



PROPOSED CHANGES TO PROVISIONAL STANDARDS

BASIS FOR CONCLUSIONS

Resource Transformation Sector

Chemicals

Aerospace & Defense

Electrical & Electronic Equipment

Industrial Machinery & Goods

Containers & Packaging

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 2017 Technical Agenda, 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 U.S. Securities and Exchange Commission (SEC) 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 *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 *Rules of Procedure* establish the processes and

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.

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 Resource Transformation 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.
- **Measurability:** Criteria should permit reasonably consistent measurements, qualitative or quantitative, of subject matter.

³ PCAOB, [AT Section 101](#) – Attest Engagements

- **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*.



RESOURCE TRANSFORMATION SECTOR

CHEMICALS INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RT0101

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #7-1 – **Industry:** Chemicals; **Topic Name:** Air Quality

2017 Technical Agenda Item #7-1 Description

SASB is evaluating the removal of metric RT0101-04⁴ to improve the cost-effectiveness of the standard.

Summary of Change – Remove Metric

SASB proposes removing metric RT0101-04, “Number of production facilities in or near areas of dense population.”

Adherence to Criteria for Accounting Metrics

The Chemicals industry provisional standard includes a topic, Air Quality, which describes the risks associated with a company’s discharges of pollutants into the air. The quantitative provisional metric RT0101-04 is intended to act as a proxy for potential financial impacts from regulatory or community action against a company due to its process air emissions and their impact on communities surrounding a company’s facilities. The topic’s other existing metric, RT0101-03 (“Air emissions for the following pollutants: NO_x (excluding N₂O), SO_x, volatile organic compounds (VOCs), and hazardous air pollutants (HAPs)), captures the total emissions of key regulated substances commonly emitted by chemicals facilities. This disclosure is decision-useful, applicable, and comparable.

The inclusion of metric RT0101-04, “Number of production facilities in or near areas of dense population,” is based on the premise that human health impacts and financial consequences for chemicals companies are likely to be exacerbated if a facility is located near densely populated areas. The metric is not decision-useful because the likelihood and magnitude of potential financial impacts cannot be readily determined from the information disclosed, and it does not provide fair representation of performance, as proximity to areas of dense population is an arbitrary determinant of risk. The removal of this metric will also improve the cost-effectiveness of the standard, and will not adversely affect disclosure pertaining to air quality.

Supporting Analysis

Increasingly stringent air emissions regulations, as well as emissions near populated areas, could result in increased mitigation costs and public health concerns, affecting company operating performance. Chemical companies could also face restrictions on, or delays in, obtaining permits from state and local agencies if their facilities do not meet specific emissions criteria. However, the number of facilities and their proximity to areas of dense population are not necessarily indicative of operating risk because of the potential for variation in the quantity of emissions from each facility, local environmental factors that affect exposure of nearby populations, and local regulations that address air emissions. These complicating factors make the information less decision-useful and subject to misinterpretation (lack of fair representation). For example, the vast majority of a company’s emissions may come from facilities that are not near areas of dense population, while it also operates multiple facilities with low emissions that are near areas of dense population. In this example, the company could be falsely considered high risk. Additionally, none of the top 10 companies in the industry currently report a like metric, nor is a similar metric present in the American Chemistry Council’s Responsible Care reporting framework.

Stakeholder Consultation

Investors: Limited investor feedback indicated that the existing metric was likely not decision-useful.

⁴ RT0101-04. Number of production facilities in or near areas of dense population

Issuers: Multiple companies indicated in the public comment period and during the consultation period that the metric could be misleading, and was not a relevant indicator of air emissions performance. A large industry association also commented during the public comment period and during consultation that the provisional metric was not an accurate representation of the risk posed by regulation or community impact, and could instead provide misleading disclosure.

Benefits

Improves cost-effectiveness: The removal of a metric that is not decision-useful and does not provide fair representation meets the guiding principles of SASB's conceptual framework, and ultimately makes the standard more cost-effective for issuers.

Proposed Update #7-2 – **Industry:** Chemicals; **Topic Name:** Energy & Feedstock Management

2017 Technical Agenda Item #7-2 Description

SASB is evaluating the removal of metric RT0101-06⁵ to improve the cost-effectiveness of the standard.

