulation in regard to environmental and societal factors, contextualized by specific pieces of legislation or regulation that impact sustainability topics that are likely to be material for industry participants.

¹² NR0101-25: Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations

¹³ NR0101-26: Five largest political, lobbying, or tax-exempt group expenditures

Supporting Analysis

The Oil & Gas – Exploration & Production industry is subject to numerous sustainability-related regulations and a rapidly changing regulatory environment. Companies in the industry regularly participate in the regulatory and legislative process on a wide variety of environmental and societal issues. Industry-specific evidence demonstrates that such participation may generate financial impacts systematically across the industry.

The SASB proposes to replace the current quantitative metrics related to political and/or campaign spending with a single, qualitative metric describing company engagement in the legal and regulatory process. The current metrics, which include the disclosure of quantitative expenditures related to legal and regulatory engagement, may provide comparable data, but they may not offer a fair representation of company management of legal and regulatory risk. This is true for several reasons:

First, metric NR0101-25 currently includes in the scope of disclosure “contributions to tax-exempt groups including trade associations.” While trade associations may engage in the legal and regulatory process on behalf of member organizations to represent the industry’s views, associations also provide several other functions to member organizations that do not relate to legal or regulatory engagement. For example, the American Petroleum Institution (API) describes its mission as, “to promote safety across the industry globally and to influence public policy in support of a strong, viable U.S. oil and natural gas industry.” To achieve this mission, API has several program areas, including advocacy, research, standards setting, certification, and training. Contributions by member organizations are therefore utilized by API for a number of purposes with differing degrees of involvement and influence in the legal and regulatory process. Such contributions, therefore, may not offer a fair representation of company exposure to risks related to the management of the legal and regulatory environment.

Similarly, the International Association of Oil and Gas Producers’ (IOGP) vision statement is “To work on behalf of the world’s oil & gas exploration and production (E&P) Companies to promote safe, responsible, and sustainable operations.” Similar to API, IOGP facilitates information sharing among its members related to health and safety, security, social responsibility, engineering, and operations. Initiatives include standards-setting, information sharing related to emergency management, spill response, and other areas. Such activities can lead to improved performance related to health, safety, environmental management, and other areas. At the same time, per the IOGP’s website, they seek to “[engage] decision makers to explain our views, offer expertise, and provide data. Our aim is to help regulators and legislators draft rules and laws that are balanced and effective.” Again, due to the mix of activities performed by the association, contributions by member organizations may not be a fair representation of specific risks incurred by a contributing organization related to the management of the legal and regulatory environment.

The revised metric includes the disclosure of interactions with regulators to promote outcomes that align oil and gas companies’ financial incentives, including a discussion of strategies around regulatory (or legislative) compliance, participation, and influence specific to environmental and social topics that are likely to be material to companies in the industry based on industry-specific evidence. Per evidence provide in the *SASB Oil and Gas – Exploration and Production Research Brief*, all of the topics included in the provisional standard for the Oil and Gas – Exploration and Production industry may include elements of legal or regulatory risk. As such, they are relevant for the purposes of the revised, qualitative metric. By providing a standardized methodology to discuss risks and opportunities related to the management of legislation or regulation that has the potential to impact social or environmental topics likely to be material to issuers in the Oil and Gas – Exploration and Production industry, the revised metric will provide a fairer representation of company exposure to and management of legal and regulatory risk.

Second, the current quantitative metrics do not provide investors with information regarding which types of regulation or legislation a company views as having the potential to materially impact its performance on sustainability topics it views as having the potential to result in material financial impacts. Further, it does not include a discussion of company positions or actions taken to manage these risks. As such, these metrics do not provide a fair representation of company exposure to and management of risks and opportunities related to the topic. By narrowly defining the revised, qualitative metric to include these standardized elements of disclosure, the resultant disclosure will retain the elements of comparability and usefulness provided by the current metrics, while also improving the representativeness of the information disclosed.

Stakeholder Consultation

Investors: Numerous investors supported the materiality of corporate strategies, participation, and influence in the regulatory and legislative process. Some investors suggested that both qualitative and quantitative disclosures related to political lobbying, alignment with shareholder interests, and regulatory influence are decision-useful. Investors expressed a consensus view that the most important aspect of the disclosure was the alignment (or lack thereof) of a company's public positions and the positions taken by organizations or associations to which the company provides funding as well as the channels through which companies seek to influence the legal and regulatory environment.

Issuers: Multiple issuers expressed agreement with the proposal to revise the current quantitative metric with a qualitative discussion of a company's efforts to manage the legal and regulatory environment. No issuers expressed opposition to the limiting or removal of the topic. Issuers identified qualitative disclosures as offering a fairer representation of their overall approach to management of the legal and regulatory environment. Issuers noted that the quantitative disclosures of contributions to industry associations, for example, may not be a fair representation of reputational risk, since associations use such funds for many purposes of which political engagement is one element. Issuers expressed a desire to ensure the discussion and analysis was comparable, objective, and complete.

Benefits

Improves the SASB standard: The revision of the provisional metrics to the proposed metric will improve the standard by providing investors with comparable, decision-useful information regarding company exposure to and management of legal and regulatory risks related to topics that are likely to have material financial impacts, thus offering a fairer representation of company performance with respect to the Management of the Legal and Regulatory Environment topic.

Improves cost-effectiveness: The replacement of the two, quantitative metrics with a single, qualitative metric will improve the cost-effectiveness of the standard, as it is shorter and, thus, less costly to implement.



EXTRACTIVES & MIENRALS PROCESSING SECTOR

OIL & GAS - MIDSTREAM INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #EM0102

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #4-11 – **Industry:** Oil & Gas – Midstream; **Topic Name:** Greenhouse Gas & Other Air Emissions

2017 Technical Agenda Item #4-11 Description

SASB is evaluating the revision of metric NR0102-01¹⁴ to ensure the decision-usefulness and alignment with other standards of the metrics associated with the topic.

Summary of Change – Revise Metrics

The SASB proposes changing metric NR0102-01 from “Gross global Scope 1 emissions, percentage covered under a regulatory program,” to “Gross global Scope 1 emissions, percentage methane, and percentage covered under a regulatory program.”

Adherence to Criteria for Accounting Metrics

The provisional Oil and Gas – Midstream industry standard includes a topic for GHG & Other Air Emissions as well as associated metrics to describe a company’s emissions into the atmosphere. With respect to GHG emissions, metric NR0102-01 currently describes a company’s direct GHG emissions and the percentage of those emissions that are covered under a regulatory program. While this indicator is comparable and distributive with respect to company exposure to GHG emissions and associated regulatory and/or reputational risks, metric NR0102-01 does not provide a complete view of specific channels of regulatory and/or reputational risk specifically associated with methane emissions. The revision of the metric to include an additional disclosure element related to methane will improve the completeness, representativeness, and alignment with external standards with respect to GHG emission risks, thereby better accomplishing the core objectives of the standard by offering investors a more decision-useful set of disclosures that minimize the cost burden for issuers.

Supporting Analysis

Methane (CH₄) emitted either intentionally and unintentionally from natural gas and oil wells has an extremely potent greenhouse gas with a global warming potential. Per the EPA, that potential is 34x that of CO₂ over a 100-year time horizon and 84x over a 20-year time horizon. As a result, fugitive methane gas emissions have therefore been the target of industry regulation as part of larger efforts related to climate regulation. Methane emissions are already the subject of regulation by some oil-producing nations and are likely to receive additional attention per INDCs association with the COP Agreement. A review of the COP INDCs of Saudi Arabia and Canada, two of the top six oil-producing nations, identified methane reduction specifically. Reducing methane emissions may require both capital and operational expenditures to address and therefore creates potentially material financial impacts for operators. Further, a company’s actions to limit methane emissions (e.g., routine maintenance, capital expenditures, lead detection protocols) are different than those used to manage CO₂ emissions (e.g., carbon capture and sequestration, energy efficiency, flaring reduction). Methane emissions have broad and significant implications as 34 of the 47 U.S. Oil & Gas Exploration and Production companies currently tracked by SASB report methane emissions to CDP where these companies’ methane emissions account for 43 percent of U.S. methane emissions. Of the five largest Midstream companies by market capitalization, three discuss specific strategies for identifying and reducing methane emissions. Thus, the revision of the metric to include methane emissions will result in a more representative and complete disclosure of company management of GHG emission related risks.

¹⁴ NR0102-01: Gross global Scope 1 emissions, percentage covered under a regulatory program

The proposed disclosure would be harmonized with the EPA's Greenhouse Gas Reporting Program, IPIECA (reporting element C1), CDP guidance (OG2.3) and CDP's Oil and Gas module (OG7.3a, which could decrease issuer reporting burden, particularly those with significant activities in the United States.

Stakeholder Consultation

Investors: Multiple investors expressed an interest in additional granularity with respect to GHG emissions and specifically noted methane emissions as decision-useful. Feedback highlighted that such disclosures should include company policies and procedures to identify and mitigate such emissions. Investors noted that methane emission reductions are one of the most cost-effective methods to reduce GHG emissions as such reductions are typically not capital-intensive and result in additional product sales. Investors noted the importance of research, such as that performed by Climate Central, which identified that the net benefit of the transition from coal to natural gas with respect to GHG emissions is highly sensitive to the leakage rate of natural gas. Investors did not express a preference with respect to the decision-usefulness of reporting GHG emissions by unconventional versus conventional resource type.

Issuers: Multiple issuers noted the importance of methane emissions and management of such emissions through maintenance and operating procedures across the sector. Issuers cautioned that additional granularity of disclosures may increase the cost burden of reporting.

Benefits

Improves the SASB standard: The proposed SASB standard provides a distinction between types of GHG emissions (CO₂ versus CH₄), thereby improving representativeness and completeness.

Improves cost-effectiveness: Many issuers currently have policies and procedures related to the identification and management of fugitive methane emissions.

Improves decision-usefulness: Adding a breakdown for methane emissions to the existing SASB CO₂ metric improves decision-usefulness as it enhances the completeness of GHG emissions disclosures and would allow investors to differentiate among companies with outsized methane emissions that are therefore potentially exposed to higher future expenditures, reputational harm, and regulatory scrutiny.

Proposed Update #4-12 – **Industry:** Oil & Gas – Midstream; **Topic Name:** Greenhouse Gas & Other Air Emissions

2017 Technical Agenda Item #4-12 Description

SASB is evaluating splitting the topic to improve the quality and clarity of the standard.

Summary of Change – Split Topic

The SASB proposes splitting the topic Greenhouse Gas & Other Air Emissions into Greenhouse Gas Emissions and Air Quality.

Metric NR0102-01, “Gross global Scope 1 emissions, percentage covered under a regulatory program” and NR0102-02, “Description 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” will be associated with the GHG Emissions topic.

Metric NR0102-03, “Air emissions for the following pollutants: NO_x (excluding N₂O), SO_x, volatile organic compounds (VOCs), and particulate matter (PM)” will be associated with the Air Quality topic.

Adherence to Principles for Topic Selection

To better represent the distinct, industry-specific risks and management strategies associated with different elements of the topic, the Greenhouse Gas & Other Air Emissions topic will be split into GHG Emissions and Air Quality.

While both relate to air emissions, the two topics are associated with differing regulatory risks and management strategies. While GHG Emissions are characterized by a chronic, decentralized risk associated with climate change, Air Quality is more directly associated with both chronic and acute localized risks associated with the environmental and human health impacts of airborne pollutants. Actions or strategies to mitigate climate-related risk include emissions reductions strategies such as carbon capture and sequestration, energy efficiency projects, acquisition of carbon offsets through the production of renewable energy or direct acquisition, or other strategies. Actions or strategies to mitigate air quality risk include project siting, installation of abatement or emissions-reduction technologies, and/or localized community engagement and grievance management processes and procedures. As such, actions taken by companies to manage and mitigate these risks are largely independent, and therefore it is appropriate to separate these two topics.

Supporting Analysis

Both the Greenhouse Gas Emissions and Air Quality topics are likely to be material to companies in the industry as independent topics. Per SASB’s *Oil and Gas – Midstream Research Brief*, total GHG emissions in 2012 from natural gas processing, transmission, underground storage, and LNG imports/exports reported to the EPA accounted for about 85 million metric tons of carbon dioxide equivalent or 39 percent of the total from petroleum and natural gas systems. Greenhouse gas emissions are likely to have received continued regulatory scrutiny, as indicated by the Paris Agreement and associated Intended Nationally Determined Commitments as well as the recent publication of the Recommendations Report of the TCFD Financial Disclosures formed by the Financial Stability Board. Of the top five companies in the industry by market capitalization, all five discuss risks associated with regulatory and/or market transition risk associated with GHG emissions.

Air emissions represent a distinct yet important risk to the Midstream industry due to significant regulation and potential fines or other regulatory actions related to violations of air emissions rules. In the U.S., the EPA’s Clean Air

Act (CAA) requires facilities in petroleum and natural gas systems to report emissions from combustion, venting, equipment leaks, and flaring. In addition, several states have enacted regulations on air emissions associated with the oil and gas production and transportation, including California, Pennsylvania, North Dakota, and others. Of the top five companies in the industry by market capitalization, four discuss risks related to regulatory developments related to air quality.

Stakeholder Consultation

Investors: No feedback was received from investors regarding the proposed change.

Issuers: No feedback was received from issuers regarding the proposed change.

Benefits

Improves the SASB standard: Improves the quality and clarity of the standard by separating sustainability topics that are likely to be material and represent distinct, industry-specific sustainability risks.

Proposed Update #4-13 – **Industry:** Oil & Gas – Midstream; **Topic Name:** Operational Safety, Emergency Preparedness, and Response

2017 Technical Agenda Item #4-13 Description

SASB is evaluating the addition of a metric to ensure the usefulness, completeness, and representativeness of the metrics associated with the topic.

Summary of Change – Add Metric

The SASB proposes adding a metric to the Operational Safety, Emergency Preparedness, and Response topic describing, “Percentage of (1) natural gas and (2) hazardous liquid pipelines inspected.”