Summary of Change – Remove Metric

SASB proposes removing metric RT0101-06, “Percentage of raw materials from renewable resources.”

Adherence to Criteria for Accounting Metrics

The Chemicals provisional industry standard includes a topic, Energy & Feedstock Management, which describes the industry’s reliance on energy and hydrocarbon feedstocks during manufacturing operations, as well as the inherent regulatory and operational risks that may result from high energy usage. Quantitative metric RT0101-05, “Total energy consumed, percentage grid electricity, percentage renewable,” provides a decision-useful, comparable disclosure of a company’s current energy mix. Quantitative metric RT0101-06 provides disclosure on the types of raw materials (feedstocks) that are an indicator of operating risk from sourcing of non-renewable feedstocks. A large share of feedstocks in the industry are in the form of fossil energy such as natural gas. However, the share of feedstock from renewable resources would have to substantially affect a company’s overall raw materials profile to be decision-useful and relevant to companies and investors. This does not appear to be the case across the industry, and therefore, disclosure on metric RT0101-06 would likely not be applicable to companies or useful for investors. The removal of the metric will therefore better accomplish the core objectives of the standard by improving its the cost-effectiveness.

Supporting Analysis

Chemicals companies primarily source fossil-fuel based feedstocks as raw materials. According to the American Chemistry Council, approximately 96 percent of the industry’s feedstock is in the form of natural gas, natural gas liquids, and liquefied petroleum gases. A relatively minor share of feedstocks is renewable in nature; renewable feedstocks, such as biofuel or wood fiber, are used to produce specialty chemical products, and make up a very small share of total industry production. The use of biomass or other renewable feedstocks in chemicals production is an important consideration for the industry in the long-term, as fossil fuel supplies are susceptible to price volatility, and regulatory measures could affect the supply to fossil feedstocks. However, recent discoveries and improvements in technology have made vast reserves of natural gas available in the U.S. and other regions at low cost, while regulatory changes are likely to be gradual, making it unclear if the industry will face increasing pressure from feedstock supply.

The share of renewable feedstocks as a percentage of total feedstock consumed is difficult to determine at an industry level. Some companies are using limited amounts of biomass as feedstock for certain products; one major company reports that approximately five percent of feedstock in 2015 was biomass, according to the company’s website. Companies involved in basic chemical production rely heavily on natural gas and its derivatives as inputs and use little to no biomass. It is unlikely at this time that the chemicals industry will be able to source sufficient amounts of renewable feedstocks to make a meaningful contribution to total feedstock use.

Additionally, the use of biomass is not necessarily beneficial for the environment; biomass production can cause significant adverse impacts such as deforestation, biodiversity loss, land depletion, and high pesticide use. It may

⁵ RT0101-06: Percentage of raw materials from renewable resources

therefore not be prudent for the industry to use such feedstocks without investigating how they are produced. Therefore, the metric does not provide an accurate or unbiased representation of company performance with respect to feedstock management. The remaining quantitative metric will provide relevant, decision-useful information about energy consumption and energy mix.

Stakeholder Consultation

Investors: Limited investor feedback supported the view that the existing measure was not relevant to feedstock sourcing risks (or opportunities), and therefore was likely not decision-useful.

Issuers: Multiple companies indicated during the public comment period that the metric could be misleading due to an unclear link between renewable feedstocks and financial and operating performance.

Others: A large industry association commented that the proposed provisional metric was not applicable to the industry nor decision-useful because of low usage rates of renewable feedstocks and unclear links to operating risks or performance.

Benefits

Improves cost-effectiveness: The removal of the metric, which is not applicable to the industry with respect to performance on the topic and does not provide useful information to investors, therefore ensures that the standard better meets the guiding principles of SASB's Conceptual Framework and improves its cost-effectiveness.

Proposed Update #7-3 – **Industry:** Chemicals; **Topic Name:** Energy & Feedstock Management

2017 Technical Agenda Item #7-3 Description

SASB is evaluating revisions to metric RT0101-05⁶ to improve the decision-usefulness and completeness of the metrics associated with the topic.

Summary of Change – Revise Metrics:

The SASB proposes revising provisional metric RT0101-05, “Total energy consumed, percentage grid electricity, percentage renewable,” to include a reporting category within the existing metric that asks registrants to report the share of self-generated energy, and a secondary technical protocol line that allows registrants to report the amount of energy sold to a customer or electric utility.