Adherence to Criteria for Accounting Metrics

The provisional Oil and Gas – Midstream SASB industry standard includes a topic for Operational Safety, Emergency Preparedness, and Response, which describes the risk of spills and accidents associated with the transport of hydrocarbon products. The associated metrics describe an individual company’s performance as it relates to this issue. Specifically, metric NR0102-09 describes the number of pipeline incidents that occurred during the reporting period. Metric NR0102-10 describes the number of rail transportation-related incidents. Finally, NR0102-11 provides a framework whereby the issuer can disclose its management systems used to integrate a culture of safety and emergency preparedness. However, the current metrics may not offer a complete and representative indication of issuer management of risks associated with the topic due to the lack of the disclosure of significant and impactful efforts made by companies to prevent such incidents from occurring. The addition of a metric describing efforts to inspect a company’s pipeline network will better accomplish the core objectives of the standard by providing investors with a more complete, representative, and distributive view of company performance with respect to safety-related risks.

Supporting Analysis

Pipeline incidents are a significant issue for the Oil and Gas – Midstream industry, and pipeline inspection activities are a key industry strategy to identifying potential issues before they escalate to an incident such as a spill or release. SASB’s *Oil and Gas – Midstream Research Brief* notes that, “An aging pipeline infrastructure could increase the likelihood of [accidents, spills, or leaks] without proper inspection, maintenance, and retrofitting.” Further, it notes that, “The 2002 and 2006 amendments to the HLPISA resulted in the DOT adopting rules that require pipeline operators to implement integrity management programs, including more frequent inspections . . . ”

In its 2011 State of the National Pipeline Infrastructure report, the US Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) notes that integrity inspections have been a key factor in the declining incident rate for pipelines despite aging infrastructure, stating “. . . in spite of the continued aging of our pipeline infrastructure, safety performance continues gradually to improve. An older pipeline does not necessarily have a higher likelihood of leaking or rupturing than a newer one. Even while materials, manufacturing techniques, joining methods, and design standards have evolved, techniques for managing the integrity of older pipelines have also improved. For example, technologies for evaluating the condition of pipelines using in-line inspection have improved significantly over the past twenty years.” The report notes that the number of pipeline incidents with death or major injury has been decreasing at a rate of approximately 10 percent every 3 years, referencing data from 1986-2011.

Current regulation requires pipelines be inspected on a regular basis, per 29 CFR 192 for gas pipelines and 49 CFR 195 for hazardous liquid pipelines and as enforced by the Pipeline and Hazardous Materials Safety Administration (PHMSA) of the United States Department of Transportation (USDOT). Each regulation specifies how pipeline operators must identify, prioritize, assess, evaluate, repair, and validate the integrity of pipelines. With respect to inspection, the regulation specifies acceptable “assessment methods” including internal inspection tools, pressure testing, direct assessments, or other equivalent technologies. This well-defined, externally valid framework will be referenced in the technical protocol for the proposed metric to ensure the comparability and verifiability of qualifying inspection activities for the purposes of disclosure per the metric.

The inclusion of this additional metric will therefore offer a more representative view of the actions taken by Midstream companies to manage and mitigate Operational Safety risk. Further, the additional metric adds a forward-looking or predictive indicator to the existing set of backward-looking metrics, which define incident rates. Thereby its inclusion offers investors a more complete view of company performance with respect to Operational Safety risk. Finally, the extent of pipeline network inspection will offer investors a distributive view company-specific inspection breadth versus peers and/or an industry average.

Stakeholder Consultation

Investors: Multiple investors expressed a consistent, strong interest in the inclusion of additional forward-looking or predictive indicators with respect to safety, noting that the current metrics are largely backward-looking. Disclosures related to infrastructure integrity were specifically mentioned as material and useful. Investors suggested that such disclosures would improve several aspects of the decision-usefulness of the disclosure by adding a metric that is a representative, complete, and distributive indicator of Operational Safety.

Issuers: General feedback from companies from both the integrated oil and gas and pure-play pipeline companies noted that SASB’s safety-related metrics are largely focused on backward-looking indicators of incident frequency rates, and the inclusion of an appropriate, aligned forward-looking indicator may offer a fairer representation of company efforts to prevent such incidents from occurring. Concerns were expressed regarding the potential cost burden of these additional disclosures should they not be aligned with existing industry norms and/or regulatory frameworks.

Benefits

Improves the SASB standard: Adding a disclosure related to preventative asset integrity management offers a more complete, representative, and distributive view of company efforts to manage Operational Safety.

Improves decision-usefulness: The metric provides investors with a representative and complete view of company management of Operational Safety risk by describing both preventative efforts to avoid incidents as well as incident rates to verify the effectiveness of such preventative efforts.

Improves alignment: Issuers who operate pipelines are already required to conduct pipeline integrity inspections per existing regulatory requirements and many report the results of such efforts. While the referenced regulation is US-based, its definitions for inspection requirements are broadly applicable and commonly employed in industry.



EXTRACTIVES & MINERALS PROCESSING SECTOR

OIL & GAS – REFINING & MARKETING INDUSTRY

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Prepared by the
Sustainability Accounting Standards Board®

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Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #4-14 – **Industry:** Oil & Gas – Refining & Marketing; **Topic Name:** Water Management

2017 Technical Agenda Item #4-14 Description

SASB is evaluating revisions to the water quality metric NR0103-06¹⁵ to improve its decision-usefulness.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol for metric NR0103-06, “Number of incidents of non-compliance with water quality and/or quantity permits, standards, and regulations,” to limit the scope of incidents of non-compliance to exclusively those that result in a formal enforcement action.

Adherence to Attributes of Technical Protocols

The Oil and Gas – Refining and Marketing industry provisional standard includes a disclosure topic, Water Management, that is centered on corporate performance and strategy concerning water-related risks and opportunities. The metrics associated with the topic focus on water consumption, water scarcity, effluent, and regulatory compliance. More specifically, metric NR0103-06 is designed to capture a company’s performance on complying with state- or federal-level water quality regulations, including regulations on water treatment and discharges. Performance on incidents of non-compliance are an indication of the strength of a company’s overall water quality management, its ability to comply with regulation, and its exposure to potential operational impacts associated with non-compliance. The impacts include costs related to permitting, penalties, remediation, and capital expenditures. However, the current metric scope, as defined in the technical protocol, is excessively broad as it states, “[a]n incident of non-compliance shall be disclosed regardless of whether it resulted in an enforcement action (e.g., fine, warning letter, etc.).” Incidents of non-compliance vary widely in terms of the nature and severity of impact, and they may or may not result in enforcement actions.

Given the broadly defined scope of non-compliance incidents, the provisional metric does not provide fair representation of corporate performance on the topic and it is less likely to be cost-effective. The proposed revision to the technical protocol for the metric will limit the scope of non-compliance incidents exclusively to those that result in formal enforcement actions—ultimately, improving the signal-to-noise ratio by focusing on those incidents more likely to indicate operational or financial impacts. This proposed revision would improve the representativeness and cost-effectiveness of the metric, as well as the comparability and usefulness of the information it generates.

Supporting Analysis

Water regulations in the U.S., Canada, and many international regions typically address the quality of water discharges from manufacturing facilities. Water-intensive industries, such as the Oil and Gas – Refining and Marketing industry, may also be affected by state or federal regulations that address water withdrawals, although this is less common than regulations governing water discharges. Companies are generally required to obtain state or federal-level permits that allow them to discharge a certain amount of wastewater over a given period. Incidents of non-compliance with water regulations may be the result of a variety of events relating to water quality management, including the failure to meet a reporting deadline or a water discharge above permit limits. The magnitude of the regulatory response will vary depending on the nature of the non-compliance. For example, failure to meet a reporting deadline may result in a non-compliance notice or warning letter with little to no financial impact for the

¹⁵ NR0103-06: Number of incidents of non-compliance with water quality permits, standards, and regulations

issuer. An effluent regulation exceedance could, however, result in a company being issued a formal enforcement action, resulting in remediation costs, fines, and/or reputational damage.

Formal enforcement actions, as defined¹⁶ by the EPA and some state agencies, are statutorily recognized actions to address a violation or threatened violation of water regulations, regulations, policy, or orders, and include administrative penalty orders, administrative orders, and judicial actions, among others. These types of enforcement actions can result in financial penalties and remediation requirements and can be indicative of overall management of water issues over time. Conversely, non-compliance incidents that result in informal enforcement actions—or example, an inspection, phone call, or violation letter—may be issued when no actual violation has occurred, and are significantly less likely to generate financial impacts for companies. Correspondingly, formal enforcement actions are less common than informal actions. According to EPA data, of 5,102 U.S. facilities that received notices of non-compliance with water regulation, only 519 resulted in formal enforcement actions.¹⁷

The provisional metric requires reporting of incidents of non-compliance regardless of whether they result in a formal enforcement action. Reporting all incidents of non-compliance does not distinguish between the severity of incidents and the resulting potential for financial impacts to the registrant. This creates an undue cost burden for the registrant related to data collection, tracking, and reporting, and adversely affects the usefulness and fair representation of the resulting disclosures.

As incidents that result in formal enforcement actions are more likely to generate financial impacts on the registrant, they are a relevant indicator to measure performance on the management of water quality. Thus, the proposed revision confines the metric's scope to incidents that result in formal enforcement actions, thereby directly improving the representativeness, comparability, and usefulness of the information generated by the standard, and better adhering to the core objectives of the standard.

Additionally, the proposed SASB metric is aligned with federal and state water quality regulations that employ formal enforcement actions as well as reporting guidelines such as the CDP Water Information Request.

Stakeholder Consultation

Investors: A limited number of investors provided input on the proposed revision. Such input broadly supported the revision, based on improvements to the decision-usefulness of resulting disclosures.

Issuers: A limited number of issuers provided input on the proposed revision. Such input constituted support for revising the scope of this metric to focus on notices of violation that result in formal enforcement actions, as doing so improves the decision-usefulness of the metric.

Others: Several subject matter experts commented that the proposed change would more accurately reflect performance on the aspect of the topic related to regulatory compliance.

¹⁶ "Informal and Formal Actions Summary of Guidance and Portrayal on EPA Websites " United States Environmental Protection Agency, accessed August 28, 2017,

<https://www.epa.gov/sites/production/files/2013-11/documents/actiondefs.pdf>.

¹⁷ "Analyze Trends: State and Water Dashboard" United States Environmental Protection Agency, last modified March 20, 2017, accessed August 28, 2017, <https://echo.epa.gov/trends/comparative-maps-dashboards/state-water-dashboard?view=performance&state=National>

Benefits

Improves the SASB standard: The proposed change would result in disclosures more consistent with the guiding criteria of fair representation and comparability.

Improves decision-usefulness: By focusing on incidents of non-compliance that resulted in formal enforcement actions, the proposed change would improve the usefulness of information generated by the standard as it improves the signal-to-noise ratio.

Improves cost-effectiveness: The proposed change narrows the scope of disclosure to a more specific (and meaningful) subset of non-compliance incidents, thereby improving the cost-effectiveness of the standard.

Improves alignment: The proposed revision will align the SASB standard with existing reporting protocols and regulatory reporting requirements.

Proposed Update #4-15 – **Industry:** Oil & Gas – Refining & Marketing; **Topic Name:** Health, Safety, and Emergency Management

2017 Technical Agenda Item #4-15 Description

SASB is evaluating splitting the topic to improve the quality and clarity of the standard.

Summary of Change – Split Topic

The SASB proposes splitting the topic “Health, Safety, and Emergency Management” into “Employee Health and Safety,” related to Human Capital; and “Critical Incident Risk Management,” related to Leadership and Governance.

For the Employee Health and Safety, topic, the existing, provisional metric NR0103-09, “(1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees and (b) contract employees” will be retained and a Discussion and Analysis metric, “Discussion of management systems used to integrate a culture of safety,” will be added.

The Critical Incident Risk Management topic will include provisional metrics NR0103-10 (to be renumbered) called “Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2),” NR0103-11 (to be renumbered) called “Challenges to Safety Systems indicator rate (Tier 3);” and NR0103-12 (to be renumbered) called “Discussion of measurement of Operating Discipline and Management System Performance through Tier 4 Indicators.”

Adherence to Principles for Topic Selection

To better represent the distinct, industry-specific risks and management strategies associated with different elements of the topic, the “Health, Safety, and Emergency Management” topic will be split into “Employee Health and Safety,” which relates to Human Capital and “Critical Risk Management,” which relates to Leadership and Governance.

While elements of these two topics are related, they represent different sustainability dimensions, and therefore require different metrics to fairly represent company performance in a way that is actionable by companies. Employee health and safety relates to human capital factors such as training, incident reporting and investigation, and personal protective equipment. Critical risk management relates to corporate governance issues such as corporate risk management procedures, technological control measures, and emergency response. As such, actions taken by companies, and metrics designed to convey performance to investors, are different and should be independently associated with each topic.

Supporting Analysis

Both the Employee Health and Safety as well as the Critical Risk Management topics are likely to be material to the industry as independent topics. With respect to Critical Risk Management, *SASB’s Oil & Gas – Refining & Marketing Research Brief* notes such catastrophic incidents can cause significant material harm for industry participants. The brief notes that there were 36 fatality/catastrophe incidents related to highly hazardous chemical releases in the refining industry until the refinery National Emphasis Program was launched and completed in 2007. The severity of potential incidents related to process safety management and the magnitude of associated financial impacts, whether through fines, legal action, or increased regulatory oversight, support the inclusion of the Critical Risk Management topic in the industry standard. Process Safety aims to prevent unintentional releases of chemicals, energy, or other potentially

dangerous materials through the design, maintenance, and verification of safety barriers, which prevent incidents from escalating into major accidents. Safety barriers may include facility design, operational control devices, safety control devices, mechanical integrity, operating procedures for high-risk activities, and other elements. The application of these principles is typically executed through a Process Safety Management program, for which the Occupational Safety and Health Administration has issued standards per 19 CFR 1910.119¹⁸. The successful application of Process Safety Management therefore primarily derives from the effectiveness of Leadership and Governance processes to ensure the successful application of its principles and requirements throughout a company's operations.

With respect to Employee Health and Safety, the brief notes that, between 2003 and 2010, the U.S. Oil and Gas Refining and Marketing industry had a fatality rate of 4.29, compared to the U.S. national average of 3.5 for all industries. The industry has made significant strides in reducing the rate of incidents and injuries—with the total recordable incident rate for the Oil and Gas Refining industry falling from 1.4 in 2005 to 0.6 in 2015. According to data from the U.S. Bureau of Labor Statistics¹⁹—company focus on reducing and maintaining low incident rates is of critical importance, as evidenced by a review of the regulatory filings of the top five companies in the industry by market capitalization. This review showed that four of the five currently disclose information related to the personal safety of employees, with the majority noting potential adverse financial impacts that may result from incidents or changes in applicable regulations. Actions taken by companies to manage risks related to Employee Health and Safety include employee safety training, the use of personal protective gear, the implementation of work control processes or permitting, and operating procedures, among other management strategies.

Stakeholder Consultation

Investors: No direct feedback was received from investors in the industry regarding the proposed change. However, investors who provided feedback for the sector generally supported changes that would improve the clarity of the information generated by standard.

Issuers: No direct feedback was received from issuers in the industry regarding the proposed change. However, issuers in the sector were generally supportive of changes which aligned topics with company strategies for managing associated risks or opportunities.

Benefits

Improves the SASB standard: Improves the quality and clarity of the standard by separating sustainability topics that are likely to be material and represent distinct, industry-specific sustainability risks.

¹⁸ "Process Safety Management," Occupational Safety and Health Administration, accessed August 28, 2015, <https://www.osha.gov/SLTC/processsafetymanagement/standards.html>.

¹⁹ "Industry Injury and Illness Data," Bureau of Labor Statistics, accessed August 28, 2017 https://www.bls.gov/iif/oshsum.htm#05Summary_News_Release.

Proposed Update #4-16 – **Industry:** Oil & Gas – Refining & Marketing; **Topic Name:** Management of the Legal & Regulatory Environment

2017 Technical Agenda Item #4-16 Description

SASB is evaluating the revisions to the metrics NR0103-16²⁰ and NR0103-17²¹ to improve the cost-effectiveness and materiality of the standard.

Summary of Change – Revise Metrics

The SASB proposes replacing the two quantitative metrics associated with the Management of the Legal and Regulatory Environment topic:

- NR0101-16 – Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations
- NR0101-17 – Five largest political, lobbying, or tax-exempt group expenditures

With the following qualitative metric:

- Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry

The technical protocol of the revised metric will describe the scope of the disclosure, including the risks and opportunities that may result from legislation or regulation related to environmental and social factors, which are likely to be material based on industry-specific characteristics.

Adherence to Criteria for Accounting Metrics

The provisional topic, Management of the Legal & Regulatory Environment, is focused on how Oil & Gas – Refining & Marketing companies engage with regulators and policymakers to influence regulations and policies to align shareholder interests with long-term societal interests, or the lack thereof. Provisional metric NR0103-16 and NR0103-17 (both proposed for removal) are intended to provide information regarding political and regulatory relations and influence. The proposal to replace the current quantitative metrics with a single qualitative metric is based on a lack of industry-specific evidence that demonstrates these metrics are a fair representation of issuer exposure to and/or management of risks associated with the topic. Furthermore, the proposed change will improve the cost-effectiveness of the standard.

The revised, qualitative metric will provide a fairer representation of performance on the topic by specifically focusing the discussion on a limited number of underlying sustainability topics that are currently included in the provisional standard. Interactions with regulators and policymakers is proposed for inclusion within the provisional topic, Greenhouse Gas Emissions. The proposed revised metric includes a discussion of the risks and opportunities related to legislation or regulation related to environmental and societal factors, contextualized by specific pieces of legislation or regulation that impact sustainability topics that are likely to be material for industry participants.

²⁰ NR0103-16: Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations

²¹ NR0103-17: Five largest political, lobbying, or tax-exempt group expenditures

Supporting Analysis

The Oil & Gas – Refining & Marketing industry is subject to numerous sustainability-related regulations and a rapidly changing regulatory environment. Companies in the industry regularly participate in the regulatory and legislative process on a wide variety of environmental and societal issues, and industry-specific evidence demonstrates that such participation may generate financial impacts systematically across the industry.

The SASB proposes to replace the current quantitative metrics related to political and/or campaign spending with a single, qualitative metric describing company engagement in the legal and regulatory process. The current metrics, which include the disclosure of quantitative expenditures related to legal and regulatory engagement, may provide comparable data, but they may not offer a fair representation of company management of legal and regulatory risk. This is true for several reasons:

First, metric NR0101-25 currently includes in the scope of disclosure “contributions to tax-exempt groups including trade associations.” While trade associations may engage in the legal and regulatory process on the behalf of member organizations to represent the industry’s views, associations also provide several other functions to member organizations that do not relate to legal or regulatory engagement. For example, while the API describes its mission as, “to promote safety across the industry globally and to influence public policy in support of a strong, viable U.S. oil and natural gas industry.” To achieve this mission, API has several program areas, including advocacy, research, standards setting, certification, and training. Contributions by member organizations are therefore utilized by API for a number of purposes with differing degrees of involvement and influence in the legal and regulatory process. Such contributions, therefore, may not offer a fair representation of company exposure to risks related to the management of the legal and regulatory environment.

Although primarily focused on upstream activities, the IOGP offers a similar example. The IOGP’s vision statement is “To work on behalf of the world’s oil & gas Refining & Marketing (E&P) Companies to promote safe, responsible, and sustainable operations.” Similar to API, IOGP facilitates information sharing among its members related to health and safety, security, social responsibility, engineering, and operations. Initiatives include standards-setting, information sharing related to emergency management, spill response, and other areas. Such activities can lead to improved performance related to health, safety, environmental management, and other areas. At the same time, per the IOGP’s website, they seek to “[engage] decision makers to explain our views, offer expertise, and provide data. Our aim is to help regulators and legislators draft rules and laws that are balanced and effective.” Again, due to the mix of activities performed by the association, contributions by member organizations may not be a fair representation of specific risks incurred by a contributing organization related to the management of the legal and regulatory environment.

The revised metric includes the disclosure of interactions with regulators to promote outcomes that align oil and gas companies’ financial incentives, including a discussion of strategies around regulatory (or legislative) compliance, participation, and influence specific to environmental and social topics that are likely to be material to companies in the industry based on industry-specific evidence. Per evidence provided in the *SASB Oil and Gas – Refining & Marketing Research Brief*, all of the topics included in the provisional standard for the Oil and Gas – Refining & Marketing industry may include elements of legal or regulatory risk, and, as such, are relevant for the purposes of the revised, qualitative metric. By providing a standardized methodology to discuss risks and opportunities related to the management of legislation or regulation that has the potential to impact social or environmental topics that are likely to be material to issuers in the Oil and Gas – Refining & Marketing industry, the revised metric will provide a fairer representation of company exposure to and management of legal and regulatory risk.

Second, the current quantitative metrics do not provide investors with information regarding which types of regulation or legislation a company views as having the potential to materially impact its performance on sustainability topics it views as having the potential to result in material financial impacts. Further, it does not include a discussion of company positions or actions taken to manage these risks. As such, these metrics do not provide a fair representation of company exposure to and management of risks and opportunities related to the topic. By narrowly defining the revised, qualitative metric to include these standardized elements of disclosure, the resultant disclosure will retain the elements of comparability and usefulness provided by the current metrics, while improving the representativeness of the information disclosed.

Stakeholder Consultation

Investors: Numerous investors supported the materiality of corporate strategies, participation, and influence in the regulatory and legislative process. Some investors suggested that both qualitative and quantitative disclosures related to political lobbying, alignment with shareholder interests, and regulatory influence are decision-useful. Investors expressed a consensus view that the most important aspect of the disclosure was the alignment (or lack thereof) of a company's public positions and the positions taken by organizations or associations to which the company provides funding as well as the channels through which companies seek to influence the legal and regulatory environment.

Issuers: Multiple issuers expressed agreement with the proposal to revise the current quantitative metric with a qualitative discussion of a company's efforts to manage the legal and regulatory environment. No issuers expressed opposition to the limiting, or removal, of the topic. Issuers identified qualitative disclosures as offering a fairer representation of their overall approach to management of the legal and regulatory environment. Issuers noted that the quantitative disclosures of contributions to industry associations, for example, may not be a fair representation of reputational risk, as associations use such funds for many purposes of which political engagement is but one element. Issuers expressed a desire to ensure the discussion and analysis was comparable, objective, and complete.

Benefits

Improves the SASB standard: The revision of the provisional metrics to the proposed metric will improve the standard by providing investors with comparable, decision-useful information regarding company exposure to and management of legal and regulatory risks related to topics that are likely to have material financial impacts, thereby offering a fairer representation of company performance with respect to the Management of the Legal and Regulatory Environment topic.

Improves cost-effectiveness: The replacement of the two, quantitative metrics with a single, qualitative metric will improve the cost-effectiveness of the standard, as the standard is shorter and, thus, less costly to implement.



EXTRACTIVES & MINERALS PROCESSING SECTOR

OIL & GAS - SERVICES INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #EM0104

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #4-17 – **Industry:** Oil & Gas – Services; **Topic Name:** Activity Metrics

2017 Technical Agenda Item #4-17 Description

SASB is evaluating the addition of an activity metric to facilitate normalization of SASB’s accounting metrics in a decision-useful, cost-effective manner.

Summary of Change – Add Metric

The SASB proposes adding an activity metric to the Oil and Gas – Services industry standard for the “Total number of hours worked.”

Adherence to Criteria for Accounting Metrics

The SASB provisional Oil and Gas – Services industry standard includes several activity metrics intended to measure the scale of the issuer’s business, providing operational context and facilitating normalization of SASB accounting metrics. The current accounting metrics include the number of active rig sites, number of active well sites, and total amount of drilling performed. While these metrics provide important angles of overall issuer activity, they may not offer a complete indication of activity whereby investors can normalize the SASB metrics in a decision-useful manner. The addition of a metric describing the number of man-hours worked will better accomplish the core objectives of the standard by providing investors with a more useful normalization basis for investor interpretation of the SASB accounting metrics.

Supporting Analysis

Due to the nature of the Oil and Gas Services industry in providing personnel, equipment, and technologies to its customers in the Oil and Gas Exploration and Production Industry, the number of hours worked is a useful way to determine the overall activity level in the industry. In its regulatory filing, one major Oil and Gas Service company notes, “Rates for services are typically priced on a per day, per meter, per man-hour or similar basis.” Another large industry participant notes in its regulatory filing, “Rates for services are typically priced on a per day, per distance drilled, per man hour or similar basis.” These and other industry participants typically track the number of hours worked in the course of their business activities, which is anticipated to reduce the cost burden of reporting the metric.

In addition, safety statistics such as the TRIR and Fatality Rate are recorded per OSHA guidance, which requires normalization based on the “number of hours worked by all employees.” As such, the normalization metric is aligned with existing regulatory reporting requirements.

Stakeholder Consultation

Investors: The investors did not provide direct consultative input on this topic. However, several investors expressed a desire for SASB to ensure that its standards provided fair, applicable normalization bases to improve the overall decision-usefulness of the sustainability indicators.

Issuers: Feedback received during consultation suggested that working hours or revenues were the best available proxy for overall activity across various areas of industry operations. A review of regulatory filings showed that several leading companies track activity levels in terms of hours worked. In addition, companies already must calculate total hours worked for reporting health and safety performance, as required by OSHA and other regulatory agencies.

Benefits

Improves the SASB standard: The proposed SASB standard improves the overall usefulness of disclosures by providing an industry-appropriate activity metric for normalization purposes.

Improves alignment: Regulatory filings indicate that issuers already track activity levels based on the number of hours worked by employees. In addition, OSHA's form 300 requires the calculation of injury and incident rates normalized by the number of hours worked.

Proposed Update #4-18 – **Industry:** Oil & Gas – Services; **Topic Name:** Water Management

2017 Technical Agenda Item #4-18 Description

SASB is evaluating the revision of metric NR0104-04²² to ensure the representativeness and applicability of the metrics associated with the topic.

Summary of Change – Revise Metric

The SASB proposes revising metric NR0104-04 from “Average volume of water used per volume of gas or oil extracted by (1) fresh water and (2) recycled water,” to “Total volume of fresh water handled in operations, percentage recycled.”

Adherence to Criteria for Accounting Metrics

The SASB provisional Oil and Gas – Services industry standard includes a topic for Water Management with associated metrics to describe a company’s water consumption and its strategies for managing water consumption and disposal-related risks and opportunities. With respect to water consumption, metric NR0104-04 currently describes the water used by a service company per volume of gas or oil extracted. While this indicator is useful with respect to company exposure to risks related to water consumption, it does not provide a fair representation of service company exposure to water-related risk. Nor is the current normalization basis on average oil or gas production applicable to service companies, who do not produce oil and gas from the assets for which they provide services. The revision of the metric to account only for water-related risks and opportunities that are largely within the service company’s control will therefore improve the representativeness and applicability of associated disclosures, thereby better accomplishing the core objectives of the standard by offering investors a more decision-useful set of disclosures that are simultaneously more cost-effective for issuers.

Supporting Analysis

The proposed change addresses two issues with the standard: first, the definition of water ownership in the well development process, and second, the appropriateness of the normalization basis (“per volume of gas or oil extracted”) for the Oil and Gas - Services industry.

With respect to the former, SASB’s *Oil and Gas – Services Research Brief* industry cites a Ceres Hydraulic Fracturing & Water Stress report (Freyman, Monika, “Hydraulic Fracturing & Water Stress.” Ceres, February 2014), which notes, “Schlumberger, Halliburton, and Baker Hughes... collectively account for 55 percent of all hydraulic fracturing wells and are responsible for approximately half of all water used in fracking in the U.S.” The report further describes that, while these companies “handled the largest volume of fracturing water overall,” “Chesapeake had the largest amount of water use reported... followed by EOG Resources, XTO Energy, and Anadarko Petroleum.” The distinction between “handling” and “use” is an important element of the decision-usefulness and cost effectiveness of associated disclosures for the Services industry; while Service companies are dependent upon water availability to enable them to provide drilling, completion, and stimulation services, the procurement of the water for these processes and its associated use is typically the responsibility of the exploration and production company.

Further, all disclosures of volumes of water used in hydraulic fracturing operations made to FracFocus.org, an online voluntary disclosure database funded by oil and gas trade groups and the U.S. Department of Energy, are made by

²² NR0104-04: Average volume of water used per volume of gas or oil extracted by (1) fresh water and (2) recycled water

Exploration and Production companies. A review of the database identified that there are no disclosures made by any of the five largest Oil and Gas Services companies.

With respect to the normalization basis, a review of the regulatory filings of the five largest Oil and Gas – Services companies by market capitalization revealed that no companies report data related to production, and the reporting of water use is restricted only to direct consumption by the company at its facilities and in the process of manufacturing its own products.