Adherence to Criteria for Accounting Metrics

The Chemicals industry provisional standard includes a topic, Energy & Feedstock Management, with two associated quantitative metrics to describe a company’s management of risks and opportunities associated with its energy profile. Provisional metric RT0101-05 provides disclosure of total energy consumption, the percentage of grid electricity consumed, and the percentage of renewable energy consumed. This information provides useful, comparable, applicable, and distributive information about a company’s energy profile. However, the provisional metric does not provide for disclosure of self-generated energy, which is typically a significant component of a chemical company’s energy profile, and therefore is decision-useful information for investors. Thus, the current metric does not offer a complete view or fair representation of a company’s performance related to its energy profile. To address this, the proposal would revise the metric to allow issuers to disclose the amount of energy they self-generate, improving the representativeness and completeness of disclosure, as well as its alignment with common industry practice.

Supporting Analysis

Per the U.S. Energy Information Administration’s (EIA) 2013 Manufacturer Energy Consumption Survey, the Chemicals industry generates the most on-site energy (electricity and steam) of all manufacturing industries, representing approximately 41 percent of the manufacturing sector’s total. Of total electricity consumed, 28 percent was generated on-site, primarily by combined heat and power generation from natural gas combustion and process heat. Because of such high levels of self-generated energy, companies may benefit from reduced risks related to energy sourcing and consumption. The industry’s relatively unique energy profile can translate into more stable supplies of energy, and mitigate impacts from fluctuating electricity or fossil fuel prices. Companies also may sell excess energy generated to other users, generating additional revenue. The proposed revision would therefore facilitate a more complete, decision-useful understanding of a company’s energy profile and the related financial impacts.

A review of the industry’s top five companies by market capitalization showed that all companies disclose self-generated energy in corporate sustainability reporting or through reporting frameworks such as CDP and the Global Reporting Initiative. Additionally, information collected from companies by the EIA in its Manufacturers Energy Consumption Survey includes self-generated energy. The proposed revision will thus align the SASB standard with industry practices of reporting energy generation, and also reflect U.S. government energy reporting protocols.

⁶ RT0101-05: Total energy consumed, percentage grid electricity, percentage renewable

Stakeholder Consultation

Issuers: A limited number of issuers indicated that self-generated energy should be disclosed to provide a complete understanding of a company's energy profile.

Others: A large industry association commented on the importance of allowing companies to report self-generated energy to give a complete set of information about a company's energy profile.

Benefits

Improves decision-usefulness: The proposed change would improve the decision-usefulness of the standard by providing more complete and representative disclosure of company performance with respect to Energy & Feedstock Management.

Improves the SASB standard: The proposed change would align the standard with current industry reporting practices.

Proposed Update #7-4 – **Industry:** Chemicals; **Topic Name:** Water Management

2017 Technical Agenda Item #7-4 Description

SASB is evaluating revisions to the water quality metric RT0101-08⁷ to improve its decision-usefulness.

Summary of Change – Revise Metric:

The SASB proposes to limit the scope of the metric RT0101-08, “Number of incidents of non-compliance with water quality and/or quantity permits, standards, and regulations,” to incidents that result in a formal enforcement action, as opposed to all types of incidents of non-compliance regardless of whether such incidents resulted in enforcement actions.

Adherence to Criteria for Accounting Metrics:

The Chemicals industry provisional standard includes a disclosure topic, Water Management, which covers 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 RT0101-08 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. The frequency of incidents of non-compliance that result in formal enforcement actions 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. 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 a 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 Chemicals 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 issues 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. However, an effluent regulation exceedance

⁷ RT0101-08: Number of incidents of non-compliance with water quality and/or quantity permits, standards, and regulations

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

Formal enforcement actions, as defined⁸ by the U.S. Environmental Protection Agency (EPA) and some state agencies, are statutorily recognized actions that address a violation or threat of 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—for 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.⁹

The provisional metric requires reporting of incidents of non-compliance regardless of whether they result in formal enforcement action. Reporting all incidents of non-compliance does not distinguish between the severity of incidents and the resulting potential for financial impacts on the registrant. This creates an undue financial 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 a means of correcting violations, 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 during the public comment period. 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 related to regulatory compliance. A large industry association and a subject matter expert supported the proposed change on the basis of improving decision-usefulness.

⁸ "Informal and Formal Actions, Summary of Guidance and Portrayal on EPA Websites," U.S. Environmental Protection Agency, Office of Enforcement and Compliant Assurance, modified July 1, 2010, accessed August 29, 2017, <https://www.epa.gov/sites/production/files/2013-11/documents/actiondefs.pdf>.

⁹ "Analyze Trends: State Water Dashboard" U.S. Environmental Protection Agency, Enforcement and Compliance History Online 2017, accessed August 29, 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 that are 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 more 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 #7-5 – **Industry:** Chemicals; **Topic Name:** Hazardous Waste Management

2017 Technical Agenda Item #7-5 Description

SASB is evaluating the technical protocol associated with metric RT0101-09¹⁰ to improve its cost-effectiveness and alignment with existing reporting frameworks.

Description of Change – Revise Technical Protocol:

The SASB proposes removing the reference to the U.S. EPA’s Resource Conservation and Recovery Act (RCRA) in the technical protocol of provisional metric RT0101-09, “Amount of hazardous waste, percentage recycled,” and revising the protocol to allow companies to report hazardous waste and hazardous waste recycled where hazardous waste is defined by local regulation at the point of waste generation.

Adherence to Attributes of Technical Protocols

The Chemicals industry provisional standard includes a topic, Hazardous Waste Management, which includes one associated metric intended to describe a registrant’s generation and recycling of hazardous wastes. The technical protocol associated with provisional metric RT0101-09 references the U.S. EPA Resources Conservation and Recovery Act (RCRA, 40 CFR 261.3) to establish a definition of hazardous materials for registrants to use in classifying their hazardous waste. While this definition is relevant for U.S. operations, companies with operations outside the U.S. use local regulations to classify wastes according to each jurisdiction in which they operate, as required by law. Requiring registrants to classify wastes in non-U.S. jurisdictions using the EPA standard adversely affects the applicability of the metric, and its lack of alignment with common industry practice reduces cost effectiveness.

To address these issues, the proposal would update the technical protocol associated with the metric to allow issuers to categorize waste according to local jurisdiction laws, something most companies already do in most regions in which they operate. Company operations in the U.S. will continue to report using EPA RCRA and applicable state laws. The technical protocol will also allow companies to state whether a certain percentage or a majority of its hazardous wastes are classified under a particular regulation. By establishing criteria that are free from regional bias, while still providing for consistent measurement among issuers, the revision will also improve the objectivity and measurability of the technical protocol underlying the metric.

Supporting Analysis

Hazardous waste management leads to operating expenses and, in some cases, capital expenditures or remediation costs. In most regions, including the U.S., Europe, and Asia, government regulations address the categorization, generation, reclamation, and disposal of hazardous waste. Noncompliance with these regulations can result in regulatory penalties. Thus, companies undertake hazardous waste classification across the majority of their operations according to the prevailing regulation at the point of waste generation. The SASB proposal thus aligns the standards with existing company practices, eliminating the requirement to reclassify waste according to one regulation, the EPA RCRA.

¹⁰ RT0101-09: Amount of hazardous waste, percentage recycled

The proposal will also align SASB's standard with the Global Reporting Initiative [Effluents and Waste 2016](#) Disclosure 306-2 a., which requires users of the standard to disclose total hazardous waste generated and recycled, among other measures, with hazardous waste classified according to local regulations.

Such alignment would further reduce the reporting burden on companies. A review of the top 10 chemicals companies by market capitalization showed that all report per the GRI guidelines, and use the GRI definition for classifying hazardous waste within the GRI environmental indicator disclosures. Additionally, several top companies report total hazardous waste generated according to local regulatory classification.

Stakeholder Consultation

Issuers: A limited number of issuers strongly supported the proposed change on the basis that it would improve the cost-effectiveness of disclosing the data and ease the reporting burden as they already collect hazardous waste data based on local jurisdiction definitions of hazardous waste.

Others: A large industry association indicated that requiring companies to categorize hazardous waste in global operations per the EPA's definition of hazardous waste is unnecessarily burdensome and costly and would not materially affect the outcome of reporting of total waste generated.

Benefits

Improves the SASB Standard: The proposed change would improve the applicability of the metric by establishing underlying protocols that are free from regional bias and support consistent measurement, thereby improving the decision-usefulness of information disclosed on the topic.