To address these concerns, the proposed revision will ensure that the scope of the disclosure is aligned with data that is likely to be available to the Services company. In the course of providing the scope of service to an Exploration and Production company, Service companies typically provide the equipment, personnel, and technical expertise needed to drill, complete, and/or stimulate a well, including provision to pump fluids into the well and receive fluids back from it. As such, Service companies are able to monitor the transfer of water across their battery limit for the purposes of reporting. In lieu of obtaining well productivity data, limiting the disclosure to factors that a Service company is likely to have direct access to will improve the cost-effectiveness of the disclosure.

While Service companies do not “use” the water associated with well development, they are exposed to water risks if limited access to water results in reduced drilling and completion activities, thereby decreasing demand for oil and gas services. In such situations, operators who have technologies and/or expertise to provide services with a lower consumption of natural capitals may have a competitive advantage. A review of the top five Oil and Gas – Services companies marketing materials related to hydraulic fracturing services identified that all five highlight technologies that reduce freshwater use. Examples include one industry-leading company that offers “recycling of flowback produced water at the wellsite” and that “. . . between 10 percent and 40 percent of the fluid volume used in fracturing operations flows back during the subsequent clean-up.” Another leading company offers a “solution for removing high salt concentrations from frac and flowback produced water . . . For operators . . . E&P waste waters can be converted to fresh water quality.” A third industry participant offers operators the ability to “conserve fresh water in fracturing operations by using 100 percent produced water.”

As such, the proposed indicator will provide the total amount of fresh water handled by Service companies as well as the amount recycled, which can be normalized to activity levels per metrics NR0104-A/B/C. The extent to which Service companies deploy technologies that reduce fresh water consumption will be reflected in the percent of total water use provided by recycled water from various waste streams (flow back water, produced water, etc.). The proposed revision will therefore improve the representativeness of the quantitative indicator with respect to Service company exposure to water management related risks as well as ensure the measurement basis is applicable to a Service company’s operating context.

Stakeholder Consultation

Investors: Investors supported the inclusion of Water Management as a material topic but indicated the current disclosure basis does not provide a decision-useful measure of Service company exposure to this risk. Investors identified that Service companies do not “own” the water used while providing their scope of service, but rather handle and facilitate the use of the water provided by the Exploration and Production company to accomplish the agreed upon scope of work. Investors expressed that indicators that describe factors largely within control of the service company, such as the company’s ability to more efficiently use natural capitals, would be more decision-useful.

Issuers: Issuers expressed significant concerns regarding the current disclosure basis, citing that it is not a fair representation of Service company performance with respect to water management risk, and that collecting data on

well productivity may not be possible in all cases and would be costly to collect, analyze, and assure in cases where such data could be obtained. Issuers expressed a desire for the disclosure to be based on factors for which the company has the ability to collect the associated data in the course of providing its scope of service to minimize the cost burden of reporting.

Others: Third parties identified that water usage is a material risk for the industry. It was noted that, if a recycling metric is used, this should be narrowly defined to ensure comparability.

Benefits

Improves the SASB standard: The proposed SASB standard represents risks and opportunities related to water management that are more representative of factors directly associated with Oil and Gas Services companies (i.e., independent of risks primarily associated with Exploration and Production companies).

Improves cost-effectiveness: The scope of the disclosure is limited to factors for which the Service company is more likely to have access to data.

Improves decision-usefulness: Provides investors with a view of Service company deployment of technologies that lower fresh water usage via reprocessing/treatment of non-fresh water sources for use in the scope of the Service company's business.

Proposed Update #4-19 – **Industry:** Oil & Gas – Services; **Topic Name:** Chemicals Management

2017 Technical Agenda Item #4-19 Description

SASB is evaluating the revision of metric NR0104-06²³ to ensure the representativeness and applicability of the metrics associated with the topic.

Summary of Change – Revise Metrics

The SASB proposes revising metric NR0104-06 from “Average amount of hydraulic fracturing fluid and proppant consumed per volume of gas or oil extracted,” to “Total volume of hydraulic fracturing fluid used, percentage hazardous”.

Adherence to Criteria for Accounting Metrics

The provisional Oil and Gas – Services SASB industry standard includes a topic for Chemicals Management with associated metrics to describe a company’s chemical usage, its public disclosure of chemicals used, and its strategies for managing chemical-related risks and opportunities. With respect to chemical usage, metric NR0104-06 currently describes the average amount of hydraulic fracturing fluid and proppant used by a service company per volume of gas or oil extracted. While this indicator is useful with respect to company exposure to risks related to chemical use in the context of hydraulic fracturing, it does not provide a representative measurement of service company exposure to chemical-related risk. Nor is the current normalization basis on average oil or gas production applicable to service companies who do not produce oil and gas from the assets for which they provide services. The revision of the metric to account only for those chemical-related risks and opportunities that are largely within the service company’s control will therefore improve the representativeness and applicability of associated disclosures and better accomplish the core objectives of the standard by offering investors a more decision-useful set of disclosures that are simultaneously more cost-effective for issuers.

Supporting Analysis

The proposed change addresses two issues with the standard: first, the applicability of aspects of chemical-related risks and opportunities to service companies within the context of their operations, and second, the appropriateness of the normalization basis (“per volume of gas or oil extracted”) for the Oil and Gas - Services industry.

With respect to the former, research conducted by the SASB and described in *Oil and Gas – Services Research Brief* identifies the potential risks for Service companies associated with Chemicals Management, noting, “The use of fracking fluids containing harmful chemicals is an area of increasing concern in many U.S. counties and other regions internationally where fracking occurs.” Concerns related to the practice have resulted in considerable federal and local regulatory attention, including a 2016 study by the EPA on the impacts of hydraulic fracturing on drinking water resources, BLM rules for hydraulic fracturing on indigenous lands, and state or local bans of the activity in California, Colorado, Connecticut, the District of Columbia, Florida, Hawaii, Illinois, Indiana, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Texas, Vermont, Virginia, West Virginia, and Wyoming. While this research supports the materiality of the topic, the associated metric does not provide investors with decision-useful information as it is not a fair representation of Service company management of this risk. Nor does it offer an applicable, verifiable, aligned measurement of performance.

²³ NR0104-06: Average amount of hydraulic fracturing fluid and proppant consumed per volume of gas or oil extracted

Per the above, the material aspect of the risk relates to the environmental risks associated with the use of hazardous chemicals in hydraulic fracturing fluid (note that the water management portion of hydraulic fracturing sustainability risks is treated in metrics NR0101-04 and 05). In order to ensure the usefulness of the disclosure in identifying the hazardous elements of hydraulic fracturing fluid to investors, it has been proposed that the disclosure be modified such that issuers identify the volume of hydraulic fluid, as well as the percentage hazardous. This will provide investors with decision-useful information related to chemicals management risk while ensuring the scope of disclosure is limited to factors likely to be within the Service company's control and/or for which the Service company has access to information.

To ensure the disclosure is aligned with existing frameworks, and is therefore cost-effective, the determination of hazardous chemicals will be per the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) issued by the United Nations Economic Commission for Europe. This system has subsequently been adopted by several national organizations, including OSHA in the United States (on March 26, 2012). The system allows chemicals or mixtures to be identified as "hazardous" per its classification criteria related to physical, health, and environmental hazards. As such, the revised disclosure will be both cost-effective and decision-useful by referencing this internationally accepted standard for the assessment and classification of hazards associated with chemicals and chemical mixtures.

Further, it is recommended that disclosures related to proppant be removed. A review of the SASB industry research brief did not identify material environmental risks associated with proppant use. While exposure to silica may be a concern, this risk would be related to Human Capital rather than Environmental Capital, an appropriate metric would be added to this Capital element of the standard.

With respect to the normalization basis, a review of the regulatory filings of the five largest Oil and Gas – Services companies by market capitalization revealed that no companies report data related to production. The proposed revision will ensure the scope of the disclosure is aligned with data that is likely to be available to the Services company. In the course of providing the scope of service to an Exploration and Production company, Service companies typically provide the equipment, personnel, and technical expertise needed to drill, complete, and/or stimulate a well. This includes provision to pump fluids into the well as well as receive fluids back from the well. As such, Service companies are able to monitor the transfer of fluid across their battery limit for the purposes of reporting. In lieu of obtaining well productivity data, limiting the disclosure to factors that a Service company is likely to have direct access to, such as the volume of fracturing fluid used, will improve the cost-effectiveness of the disclosure.

As such, the proposed indicator will provide the amount of hydraulic fracturing fluid used in the scope of service provided by Service companies as well as the amount that can be considered hazardous per internationally accepted definitions. This can subsequently be normalized to activity levels per metrics NR0104-A/B/C. The revised metric will therefore communicate the extent to which Service companies provide well stimulation services that reduce the volume of hydraulic fracturing fluid required as well as the percentage of this fluid that is hazardous, thereby improving the representativeness of the quantitative indicator with respect to Service company exposure to chemicals management related risks as well as ensuring the measurement basis is applicable to a Service company's operating context.

Stakeholder Consultation

Investors: Investors expressed a consensus view that Chemical Management is a material topic but that the current disclosure basis does not provide a decision-useful measure of Service company exposure to this risk. Investors

identified that Service companies specify the chemical make-up of hydraulic fracturing fluid but do not determine the volume to be used in providing their scope of service. Rather this is done by the Exploration and Production company. Investors expressed that indicators that describe factors largely within control of the service company, are more decision-useful.

Issuers: Issuers expressed significant concerns regarding the current disclosure, citing that it is not a fair representation of Service company performance with respect to chemicals management risk, as chemical and hydraulic fluid specification is done by the Exploration and Production Company. Issuers further noted that collecting data on well productivity may not be possible in all cases and would be costly to collect, analyze, and assure in cases where such data could be obtained. Issuers expressed a desire for the disclosure to be based on factors for which they have the ability to collect the associated data in the course of providing scope of service to minimize the cost burden of reporting.

Benefits

Improves the SASB standard: The proposed SASB standard represents risks and opportunities related to chemicals management that are more representative of factors directly associated with Oil and Gas Services companies (i.e., independent of risks primarily associated with Exploration and Production companies).

Improves cost-effectiveness: The scope of the disclosure is limited to factors for which the Service company is more likely to have access to data, and eliminates reporting related to silica.

Improves decision-usefulness: The revised metric provides investors with a view of Service company deployment of technologies that affect environmental risk, including the amount of hydraulic fracturing fluid pumped as well as the percentage of such fluid considered hazardous.

Proposed Update #4-20 – **Industry:** Oil & Gas – Services; **Topic Name:** Chemicals Management

2017 Technical Agenda Item #4-20 Description

SASB is evaluating the removal of metric NR0104-07²⁴ to ensure the representativeness and applicability of the metrics associated with the topic.

Summary of Change – Remove Metric

The SASB proposes to remove metric NR0104-07, “Percentage of hydraulically fractured wells for which there is public disclosure of all fluid chemicals used.”

Adherence to Criteria for Accounting Metrics

The SASB provisional Oil and Gas – Services industry standard includes a topic Chemicals Management, which describes the risks and opportunities associated with a company’s use of potentially hazardous chemicals and the associated environmental impacts. The associated metrics describe an individual company’s performance as it relates to this issue. Specifically, metric NR0104-06 describes the amount of hydraulic fracturing fluid used in well stimulation activities. Metric NR0104-07 describes the percentage of hydraulically fractured wells for which the chemicals used is publicly disclosed and NR0104-08 describes the registrants’ strategy to address chemical-related risks, opportunities, and impacts. Due to chemical disclosures being the responsibility of the Oil and Gas Exploration and Production company rather than the Services company, metric NR0104-07 is not a fair representation of company performance, nor is it applicable to the industry or aligned with existing industry norms and practices. The removal of the metric will therefore retain the decision-usefulness of the set of disclosures with respect to chemical management risks and opportunities for investors while reducing the cost-burden of reporting for issuers.

Supporting Analysis

Oil and Gas Service companies provide chemicals, other materials, personnel, equipment, and expertise to Exploration and Production companies for exploration, well drilling, completion, and stimulation services. While such services span the scope of well development, Exploration and Production companies ultimately are responsible for the scope of the design of the well, including the specification of the hydraulic fracturing fluid in cases where stimulation practices will be deployed. As such, disclosures related to chemicals used in hydraulic fracturing activities are the responsibility of the Exploration and Production company rather than the Services company. In recognition of Exploration and Production company exposure to this risk, the associated SASB Standard includes metric NR0101-07, which is associated with the Water Management topic and contains an identical metric to that which is proposed to be removed from the Services standard above.

In support of this view, all disclosures made to FracFocus.org, an online voluntary disclosure database for hydraulic fracturing fluids funded by oil and gas trade groups and the U.S. Department of Energy (DOE), are made by Exploration and Production companies. A review of the database identified that there are no disclosures made by any of the five largest Oil and Gas Services companies by market capitalization.

²⁴ NR0104-07: Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used

As such, the above metric does not provide investors with decision-useful information as it is not a fair representation of Service company management and control of this risk, nor does it offer an applicable measurement of performance. As a result, it has been proposed to be removed from the standard.

Stakeholder Consultation

Investors: Investors expressed a consensus view that Chemicals Management is a material topic but that the current disclosure basis does not provide a decision-useful measure of Service company exposure to and control of this risk. Investors identified that Service companies do not define the hydraulic fracturing fluid make-up, but rather provide chemicals and/or well drilling, completion, and stimulation activities using such chemicals to the Exploration and Production company. Investors expressed that indicators which describe factors largely within control of the service company, such as the company's ability to deploy more efficient and/or less hazardous chemicals at similar cost and/or with the same performance.

Issuers: Issuers expressed significant concerns regarding the current disclosure, citing that it is not a fair representation of Service company performance with respect to chemical management risk. As they do not specify the hydraulic fluid chemical make-up, therefore they are not able to disclose this information. Issuers expressed a desire for the disclosure to be based on factors for which the company has the ability to collect the associated data in the course of providing its scope of service to minimize the cost burden of reporting.

Benefits

Improves the SASB standard: The proposed SASB standard will represent risks and opportunities related to chemical management that are more representative of factors directly associated with Oil and Gas Services companies (i.e., independent of risks primarily associated with Exploration and Production companies).

Improves cost-effectiveness: The removal of a metric that is not applicable to Service companies' operating context will improve the cost effectiveness of company use of the standard.