Improves cost-effectiveness: The proposed change would improve the cost-effectiveness of the standard by aligning the metric's underlying technical protocol with current reporting practices.

Proposed Update #7-6 – **Industry:** Chemicals; **Topic Name:** Community Relations

2017 Technical Agenda Item #7-6 Description

SASB is evaluating the addition of a new topic, including new metrics, based on the potential for performance on this topic to affect corporate value and its relevance across the industry.

Summary of Change – Add Topic and Metric

The SASB proposes adding a topic, Community Relations, along with an associated metric, “Discussion of process to manage risks and opportunities associated with community rights and interests.”

Description of Topic

Chemical facilities typically generate air emissions, water effluents, and waste. Such localized environmental impacts may affect community rights and interests, such as human health and shared environmental resources, potentially resulting in regulatory, operational, and reputational effects. Additionally, process safety incidents can affect nearby populations. In some regions, regulators have published guidance addressing certain aspects of community impacts in existing regulations, such as those affecting permitting. Consequently, chemicals companies can benefit from building strong working relationships with communities, which serve to mitigate potential operating risks and ensure a strong social license to operate. To this end, companies can adopt various community engagement strategies in their global operations, such as developing engagement plans, establishing codes and guidelines to ensure alignment of the organization’s interests with those of their surrounding communities, or conducting impact assessments to evaluate projects and mitigate potential negative impacts.

Evidence

Due to the size of facilities and the manufacturing processes involved, many chemicals facilities generate significant air emissions, water-effluents, and hazardous waste. According to 2013 EPA Toxic Release Inventory data, the chemicals industry (NAICS 325) released nearly 235 million pounds of hazardous air pollutants in 2013, or approximately 12 percent of the total for all industrial facilities in the United States. Additionally, in 2011, the industry generated approximately 62 percent of the total reported solid hazardous waste generated in the United States. Emissions and effluents from chemical facilities are heavily regulated in many jurisdictions in the U.S. and internationally, resulting in mitigation-related operating costs and regulatory risk. In some regions, regulations may currently be less stringent than those in developed markets such as the U.S. and Europe. Future regulatory development in these markets can create regulatory uncertainty regarding the treatment of emissions and effluents and their impacts on local populations.

According to data from the U.S. EPA Risk Management Plan (RMP), approximately 80 million people live within 25 miles of a chemicals facility registered with the RMP.¹¹ The proximity of some chemicals facilities to populated areas could cause adverse health impacts from continuing emissions and effluents. Regulations may exist at the local level to address impacts on communities at greater risk due to their proximity to facilities. Additionally, the proximity of facilities to areas with economically disadvantaged or minority populations is a potential area of regulatory focus in some jurisdictions. For example, in 2015 the U.S. EPA published guidance to include environmental justice concerns

¹¹ A Demographic Analysis of Chemical Disaster Vulnerability Zones, Environmental Justice and Health Alliance for Chemical Policy Reform, May 2014, accessed August 30, 2017, p. 33, <http://comingcleaninc.org/assets/media/images/Reports/Who's%20in%20Danger%20Report%20FINAL.pdf>

when developing regulatory actions.¹² Additional regulatory considerations could affect the mitigation of emissions or effluents and the process for obtaining permits.

The proposed metric aligns with elements of the Global Reporting Initiative (GRI) Social standards 413-1, “Operations with local community engagement, impact assessments, and development programs,” and 413-2,¹³ “Operations with significant actual and potential negative impacts on local communities.” The GRI standard requires reporting organizations to disclose the vulnerability of local communities to potential negative operational impacts, including environmental impacts, natural resource consumption, proximity of operations, and the percentage of operations with assessment plans designed to mitigate potential impacts on local communities.

The top five chemical companies by revenue disclose information about community relations in corporate sustainability reports, typically including a narrative on how the company manages relations with communities, including actions taken to support community health. For example, a top five chemical company by revenue reports that it has created “Local Community Success Plans to prioritize environmental, social and economic issues ...”