Proposed Update #4-21 – **Industry:** Oil & Gas – Services; **Topic Name:** Ecological Impact Management

2017 Technical Agenda Item #4-21 Description

SASB is evaluating the revision of the technical protocol associated with metric NR0104-09²⁵ to improve its measurability.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol associated with metric NR0104-09, “Average disturbed acreage per (1) oil and (2) gas well site,” to improve its representativeness and completeness by limiting the disclosure scope to the disturbed acreage that is directly associated with the issuer’s scope of service.

Adherence to Attributes of Technical Protocols

The SASB provisional Oil and Gas – Exploration and Production industry standard includes a topic for Ecological Impact Management with two associated metrics describing the service company exposure to and management of associated risks and opportunities. Specifically, metric NR0104-09 recommends that issuers disclose the average disturbed acreage per oil and gas well site. The current technical protocol defines that the scope of disclosure corresponds to the full disturbed acreage associated with the well development site and that this disturbed acreage should be disclosed until the site has been fully remediated. While the technical protocol is currently objective and relevant, two specific changes have been proposed to improve its measurability. First, the technical protocol will be revised to specify that the disturbed acreage reported by a given service company should be only that which is associated with the scope of service being provided by the individual company. Second, the technical protocol will be revised to indicate that disturbed acreage should be disclosed only if the Service company is or was actively providing services during the reporting period. These changes will improve the measurability by tying performance with respect to ecological impact risk directly to factors controlled by an individual service company, ultimately better accomplishing the core objective of the standard by offering investors a decision-useful disclosure that is simultaneously more cost-effective for issuers.

Supporting Analysis

Ecological Impact Management is an important and likely material factor for Oil and Gas – Services industry participants, as supported by SASB’s *Oil and Gas – Services Research Brief* that notes that “Service companies can also enable E&P customers to reduce their ecological impacts by developing more efficient drilling technologies and processes that minimize land use,” and that, “ecological concerns about E&P operations continue [to present a sustainability risk], providing service companies with the potential market opportunity to offer advanced technologies that minimize land use and related ecological impacts.”

The brief identifies that Exploration and Production companies define the requirements for a given well development site and ultimately are responsible for the design of the well pad. Elements of the well development plan, including the deployment of drilling technologies offered by Service companies, will have a significant impact on the overall disturbed acreage.

The current disclosure metric calls for the “total acreage of disturbed land per well site.” As the design of the well pad is per the Exploration and Production company’s requirements, the disclosure as currently defined may misrepresent

²⁵ NR0104-09: Description of strategy or plans to address chemical-related risks, opportunities, and impacts

the contribution of an individual Service company to the overall disturbed acreage. For example, decisions about access roads, impoundment design, equipment staging areas, or other elements of well pad design may impact the total disturbed acreage independently of the scope of service provided by a given Service company. This reduces the representativeness of the metric with respect to Service company management of ecological risks and opportunities.

Further, multiple Service companies are often engaged on the execution of individual scopes of work associated with the overall well development plan. Drilling may be performed by a separate contractor than hydraulic fracturing. Further, the two activities often occur sequentially with the drilling equipment removed before the hydraulic fracturing equipment is installed. This would lead to double counting of disturbed acreage per the existing technical protocol.

In addition, the technical protocol currently requires that issuers report land as disturbed until “post-closure restoration and remediation efforts are substantially complete (even if monitoring is ongoing).” This disclosure requirement presents a significant cost burden to issuers, as once a service company’s scope of service has concluded it may no longer have access to the well site and thus will likely not have any ongoing monitoring processes or obligations. Further, the Service company is typically not responsible for subsequent remediation activities and remediation is typically the responsibility of the Exploration and Production company. Even if post-closure data were available, it could result in a Service company’s disclosure of total disturbed acreage consisting largely of active, producing well sites owned and operated by Exploration and Production companies, and could also obscure the marginal but more specifically material impact of active development sites associated with service company activities.

To address this, the technical protocol will be updated to explicitly limit the scope of disclosure from the total acreage disturbed land per well site to that directly associated with the scope of service provided by the registrant. Further, the technical protocol will be updated to identify that such disturbed acreage shall be disclosed by the Service company only while it is or was actively involved in providing services (including personnel or equipment) during the reporting period and/or it has met its remediation obligations as required by its service contract with the Exploration and Production company.

The proposed revisions will improve the measurability of the technical protocol by ensuring consistent, applicable measurement of Service company exposure to and management of ecological risks and opportunities.

Stakeholder Consultation

Investors: Investors consistently provided feedback that the standard would be more decision-useful if the disclosures were focused on factors affecting sustainability risks and opportunities that are directly attributable to or within the control of Service companies.

Issuers: Issuers noted that the additional data gathering to track disturbed acreage associated with well sites for which the issuer is no longer actively providing services would represent a significant cost burden. Issuers also noted that, as defined, the metric would not provide an accurate view of issuer management of ecological risks and opportunities. This is both due to definitions of the assignment of disturbed acreage to the issuer not directly related to its scope of work as well as the continued reporting of disturbed acreage associated with sites for which an issuer is not actively providing services nor is obligated to remediate in the future.

Benefits

Improves the SASB standard: The proposed SASB standard better represents the contribution of an individual service company to disturbed acreage and associated ecological risks.

Improves decision-usefulness: The revised technical protocol provides investors with a performance indicator more directly linked to ecological risk management of factors that are within the control of the Service company.

Improves cost-effectiveness: Revising the technical protocol eliminates an element of the technical protocol that would have required issuers to collect and manage data that is neither readily available nor representative of the underlying sustainability risks associated with their business.

Proposed Update #4-22 – **Industry:** Oil & Gas – Services; **Topic Name:** Health, Safety, and Emergency Management

2017 Technical Agenda Item #4-22 Description

SASB is evaluating the revision of metric NR0104-11²⁶ associated with the topic to improve its usefulness and to align with external standards.

Summary of Change – Revise Metrics

The SASB proposes changing metric NR0104-11 from “(1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, (3) Near Miss Frequency Rate, and (4) Total Vehicle Incident Rate (TVIR) for (a) full-time employees, (b) contract employees, and (c) short-service employees,” to “(1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, (3) Near Miss Frequency Rate, (4) Total Vehicle Incident Rate (TVIR), and (5) Average hours of Health, Safety, and Emergency Response Training for (a) full-time employees, (b) contract employees, and (c) short-service employees.”

Adherence to Criteria for Accounting Metrics

The provisional Oil and Gas – Services SASB industry standard includes a topic for Health, Safety, and Emergency Management with associated metrics to describe a company’s management of risks related to the health and well-being of its employees as well as its governance processes to prevent accidents and incidents. With respect to employee health and well-being, metric NR0104-11 currently includes the total recordable injury rate, fatality rate, and near miss frequency rate for full time, contract, and short-service employees. While these quantitative indicators are aligned with existing issuer norms for the management of employee health and safety and are distributive, useful, and comparable, they do not provide a complete view of a company’s efforts to manage employee health and safety risk. Therefore, they may not be fully representative of company performance. The revision of the metric to include an additional disclosure element related to employee safety training will improve the completeness of company actions taken to manage employee health and safety risk. Thus, the revision more fairly represents performance and better accomplishes the core objectives of the standard by offering investors a more decision-useful set of disclosures when combined with the existing metrics related to the topic.

Supporting Analysis

Health and safety incidents can have material financial impacts for industry participants; SASB’s *Oil and Gas – Services Research Brief* notes that health and safety are highly material to the Oil and Gas Services industry, noting, “A Bureau of Labor Statistics (BLS) and Center for Disease Control (CDC) report found that during 2003-2010 the U.S. onshore and offshore oil and gas extraction industry (including E&P companies, drilling contractors and well-servicing companies) had a collective fatality rate seven times higher than for all U.S. workers: 27.1 versus 3.8 deaths per 100,000 workers. According to BLS data, the fatality rate for the Oil & Gas Services industry in 2011 was 33 per 100,000 workers, more than nine times the average rate for all industries.” The brief further notes that, “Implementing policies, training programs, and other actions to achieve a strong corporate safety culture is essential to reduce risks to a company’s workforce, operations, and financial condition.”

An important measure of management commitment to safety culture is the priority placed on providing safety training for the workforce. In its voluntary guidance on sustainability reporting, IPIECA identifies “health and safety orientation and training” as one form of “workforce participation” per reporting issue HS1; workforce participation is described

²⁶ NR0104-11: Average disturbed acreage per (1) oil and (2) gas well site

as "health and safety management programs and processes to facilitate participation of the workforce in health and safety dialogues" and that such programs "can enhance cooperative attitudes and culture, which in turn contributes towards identifying and addressing potential health and safety problems and ensuring management system effectiveness."

The ILO identifies training as a key element of a strong health and safety culture. In its Promotional Framework for Occupational Safety and Health Recommendation, the ILO states, "In promoting a national preventative safety and health culture as defined in Article 1(d) of the Convention, Members should seek . . . (b) to promote mechanisms for delivery of occupational education and training, in particular for management, supervisors, workers and their representatives . . . (c) to introduce occupational and safety health concepts and, where appropriate, competencies, in educational and vocational training programmes . . ."

Across the sector, several issuers report metrics related to employee training. In a review of the five largest industry participants by market capitalization, all five discuss training in their voluntary sustainability reports, four provide metrics, and one reports the average training hours per employee. The extent of existing reporting on this topic will reduce the marginal burden of collecting and/or reporting this data.

In a 2009 study on the relationship between safety training and incident rates from The Ergonomics Open Journal, the authors found from a literature review that of the "23 studies with quasi-experimental designs that evaluated the effects of worker safety health and training on OHS outcomes... all but two of the studies found significant positive effects." The paper concludes that, "safety training increases the reporting of injuries [and] also has real safety effects on days-away-from-work injuries . . ."

Thus, the revision of the metric to include a measure of worker training will improve the representativeness and completeness of the full scope of issuer efforts to ensure worker health and safety.

To ensure the additional disclosure element is comparable and verifiable, the OSHA regulation for occupational health and safety (29 CFR 1910) has been referenced to define employee training programs which may qualify to be included when reporting the proposed indicator. This regulation defines the safety requirements the aspects worker health and safety subject to OSHA oversight, including means of egress, occupational health, hazardous materials management, personal protective equipment, fire protection, electrical systems, and other topics. If safety training does not fall under the topics listed in 29 CFR 1910, the technical protocol requires registrants to disclose the scope of such trainings and the specific occupational risks or hazards the training is intended to address.

Stakeholder Consultation

Investors: Investors expressed a consistent, strong interest in the inclusion of additional forward-looking or predictive indicators with respect to health and safety, noting that the current metrics in the standard are largely backward-looking. Investors suggested that this will improve several aspects of the decision-usefulness of the disclosure by making the metric a more representative, complete, and distributive indicator of Health and Safety performance.

Issuers: Issuers agreed with the materiality of Health, Safety, and Emergency Preparedness, and some identified employee training as a performance indicator used by management to assess performance.

Benefits

Improves the SASB standard: The proposed SASB standard provides a more complete description of company performance with respect to health, safety, and emergency management.

Improves decision usefulness: Issuer disclosure of employee training provides a forward-looking indicator to enhance investor understanding of the strength of a company's safety culture and therefore its exposure to health, safety, and emergency management risk.

Proposed Update #4-23 – **Industry:** Oil & Gas – Services; **Topic Name:** Health, Safety, and Emergency Management

2017 Technical Agenda Item #4-23 Description

SASB is evaluating splitting the topic to improve the quality and clarity of the standard.

Summary of Change – Split Topic

The SASB proposes splitting the topic “Health, Safety, and Emergency Management” into “Employee Health and Safety” related to Human Capital; and “Critical Incident Risk Management,” related to Leadership and Governance.

For the Employee Health and Safety topic, metric NR0104-12 will be revised from, “Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and project lifecycles,” to “Discussion of management systems used to integrate a culture of safety throughout the value chain and project lifecycles.”

The Critical Incident Risk Management topic will include a new discussion and analysis metric describing “Discussion of management systems used to identify and mitigate catastrophic and tail-end risks.”

Adherence to Principles for Topic Selection

To better represent the distinct, industry-specific risks and management strategies associated with different elements of the topic, the Health, Safety, and Emergency Management topic will be split into Employee Health and Safety that relates to Human Capital; and Critical Risk Management, which relates to Leadership and Governance.

To that end, while elements of these two topics are related, they represent different sustainability dimensions, and therefore require different metrics to fairly represent company performance in a way that is actionable by companies. While employee health and safety relates to human capital factors such as training, incident reporting and investigation, and personal protective equipment, critical risk management relates to corporate governance issues such as corporate risk management procedures, technological control measures, and emergency response. As such, actions taken by companies, and metrics designed to convey performance to investors, are different for these different topics.

Supporting Analysis

Both topics are likely to be material to the industry. With respect to Critical Risk Management, the industry has recognized the importance of managing Process Safety in addition to Personal Safety with the goal to prevent serious incidents, such as those that lead to fatalities or significant environmental or property damage. In its 2016 Sustainability Report, one major company notes that, “Well control events are the single most significant HSE threat to our company, our customers and our industry, as the consequences can be catastrophic. Over the past six years, we’ve invested our best thinking and resources in our upstream process safety (UPS), building on our decades of experience in our downstream and chemicals manufacturing business.” Similarly, in its 2016 Sustainability Report, another major company describes its “Critical Focus Areas” related to Process Safety, with the intent to ensure “extra attention and absolute adherence to our processes” for “those areas that present the biggest risk for HSE, process safety, and service quality incidents.” A third industry leading company emphasizes its focus on well integrity management, noting that such expertise allows it to, “deliver enhanced well integrity, technological integration, well monitoring, service quality, and process safety that minimize risks for rig workers, the formation, and the

environment.” As such, the ability to eliminate, manage, or mitigate Critical Risks is highly material to the Services industry, both in respect to the direct impacts to a Service company’s employees and assets as well as reputational harm that may result from incidents that may impact the company’s reputation with its clients and its ability to attract business.

Process Safety aims to prevent unintentional releases of chemicals, energy, or other potentially dangerous materials through the design, maintenance, and verification of safety barriers that prevent incidents from escalating into major accidents. Safety barriers may include facility design, operational control devices, safety control devices, mechanical integrity, operating procedures for high-risk activities, and other elements. The application of these principles is typically executed through a Process Safety Management program, for which the Occupational Safety and Health Administration has issued standards per 19 CFR 1910.119²⁷. The successful application of Process Safety Management therefore primarily derives from the effectiveness of Leadership and Governance processes to ensure the successful application of its principles and requirements throughout a company’s operations.

With respect to Employee Health and Safety, the brief notes that, between 2003 and 2010, the U.S. Oil and Gas Extraction industry, including the Services industry, had a fatality rate seven times higher than for all U.S. workers (27.1 compared to 3.8 deaths per 100,000 workers). While the industry has made remarkable strides in reducing the rate of incidents and injuries—with the total recordable incident rate for the Oil and Gas Drilling industry falling from 6.4 in 2005 to 1.5 in 2015, according to data from the U.S. Bureau of Labor Statistics²⁸—company focus on reducing and maintaining low incident rates is of critical importance, as evidenced by SASB’s analysis of the regulatory filings of the top ten companies in the industry by revenue. The analysis showed that 100 percent currently disclose information related to the personal safety of employees, with the majority noting potential adverse financial impacts that may result from incidents or changes in applicable regulations. Actions taken by companies to manage risks related to Employee Health, Safety, and Well-Being include employee safety training, the use of personal protective gear, the implementation of work control processes or permitting, and operating procedures, among other management strategies.

Stakeholder Consultation

Investors: No direct feedback was received from investors in the industry regarding the proposed change. However, investors who provided feedback for the sector generally supported changes that would improve the clarity of the information generated by standard.

Issuers: No direct feedback was received from issuers in the industry regarding the proposed change. However, issuers in the sector were generally supportive of changes that aligned topics with company strategies for managing associated risks or opportunities.

Benefits

Improves the SASB standard: Improves the quality and clarity of the standard by separating sustainability topics that are likely to be material and represent distinct, industry-specific sustainability risks.

²⁷“Process Safety Management” Occupational Safety and Health Administration, accessed August 28, 2017
<https://www.osha.gov/SLTC/processsafetymanagement/standards.html>.

²⁸ “Industry Injury Illness Data” Bureau of Labor Statistics, accessed August 28, 2017
https://www.bls.gov/iif/oshsum.htm#05Summary_News_Release.

Proposed Update #4-24 – **Industry:** Oil & Gas – Services;
Topic Name: Business Ethics and Payments Transparency

2017 Technical Agenda Item #4-24 Description

SASB is evaluating the addition of a metric based on the usefulness, completeness, distributiveness, and representativeness of the metrics associated with the topic.

No Proposed Change:

Based upon additional research and the lack of a clear, quantifiable metric that would result in useful and distributive disclosures, no changes related to the provisional standard related to Technical Agenda item 4-24 have been proposed at this time.

Proposed Update #4-25 – **Industry:** Oil & Gas – Services; **Topic Name:** Management of the Legal & Regulatory Environment

2017 Technical Agenda Item #4-25 Description

SASB is evaluating revisions to metrics NR0104-15²⁹ and NR0104-16³⁰ to improve the cost-effectiveness and materiality of the standard.

Summary of Change – Revise Metrics

The SASB proposes replacing the two quantitative metrics associated with the Management of the Legal and Regulatory Environment topic:

- NR0104-15 – Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations
- NR0104-16 – Five largest political, lobbying, or tax-exempt group expenditures

With the following qualitative metric:

- Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry

The technical protocol of the revised metric will describe the scope of the disclosure, including the risks and opportunities that may result from legislation or regulation related to environmental and social factors that are likely to be material based on industry-specific characteristics.

Adherence to Criteria for Accounting Metrics

The provisional topic, Management of the Legal & Regulatory Environment, is focused on how Oil & Gas – Services companies engage with regulators and policymakers to influence regulations and policies to align shareholder interests with long-term societal interests, or the lack thereof. Provisional metric NR0104-15 and NR0104-16 (both proposed for removal) are intended to provide information regarding political and regulatory relations and influence. The proposal to replace the current quantitative metrics with a single qualitative metric is based on a lack of industry-specific evidence that demonstrates these metrics are a fair representation of issuer exposure to and/or management of risks associated with the topic. Furthermore, the proposed change will improve the cost-effectiveness of the standard.

The revised, qualitative metric will provide a fairer representation of performance on the topic by specifically focusing the discussion on a limited number of underlying sustainability topics that are currently included in the provisional standard. Interactions with regulators and policymakers is proposed for inclusion within the provisional topic, Greenhouse Gas Emissions. The proposed revised metric includes a discussion of the risks and opportunities related to legislation or regulation related to environmental and societal factors, contextualized by specific pieces of legislation or regulation that impact sustainability topics that are likely to be material for industry participants.

²⁹ NR0104-15: Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations

³⁰ NR0104-16: Five largest political, lobbying, or tax-exempt group expenditures

Supporting Analysis

The Oil & Gas – Services industry is subject to numerous sustainability-related regulations and a rapidly changing regulatory environment. Companies in the industry regularly participate in the regulatory and legislative process on a wide variety of environmental and societal issues, and industry-specific evidence demonstrates that such participation may generate financial impacts systematically across the industry.

The SASB proposes to replace the current quantitative metrics related to political and/or campaign spending with a single, qualitative metric describing company engagement in the legal and regulatory process. The current metrics, which include the disclosure of quantitative expenditures related to legal and regulatory engagement, may provide comparable data, but they may not offer a fair representation of company management of legal and regulatory risk. This is true for several reasons:

First, metric NR0104-15 currently includes in the scope of disclosure “contributions to tax-exempt groups including trade associations.” While trade associations may engage in the legal and regulatory process on the behalf of member organizations to represent the industry’s views, associations also provide several other functions to member organizations that do not relate to legal or regulatory engagement. For example, while the API describes its mission as, “to promote safety across the industry globally and to influence public policy in support of a strong, viable U.S. oil and natural gas industry.” To achieve this mission, API has several program areas, including advocacy, research, standards setting, certification, and training. Contributions by member organizations are therefore utilized by API for a number of purposes with differing degrees of involvement and influence in the legal and regulatory process. Such contributions, therefore, may not offer a fair representation of company exposure to risks related to the management of the legal and regulatory environment.

Similarly, IOGP’s vision statement is “To work on behalf of the world’s oil & gas Services (E&P) Companies to promote safe, responsible, and sustainable operations.” Similar to API, IOGP facilitates information sharing among its members related to health and safety, security, social responsibility, engineering, and operations. Initiatives include standards-setting, information sharing related to emergency management, spill response, and other areas. Such activities can lead to improved performance related to health, safety, environmental management, and other areas. At the same time, per the IOGP’s website, they seek to “[engage] decision makers to explain our views, offer expertise, and provide data. Our aim is to help regulators and legislators draft rules and laws that are balanced and effective.” Again, due to the mix of activities performed by the association, contributions by member organizations may not be a fair representation of specific risks incurred by a contributing organization related to the management of the legal and regulatory environment.

The revised metric includes the disclosure of interactions with regulators to promote outcomes that align oil and gas companies’ financial incentives, including a discussion of strategies around regulatory (or legislative) compliance, participation, and influence specific to environmental and social topics that are likely to be material to companies in the industry based on industry-specific evidence. Per evidence provided in the *SASB Oil and Gas – Services Research Brief*, all of the topics included in the provisional standard for the Oil and Gas – Services industry may include elements of legal or regulatory risk, and, as such, are relevant for the purposes of the revised, qualitative metric. By providing a standardized methodology to discuss risks and opportunities related to the management of legislation or regulation that has the potential to impact social or environmental topics that are likely to be material to issuers in the Oil and Gas – Services industry, the revised metric will provide a fairer representation of company exposure to and management of legal and regulatory risk.

Second, the current quantitative metrics do not provide investors with information regarding which types of regulation or legislation a company views as having the potential to materially impact its performance on sustainability topics it views as having the potential to result in material financial impacts. Further, it does not include a discussion of company positions or actions taken to manage these risks. As such, these metrics do not provide a fair representation of company exposure to and management of risks and opportunities related to the topic. By narrowly defining the revised, qualitative metric to include these standardized elements of disclosure, the resultant disclosure will retain the elements of comparability and usefulness provided by the current metrics, while improving the representativeness of the information disclosed.

Stakeholder Consultation

Investors: Numerous investors supported the materiality of corporate strategies, participation, and influence in the regulatory and legislative process. Some investors suggested that both qualitative and quantitative disclosures related to political lobbying, alignment with shareholder interests, and regulatory influence are decision-useful. Investors expressed a consensus view that the most important aspect of the disclosure was the alignment (or lack thereof) of a company's public positions and the positions taken by organizations or associations to which the company provides funding as well as the channels through which companies seek to influence the legal and regulatory environment.

Issuers: Multiple issuers expressed agreement with the proposal to revise the current quantitative metric with a qualitative discussion of a company's efforts to manage the legal and regulatory environment. No issuers expressed opposition to the limiting, or removal, of the topic. Issuers identified qualitative disclosures as offering a fairer representation of their overall approach to management of the legal and regulatory environment. Issuers also noted that the quantitative disclosures of contributions to industry associations may not be a fair representation of reputational risk, as associations use such funds for many purposes of which political engagement is just one element. Issuers expressed a desire to ensure the discussion and analysis was comparable, objective, and complete.

Benefits

Improves the SASB standard: The revision of the provisional metrics to the proposed metric will improve the standard by providing investors with comparable, decision-useful information regarding company exposure to and management of legal and regulatory risks related to topics. These topics are likely to have material financial impacts, thereby offering a fairer representation of company performance with respect to the Management of the Legal and Regulatory Environment topic.

Improves cost-effectiveness: The replacement of the two, quantitative metrics with a single, qualitative metric will improve the cost-effectiveness of the standard, as the standard is shorter and thus less costly to implement.



EXTRACTIVES & MINERALS PROCESSING SECTOR

COAL OPERATIONS INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #EM0201

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #4-26 – **Industry:** Coal Operations; **Topic Name:** Water Management

2017 Technical Agenda Item #4-26 Description

SASB is evaluating revisions to the water quality metric NR0201-04³¹ to improve its decision-usefulness.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol for metric NR0201-04, “Number of incidents of non-compliance with water quality and/or quantity permits, standards, and regulations,” to limit the scope of incidents of non-compliance to exclusively those that result in a formal enforcement action.

Adherence to Attributes of Technical Protocols

The Coal Operations industry provisional standard includes a disclosure topic, Water Management, that is centered on corporate performance and strategy concerning water-related risks and opportunities. The metrics associated with the topic focus on water consumption, water scarcity, effluent, and regulatory compliance. More specifically, metric NR0201-04 is designed to capture a company’s performance on complying with state- or federal-level water quality regulations, including regulations on water treatment and discharges. Performance on incidents of non-compliance are an indication of the strength of a company’s overall water quality management, its ability to comply with regulation, and its exposure to potential operational impacts associated with non-compliance, including costs related to permitting, penalties, remediation, and capital expenditures. However, the current metric scope, as defined in the technical protocol, is excessively broad as it states, “[a]n incident of non-compliance shall be disclosed regardless of whether it resulted in an enforcement action (e.g., fine, warning letter, etc).” Incidents of non-compliance vary widely in terms of the nature and severity of impact, and they may or may not result in enforcement actions.

Given the broadly defined scope of non-compliance incidents, the provisional metric does not provide fair representation of corporate performance on the topic and it is less likely to be cost-effective. The proposed revision to the technical protocol for the metric will limit the scope of non-compliance incidents exclusively to those that result in formal enforcement actions. It will ultimately improve the signal-to-noise ratio by focusing on those incidents more likely to indicate operational or financial impacts. This proposed revision would improve the representativeness and cost-effectiveness of the metric, as well as the comparability and usefulness of the information it generates.

Supporting Analysis

Water regulations in the U.S., Canada, and many international regions typically address the quality of water discharges from manufacturing facilities. Water-intensive industries, such as the Coal Operations industry, may also be affected by state or federal regulations that address water withdrawals. But this is less common than regulations governing water discharges. Companies are generally required to obtain state or federal-level permits that allow them to discharge certain amount of wastewater over a given period. Incidents of non-compliance with water regulations may be the result of a variety of events relating to water quality management, including the failure to meet a reporting deadline or a water discharge above permit limits. The magnitude of the regulatory response will vary depending on the nature of the non-compliance. For example, failure to meet a reporting deadline may result in a non-compliance notice or warning letter with little to no financial impact for the issuer. An effluent regulation

³¹ NR0201-04: Number of incidents of non-compliance with water quality permits, standards, and regulations

exceedance could, however, result in a company being issued a formal enforcement action, resulting in remediation costs, fines, and/or reputational damage.

Formal enforcement actions, as defined by the U.S. EPA³² and some state agencies, are statutorily recognized actions to address a violation or threatened violation of water regulations, regulations, policy, or orders, and include administrative penalty orders, administrative orders, and judicial actions, among others. These types of enforcement actions can result in financial penalties and remediation requirements and can be indicative of overall management of water issues over time. Conversely, non-compliance incidents that result in informal enforcement actions may be issued when no actual violation has occurred and are significantly less likely to generate financial impacts for companies. Examples of non-compliance incidents include an inspection, phone call, or violation letter. Correspondingly, formal enforcement actions are less common than informal actions. According to EPA data, of 5,102 U.S. facilities that received notices of non-compliance with water regulation, only 519 resulted in formal enforcement actions.³³

The provisional metric requires reporting of incidents of non-compliance regardless of whether they result in a formal enforcement action. Reporting all incidents of non-compliance does not distinguish between the severity of incidents and the resulting potential for financial impacts to the registrant. This creates an undue cost burden for the registrant related to data collection, tracking, and reporting. It also adversely affects the usefulness and fair representation of the resulting disclosures.

As incidents that result in formal enforcement actions are more likely to generate financial impacts on the registrant, they are a relevant indicator to measure performance on the management of water quality. Thus, the proposed revision confines the metric's scope to incidents that result in formal enforcement actions. Thereby, it directly improves the representativeness, comparability, and usefulness of the information generated by the standard, and better adhering to the core objectives of the standard.

Additionally, the proposed SASB metric is aligned with federal and state water quality regulations that employ formal enforcement actions as well as reporting guidelines such as the CDP Water Information Request.

Stakeholder Consultation

Investors: A limited number of investors provided input on the proposed revision. Such input broadly supported the revision, based on improvements to the decision-usefulness of resulting disclosures.

Issuers: A limited number of issuers provided input on the proposed revision. Such input constituted support for revising the scope of this metric to focus on notices of violation that result in formal enforcement actions, as doing so improves the decision-usefulness of the metric.

Others: Several subject matter experts commented that the proposed change would more accurately reflect performance on the aspect of the topic related to regulatory compliance.

³² "Informal and Formal Actions, Summary of Guidance and Portrayal on EPA Websites" United States Environmental Protection Agency, last modified July 1, 2010, accessed August 28, 2017

<https://www.epa.gov/sites/production/files/2013-11/documents/actiondefs.pdf>.

³³ "Analyze Trends: State Water Dashboard," last modified on March 20, 2017, accessed August 28, 2017,

<https://echo.epa.gov/trends/comparative-maps-dashboards/state-water-dashboard?view=performance&state=National>.

Benefits

Improves the SASB standard: The proposed change would result in disclosures more consistent with the guiding criteria of fair representation and comparability.

Improves decision-usefulness: By focusing on incidents of non-compliance that resulted in formal enforcement actions, the proposed change would improve the usefulness of information generated by the standard as it improves the signal-to-noise ratio.

Improves cost-effectiveness: The proposed change narrows the scope of disclosure to a more specific (and meaningful) subset of non-compliance incidents, thereby improving the cost-effectiveness of the standard.

Improves alignment: The proposed revision will align the SASB standard with existing reporting protocols and regulatory reporting requirements.

Proposed Update #4-27 – **Industry:** Coal Operations; **Topic Name:** Workforce Health, Safety, and Well-Being

2017 Technical Agenda Item #4-27 Description

SASB is evaluating renaming the topic.

Summary of Change – Revise Topic Name

The SASB proposes renaming the provisional topic Workforce Health, Safety, and Well-Being to Employee Health and Safety.

Supporting Rationale

Workforce Health, Safety, and Well-Being is the topic name used in the provisional standard and may be unclear with respect to the definition of the term “workforce” as it relates to labor participation in the Coal Operations industry. In addition, the term “Well-Being” does not relate to the associated metrics, which communicate performance with respect to workforce injury and incident rates as well as policies and procedures to reduce or eliminate such injuries and incidents. To eliminate this potential uncertainty as well as improve the quality and clarity of the standard, the topic name will be revised to, Employee Health and Safety.

Benefits

Improves the SASB standard: The proposed revision improves the clarity of the standard.



EXTRACTIVES & MINERALS PROCESSING SECTOR

METALS & MINING INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #EM0302

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Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #4-28 – **Industry:** Metals & Mining; **Topic Name:** Water Management

2017 Technical Agenda Item #4-28 Description

SASB is evaluating the revision of the technical protocol associated with metric NR0302-05³⁴ to improve its completeness.

Summary of Change – Revise Technical Protocol

The SASB proposes updating the technical protocol associated with metric NR0302-05, “Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress,” to include the disclosure of which facilities are located in areas of High or Extremely High water stress.

Adherence to Attributes of Technical Protocols

The provisional Metals and Mining SASB industry standard includes a topic for Water Management with two associated metrics describing company exposure to risks associated with water consumption as well as water effluents. Specifically, metric NR0302-05 recommends that issuers disclose the total fresh water withdrawn, the amount recycled, and the amount that was withdrawn from regions of high or extremely high water stress. The current technical protocol defines how areas of high or extremely high water stress should be identified, but does not indicate the extent of company operations in these areas. The proposed revision will add an element to the technical protocol whereby issuers will disclose those facilities located in areas of high or extremely high water stress, thereby improving the completeness of the technical protocol and ultimately better accomplish the core objective of the standard by improving the decision-usefulness of the disclosure.

Supporting Analysis

Water is of critical operational importance to the majority of metal and mining operations. Per *Metals and Mining Research Brief*, “MSCI Ranking of sub-industries within the General Industry Classification System by water intensity finds the mining industry among the most water-intense, just after Utilities and Food and Beverage.” While critical for operations, the associated risk tends to be highly localized in nature, with areas of high baseline water stress or ecological sensitivity carrying disproportionately high risk. The brief notes, “. . . around half of the world’s copper come from mountainous and dry areas.”

While the importance of water stress as an element of overall water management risk is emphasized in the existing metric, the associated financial impacts are often associated with localized, facility-specific factors. The industry research brief prepared by SASB provides evidence in support of this conclusion, referencing a \$200 million investment in larger water reservoirs required by Peru for Newmont to re-secure its mining lease as well as the \$3.4 billion desalination plant being built by BHP Billiton as part of its Atacama project. More recent examples include the cessation of operations at Kinross Gold’s Maricunga mine following a ruling by the Chilean environmental protection agency due to concerns about adverse impacts to local water resources as well as the \$2.4 billion desalination and power plant associated with the Alcoa and Ma’aden bauxite mine joint venture in Saudi Arabia. In a much broader indication of the criticality of water management risk, the World Economic Forum highlighted “water crisis” as a top-5 risk in terms of impact from 2012-2017 in its Global Risks Report.

³⁴ NR0302-05: Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress
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Companies have consistently identified water management as a material risk to their businesses. In the 2015 State of Disclosure Report performed by SASB, all of the ten of the top companies by revenue in the Metals and Mining industry disclosed information related to water management. Twenty percent of the disclosures were boilerplate in nature, 60 percent were a company-tailored narrative, and 20 percent used metrics. Further, an analysis of regulatory filings of the five largest integrated metals and mining companies by market capitalization showed that all five disclose the geographic location of their facilities. This suggests that the reporting burden associated with the identification of specific facilities is likely to be relatively small.

Other disclosure frameworks recognize the importance of localized water risk. In its Water Questionnaire, CDP's element W1.4a asks companies to disclose "detrimental impacts experienced by your organization related to water in the reporting year" with reporting elements including the country, river basin, length of impact, and financial implications. The World Resource Institute's Aqueduct tool provides water risk assessments for companies based on the location of a company's facility as well as the nature of its business.

In addition, the International Council on Mining and Metals (ICMM), whose membership consists of major Metals and Mining organizations, provided guidance for member organizations in its Practical Guide to Consistent Water Reporting. In the Guide, the report suggests "the company-wide [water] dataset may be analyzed and used in many different ways" and offers one such way as, "to identify... sites associated with significant water risks when reporting via CDP."

To emphasize the localized nature of water risk to the Metal and Mining industry, which typically features large, capital intensive mining development projects that are subject to localized environmental risk factors, the technical protocol will be updated to include the identification of facilities located in areas of high or very high water stress. This will improve the completeness of the disclosure in providing decision-useful information to investors when assessing company exposure to and management of water-related risks and opportunities.

Stakeholder Consultation

Investors: Investors emphasized that this risk is material at the asset level and disclosures that provide a more accurate view of the localized nature of water management risk would be decision-useful. Some investors noted the usefulness of granular disclosure of water usage at the asset-level, while others noted that aggregate data indicating the proportion of assets in water-stressed regions may be sufficient to understand associated risks.

Issuers: Issuers suggested that this risk is best understood at a localized level, especially with respect to withdrawals from areas of high water stress. Feedback suggests that such withdrawals carry additional risks and costs, including supply disruptions and elevated costs to acquire or desalinate water from non-fresh water sources. Issuers noted a concern that the current aggregate, corporate-level disclosure basis may obfuscate management strategies to mitigate water-related risks at specific mine sites in water stressed regions. It was also suggested that disclosures related to the localized nature of these risks be harmonized with existing reporting frameworks and/or be aligned with existing industry practice for tracking and managing operational water usage to minimize the cost burden associated with reporting.

Others: Third parties emphasized the highly localized nature of water management risk and the importance of asset-specific disclosures.

Benefits

Improves the SASB standard: The updated technical protocol emphasizes the localized nature of water scarcity risk for the Metals and Mining industry.

Improves decision-usefulness: Updating the technical protocol to include facilities located in areas of high water stress as well as company strategies for mitigating this risk provides investors with a more complete, representative, and comparable view of water management risk.

Proposed Update #4-29 – **Industry:** Metals & Mining; **Topic Name:** Water Management

2017 Technical Agenda Item #4-29 Description

SASB is evaluating revisions to the water quality metric NR0302-06³⁵ to improve its decision-usefulness.

Summary of Change – Revise Technical Protocol

The SASB proposes revising the technical protocol for metric NR0302-06, “Number of incidents of non-compliance with water quality and/or quantity permits, standards, and regulations,” to limit the scope of incidents of non-compliance to exclusively those that result in a formal enforcement action.

Adherence to Attributes of Technical Protocols

The Metals and Mining industry provisional standard includes a disclosure topic, Water Management, that is centered on corporate performance and strategy concerning water-related risks and opportunities. The metrics associated with the topic focus on water consumption, water scarcity, effluent, and regulatory compliance. More specifically, metric NR0302-16 is designed to capture a company’s performance on complying with state- or federal-level water quality regulations, including regulations on water treatment and discharges. Performance on incidents of non-compliance are an indication of the strength of a company’s overall water quality management, its ability to comply with regulation, and its exposure to potential operational impacts associated with non-compliance. This includes costs related to permitting, penalties, remediation, and capital expenditures. However, the current metric scope, as defined in the technical protocol, is excessively broad as it states, “[a]n incident of non-compliance shall be disclosed regardless of whether it resulted in an enforcement action (e.g., fine, warning letter, etc.).” Incidents of non-compliance vary widely in terms of the nature and severity of impact, and they may or may not result in enforcement actions.

Given the broadly defined scope of non-compliance incidents, the provisional metric does not provide fair representation of corporate performance on the topic and it is less likely to be cost-effective. The proposed revision to the technical protocol for the metric will limit the scope of non-compliance incidents exclusively to those that result in formal enforcement actions—ultimately, improving the signal-to-noise ratio by focusing on those incidents more likely to indicate operational or financial impacts. This proposed revision would improve the representativeness and cost-effectiveness of the metric, as well as the comparability and usefulness of the information it generates.

Supporting Analysis

Water regulations in the U.S., Canada, and many international regions typically address the quality of water discharges from manufacturing facilities. Water-intensive industries, such as Metals and Mining, may also be affected by state or federal regulations that address water withdrawals. However, this is less common than regulations governing water discharges. Companies are generally required to obtain state or federal-level permits that allow them to discharge certain amount of wastewater over a given period. Incidents of non-compliance with water regulations may be the result of a variety of events relating to water quality management, including the failure to meet a reporting deadline or a water discharge above permit limits. The magnitude of the regulatory response will vary depending on the nature of the non-compliance. For example, failure to meet a reporting deadline may result in a non-compliance notice or warning letter with little to no financial impact for the issuer. An effluent regulation

³⁵ NR0302-06: Number of incidents of non-compliance with water quality permits, standards, and regulations

exceedance could, however, result in a company being issued a formal enforcement action, resulting in remediation costs, fines, and/or reputational damage.

Formal enforcement actions, as defined³⁶ by the EPA and some state agencies, are statutorily recognized actions to address a violation or threatened violation of water regulations, regulations, policy, or orders, and include administrative penalty orders, administrative orders, and judicial actions, among others. These types of enforcement actions can result in financial penalties and remediation requirements and over time can be indicative of overall management of water issues. Conversely, non-compliance incidents that result in informal enforcement actions may be issued when no actual violation has occurred, and are significantly less likely to generate financial impacts for companies. Examples include an inspection, phone call, or violation letter. Correspondingly, formal enforcement actions are less common than informal actions. According to EPA data, of 5,102 U.S. facilities that received notices of non-compliance with water regulation, only 519 resulted in formal enforcement actions.³⁷

The provisional metric requires reporting of incidents of non-compliance regardless of whether they result in a formal enforcement action. Reporting all incidents of non-compliance does not distinguish between the severity of incidents and the resulting potential for financial impacts to the registrant. This creates an undue cost burden for the registrant related to data collection, tracking, and reporting. It also adversely affects the usefulness and fair representation of the resulting disclosures.

As incidents that result in formal enforcement actions are more likely to generate financial impacts on the registrant, they are a relevant indicator of performance on the management of water quality. Thus, the proposed revision confines the metric's scope to incidents that result in formal enforcement actions. It thereby directly improves the representativeness, comparability, and usefulness of the information generated by the standard, and better adheres to the core objectives of the standard.

Additionally, the proposed SASB metric is aligned with federal and state water quality regulations that employ formal enforcement actions as well as reporting guidelines such as the CDP Water Information Request.

Stakeholder Consultation

Investors: A limited number of investors provided input on the proposed revision. Such input broadly supported the revision, based on improvements to the decision-usefulness of resulting disclosures.

Issuers: A limited number of issuers provided input on the proposed revision. Such input constituted support for revising the scope of this metric to focus on notices of violation that result in formal enforcement actions, as doing so improves the decision-usefulness of the metric.

Others: Several subject matter experts commented that the proposed change would more accurately reflect performance on the aspect of the topic related to regulatory compliance.

³⁶ "Informal and Formal Actions, Summary of Guidance and Portrayal on EPA Websites," United States Environmental Protection Agency, last modified July 1, 2010, accessed August 28, 2017, <https://www.epa.gov/sites/production/files/2013-11/documents/actiondefs.pdf>.

³⁷ "Analyze Trends: State Water Dashboard," United States Environmental Protection Agency, last modified March 20, 2017, accessed August 28, 2017, <https://echo.epa.gov/trends/comparative-maps-dashboards/state-water-dashboard?view=performance&state=National>.

Benefits

Improves the SASB standard: The proposed change would result in disclosures more consistent with the guiding criteria of fair representation and comparability.

Improves decision-usefulness: By focusing on incidents of non-compliance that resulted in formal enforcement actions, the proposed change would improve the usefulness of information generated by the standard as it improves the signal-to-noise ratio.

Improves cost-effectiveness: The proposed change narrows the scope of disclosure to a more specific (and meaningful) subset of non-compliance incidents, thereby improving the cost-effectiveness of the standard.

Improves alignment: The proposed revision will align the SASB standard with existing reporting protocols and regulatory reporting requirements.

Proposed Update #4-30 – **Industry:** Metals & Mining; **Topic Name:** Security, Human Rights, and the Rights of Indigenous Peoples

2017 Technical Agenda Item #4-30 Description

SSASB is evaluating the revision of the technical protocol associated with metric NR0302-16³⁸ to improve its measurability.

Summary of Change – Revise Technical Protocol

The SASB proposes modifying the technical protocol for metric NR0302-16 to include a reference to the United Nations Declaration on the Rights of Indigenous Peoples and International Labour Organization (ILO) with respect to the identification of indigenous peoples.

Adherence to Attributes of Technical Protocols

The provisional Metals and Mining SASB industry standard includes a topic for “Security, Human Rights, and the Rights of Indigenous Peoples” with three associated metrics describing company exposure to and management of associated risks and opportunities. Specifically, metric NR0302-16 specifies that issuers should disclose proved and probable reserves in or near indigenous lands. The current technical protocol notes that “indigenous lands are those occupied by those who self-identify as indigenous) as well as a reference to a United Nations working definition of indigenous peoples. The current technical protocol provides relevant, measurable, and complete guidance. But it does not explicitly refer to the United Nations Declaration on the Rights of Indigenous Peoples and/or the ILO Convention No. 169, which include “self-identification” as criteria for identifying Indigenous groups. To address this, the protocol will be updated to reference these frameworks to ensure the objectivity of associated disclosures.

Supporting Analysis

In order to ensure objectivity with respect to the identification of indigenous peoples for the purposes of issuer disclosures related to metric NR0302-16, the standard shall be modified to directly reference UNDRIP as well as the ILO Convention No. 169. The UNDRIP notes in Article 33 that “Indigenous peoples have the right to determine their own identity or membership in accordance with their customs and traditions. This does not impair the right of indigenous individuals to obtain citizenship of the States in which they live.” The ILO Convention No. 169 notes in Article 1, Section 2 that, “Self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply.” The International Council on Metals and Mining (ICMM), an international organization dedicated to a safe, fair and sustainable mining industry, states as one of its Principles that member organizations must, “respect human rights and the interests, cultures, customs, and values of employees and communities affected by our activities,” and further commits to, “respect the culture, customs, and heritage of local communities, including indigenous peoples.” The ICMM prepared additional guidance in its Indigenous Peoples and Mining Good Practice Guide, which notes, “The designation of “indigenous peoples” has come to be recognized over the last few decades as a particular demographic category under international law through instruments such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)” To ensure SASB is aligned with these internationally recognized organizations and therefore provides an objective

³⁸ NR0302-16: (1) Proven and (2) probable reserves in or near indigenous land

definition for the identification of indigenous peoples, the technical protocol will be updated to directly refer to the UN and ILO frameworks.

Stakeholder Consultation

Investors: Multiple investors were supportive of SASB's process to define technical protocols that are objective and relevant to the subject matter.

Issuers: Multiple issuers across the sector expressed concerns regarding the identification of groups as "indigenous peoples" as challenging due to the lack of a universally accepted definition of the term.

Benefits

Improves the SASB standard: Clarifies the technical protocol by referencing internationally recognized frameworks whereby the issuer can determine the scope of reserves included in the disclosure basis, thereby improving the objectivity of associated disclosures.

Proposed Update #4-31 – **Industry:** Metals & Mining; **Topic Name:** Workforce Health, Safety, and Well-Being

2017 Technical Agenda Item #4-31 Description

SASB is evaluating the revision of metric NR0302-18³⁹ associated with the topic to improve its usefulness and to align with external standards.

Summary of Change – Revise Metrics

The SASB proposes changing metric NR0302-18 from “(1) MSHA All-Incidence Rate, (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees and (b) contract employees” to “(1) MSHA All-Incidence Rate, (2) Fatality Rate, (3) Near Miss Frequency Rate, and (4) Average hours of Health, Safety, and Emergency Response Training for (a) full-time employees and (b) contract employees.”

In addition, the topic name shall be revised from, “Workforce Health, Safety, and Well-Being” to “Employee Health and Safety.”

Adherence to Criteria for Accounting Metrics

The provisional Metals and Mining SASB industry standard includes a topic for Workforce Health, Safety, and Well-Being with associated metrics to describe a company’s management of risks related to the health and well-being of its employees as well as its governance processes to prevent and/or manage accidents and incidents. With respect to employee health and well-being, metric NR0302-18 currently includes the total recordable injury rate, fatality rate, and near miss frequency rate for full time, contract, and short-service employees. While these quantitative indicators are aligned with existing issuer norms for the management of employee health and safety and are distributive, useful, and comparable, they do not provide a complete view of a company’s efforts to manage employee health and safety risk. Therefore, they may not be fully representative of company performance. The revision of the metric to include an additional disclosure element related to employee safety training will improve the completeness of company actions taken to manage employee health and safety risk. It will also be more fairly representative of performance and better accomplish the core objectives of the standard by offering investors a more decision-useful set of disclosures when combined with the existing metrics related to the topic.

In addition, to more clearly aligning the topic name with the associated metrics, the topic name will be revised from “Workforce Health, Safety, and Well-Being” to “Employee Health and Safety.” The metrics associated with the topic specifically relate to Health and Safety, and describe company performance related to workforce injury and incident rates as well as policies and procedures to reduce or eliminate such injuries and incidents. The revision will therefore improve the quality and clarity of the standard.

Supporting Analysis

Health and safety incidents can have material financial impacts for industry participants. The *Metals & Mining Research Brief* prepared by SASB notes that health and safety incidents can cause significant material harm for industry participants. The brief notes that “In 2012, the metal mining industry had a fatal injury work rate . . . 2.4 times the U.S. industry average” and that that, “In 2011 . . . companies operating domestically received 63,601 citations related to health and safety, for which \$40.8 million in penalties and fines were assessed.” Further, it was

³⁹ NR0302-18: (1) MSHA All-Incidence Rate, (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees and (b) contract employees

noted that “Of the 17 fatalities in non-coal mines in 2012, the MSHA reported that eight of the miners had less than one year of experience at the mine or task they were performing. This underscores the need for effective task training whenever miners are assigned to new tasks.”

An important measure of management commitment to safety culture is the priority placed on providing safety training for the workforce. In its 10 Principles, the International Council on Mining and Metals, an international organization dedicated to a safe, fair, and sustainable mining industry requires member organizations to “Pursue continual improvement in health and safety performance with the ultimate goal of zero harm” and, as a key element of achieving this goal, to “Provide all employees with health and safety training, and require employees of contractors to undergo the same training.”

The ILO identifies training as a key element of a strong health and safety culture. In its Promotional Framework for Occupational Safety and Health Recommendation, the ILO states, “In promoting a national preventative safety and health culture as defined in Article 1(d) of the Convention, Members should seek . . . (b) to promote mechanisms for delivery of occupational education and training, in particular for management, supervisors, workers and their representatives . . . (c) to introduce occupational and safety health concepts and, where appropriate, competencies, in educational and vocational training programmes . . . ”

Across the sector, several issuers report metrics related to employee training. In a review of the five largest industry participants by market capitalization, all five discuss training in their voluntary sustainability reports, four provide metrics, and one reports the average training hours per employee. The extent of existing reporting on this topic will reduce the marginal burden of collecting and/or reporting this data.

In a 2009 study on the relationship between safety training and incident rates from The Ergonomics Open Journal, the authors found from a literature review that of the “23 studies with quasi-experimental designs that evaluated the effects of worker safety health and training on OHS outcomes. . . all but two of the studies found significant positive effects.” The paper concludes that, “safety training increases the reporting of injuries [and] also has real safety effects on days-away-from-work injuries . . . ”

Thus, the revision of the metric to include a measure of worker training will improve the representativeness and completeness of the full scope of issuer efforts to ensure worker health and safety.

To ensure the additional disclosure element is comparable and verifiable, the OSHA regulation for occupational health and safety (29 CFR 1910) has been referenced to define which employee training programs may qualify to be included when reporting the proposed indicator. This regulation defines the safety requirements the aspects worker health and safety subject to OSHA oversight, including means of egress, occupational health, hazardous materials management, personal protective equipment, fire protection, electrical systems, and other topics. If safety training does not fall under the topics listed in 29 CFR 1910, the technical protocol requires registrants to disclose the scope of such trainings and the specific occupational risks or hazards the training is intended to address.

Stakeholder Consultation

Investors: The investors expressed a consistent, strong interest in the inclusion of additional forward-looking or predictive indicators with respect to health and safety, noting that the current metrics are largely backward-looking. Investors suggested that this would improve several aspects of the decision-usefulness of the disclosure by making the metric a more representative, complete, and distributive indicator of Health and Safety performance.

Issuers: The issuers agreed with the materiality of Health, Safety, and Emergency Preparedness, and some identified employee training as a performance indicator used by management to assess performance.

Benefits

Improves the SASB standard: The proposed SASB standard provides a more complete description of company performance with respect to health, safety, and emergency management.

Improves decision-usefulness: Issuer disclosure of employee training provides a forward-looking indicator to enhance investor understanding of the strength of a company's safety culture and therefore its exposure to health, safety, and emergency management risk.

Proposed Update #4-32– **Industry:** Metals & Mining; **Topic Name:** Business Ethics and Payments Transparency

2017 Technical Agenda Item #4-32 Description

SASB is evaluating the addition of a metric to ensure the usefulness, completeness, and representativeness of the metrics associated with the topic.

No Proposed Change:

Based upon additional research and the lack of a clear, quantifiable metric that would result in useful and distributive disclosures, no changes related to the provisional standard related to Technical Agenda item 4-34 have been proposed at this time.



EXTRACTIVES & MINERALS PROCESSING SECTOR

CONSTRUCTION MATERIALS INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #EM0401

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #4-33 – **Industry:** Construction Materials; **Topic Name:** Workforce Health, Safety, and Well-Being

2017 Technical Agenda Item #4-33 Description

SASB is evaluating the revision of a technical protocol associated with metric NR0401-10⁴⁰ to improve its measurability.

Summary of Change – Revise Technical Protocol

The SASB proposes changing the technical protocol of metric NR0401-10 to clearly define “silicosis.”

In addition, the topic name shall be revised from “Workforce Health, Safety, and Well-Being” to “Employee Health and Safety.”

Adherence to Attributes of Technical Protocols

The provisional Construction Materials SASB industry standard includes a topic for Workforce Health, Safety, and Well-Being with metrics describing company exposure to and management of associated risks and opportunities. Specifically, metric NR0401-10 specifies that issuers should disclose the number of reported cases of silicosis. The current technical protocol notes that silicosis is associated with exposure to crystalline silica. To ensure the consistent measurability of disclosures associated with the metric, and therefore the comparability and decision-usefulness for investors, the technical protocol will be revised to strengthen the definition of silicosis.

In addition, to more clearly align the topic name with the associated metrics, the topic name will be revised from Workforce Health, Safety, and Well-Being to Employee Health and Safety. The metrics associated with the topic specifically relate to Health and Safety, and describe company performance related to workforce injury and incident rates as well as policies and procedures to reduce or eliminate such injuries and incidents. The revision will therefore improve the quality and clarity of the standard. Supporting Analysis

Per SASB’s *Construction Materials Research Brief*, “Silica exposure can lead to lung injuries including silicosis, which can be severely debilitating and even fatal in some cases if untreated, and lung cancer.” The Occupational Safety and Health Administration’s standards that pertain to occupational exposures to silica (29 CFR 1910.1053 App B) define Silicosis as “. . . an irreversible, often disabling, and sometimes fatal fibrotic lung disease” and further defines three presentations of the disease, including, chronic, accelerated, and acute silicosis.

To ensure the representativeness, comparability, and alignment of the SASB Standard, it is proposed to directly reference the 29 CFR 1910 for the reporting of silicosis cases by issuers. While 29 CFR 1910 is a US regulation, the definitions contained within can be referred to in other jurisdictions for the purposes of defining cases of silicosis.

Stakeholder Consultation

Investors: In general, investors were supportive of SASB’s process to define technical protocols that are objective and relevant to the subject matter.

⁴⁰ NR0401-10: Number of reported cases of silicosis

Issuers: Feedback received during consultation noted that the current technical protocol may be misleading with respect to the definition of silicosis. It was noted that exposure to crystalline silica is not synonymous with silicosis, which is a diagnosed condition that results from repertory exposure to crystalline silica.

Benefits

Improves the SASB standard: The updated technical protocol improves the measurability of disclosures prepared per the technical protocol by clarifying its definition of silicosis.

Proposed Update #4-34 – **Industry:** Construction Materials; **Topic Name:** Product Innovation

2017 Technical Agenda Item #4-34 Description

SASB is evaluating the revision of metric NR0401-11⁴¹ to improve its comparability.

Summary of Change – Revise Metrics

The SASB proposes revising metric NR0401-11 from, “Percentage of products that can be used for credits in sustainable building design and construction certifications” to “Percentage of products that qualify for credits in sustainable building design and construction certifications.”

Adherence to Criteria for Accounting Metrics

The provisional Construction Materials industry standard includes a topic for Product Innovation with associated metrics to describe a company’s management of risks related to market-driven sustainability trends in building design. With respect to product innovation, metric NR0401-11 describes the percentage of products produced by the construction materials company that can be used for credits in sustainability building design and construction certifications. While this quantitative indicator is useful, the current definition may not offer sufficient clarity to issuers to ensure disclosures are comparable. The revision of the metric to clearly define which materials should be included in the disclosure will better accomplishing the core objectives of the standard by offering investors a more comparable and therefore decision-useful disclosure.

Supporting Analysis

In the provisional Construction Materials Standard, metric NR0401-11 describes the, “percentage of products that can be used for credits in sustainable building design and construction certifications.” This disclosure recognizes that the company manufacturing and selling construction materials products may not be able to determine if such credits were claimed by the construction company for the project in which these materials were used, and so frames the disclosure around materials which qualify for such credits. To clarify this intent, it is recommended that the metric language be revised from materials that “can be used” for sustainable building credits to those that “qualify” for such credits.

Stakeholder Consultation

Investors: No feedback was received specific to the proposed change. In general, investors were supportive of changes that improve the comparability of the information generated by the standard.

Issuers: Limited feedback was received on the proposed change. Feedback that was received noted that disclosures would be more meaningful if they reflected qualifying materials that were sold and used for green construction credits rather than those that can be used. However, it was noted that all construction materials companies may not have access to this information for the purposes of reporting, and obtaining such information may be costly. In addition, it was noted that the metric language could benefit from revision to clarify the intent of the disclosure.

⁴¹ NR0401-11: Percentage of products that can be used for credits in sustainable building design and construction certifications

Benefits

Improves the SASB standard: The metric revision improves the clarity of the metric to ensure issuers disclose on a comparable basis, thereby improving the quality of the information generated by the standard.