The Responsible Care program, the Chemical industry’s primary environmental, health, safety, and security performance initiative, includes community awareness and emergency response in part 3.7 of the Responsible Care Management System that requires procedures and processes to work with the local community in responding to accidents and emergency situations, and to prevent and mitigate the impacts that may be associated with them. As part of the program, companies engage with local communities to ensure that community environmental health and safety concerns are addressed by building working relationships.¹⁴

Stakeholder Consultation

Issuers: The SASB contacted fourteen issuers in the industry during consultation to obtain input on the provisional standard. While nine of these issuers proceeded to provide specific input and suggest one or more revisions, the SASB did not receive direct feedback from issuers in the industry regarding the proposed change. Issuers had previously commented during the public comment period that metrics addressing potential community impacts and regulatory response could be relevant

Benefits

Improves the SASB standard: The proposed topic and metric will provide investors with decision-useful, material information about risks stemming from potential regulatory, operational, and reputational impacts from air, water, and waste discharges in proximity to populations, and a company’s approach to managing such risks.

¹² “Guidance on Considering Environmental Justice During the Development of an Action,” U.S. Environmental Protection Agency, last updated February 17, 2017, accessed August 14, 2017, <https://www.epa.gov/environmentaljustice/guidance-considering-environmental-justice-during-development-action>.

¹³ Global Reporting Initiative Standards Download Center, 2017, <https://www.globalreporting.org/standards/gri-standards-download-center/>

¹⁴ Responsible Care, RCMS Guidance FINAL_April_10_2014

Proposed Update #7-7 – **Industry:** Chemicals; **Topic Name:** Safety & Environmental Stewardship of Chemicals & Genetically Modified Organisms

2017 Technical Agenda Item #7-7 Description

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

Summary of Change – Split Topic

SASB proposes to split the existing disclosure topic Safety & Environmental Stewardship of Chemicals & Genetically Modified Organisms into two new disclosure topics: Safety & Environmental Stewardship of Chemicals, and Genetically Modified Products. The proposed change will align with SASB’s Conceptual Framework and improve the relevance of the associated metrics.

The “Safety & Environmental Stewardship of Chemicals” topic will retain metrics RT0101-11, “Percentage of products that contain Registration, Evaluation, Authorization and Restriction of Chemical (REACH) substances of very high concern (SVHC),” RT0101-12, “Percentage of products that contain Class I World Health Organization (WHO) Acute Toxicity Hazard Categories pesticides,” and RT0101-13, “Discussion of strategy to (a) manage chemicals of concern and (b) develop alternatives with reduced human and/or environmental impact.”

The “Genetically Modified Products” topic will retain metric RT0101-14, “Percentage of products by revenue that contain genetically modified organisms (GMOs)”.

Adherence to Principles for Topic Selection

The Chemicals industry provisional standard includes a topic, Safety & Environmental Stewardship of Chemicals & Genetically Modified Organisms, which includes associated quantitative metrics that address the share of products that contain categories of chemical substances, or genetically modified materials, as well as a qualitative metric addressing a company’s strategy to manage chemicals of concern and develop alternatives. To align with SASB’s Conceptual Framework, SASB is proposing to separate the “Genetically Modified Organisms” angle of the provisional topic and its corresponding metric into its own topic because of evidence that supports its potential material financial impacts on companies based on industry-specific characteristics. Similarly, the “Safety & Environmental Stewardship of Chemicals” will be separated as an independent topic.

While elements of these two topics are related, they represent different aspects of sustainability, and therefore require unique topic descriptions and metrics to fairly represent company performance in a way that is actionable for companies. While chemical safety includes factors such as product lifecycle impacts on human health and the environment, the impacts of genetically modified organisms on human health and the environment are not well understood, and are not distinctly tied to product safety.

The Chemicals industry acknowledges the potential risks posed by chemical safety in financial disclosure. In its 2014 10-K, Huntsman Corporation succinctly summarizes the issue, writing,

“Governmental, regulatory and societal demands for increasing levels of product safety and environmental protection could result in increased pressure for more stringent regulatory control with respect to the chemical industry. In addition, these concerns could influence public perceptions regarding our products and operations, the viability of certain products, our reputation, the cost to comply with regulations, and the ability to attract and retain employees.”¹⁵ The chemical safety topic is relevant due to specific regulations that address known human health or environmental impacts, and the resulting implications for compliance costs, revenue risk, or reputational impacts.

On the other hand, Syngenta describes regulatory risks related to GMO products in its financial filings, writing, “Actions by consumer groups and others may disrupt research and development or production of genetically modified seeds or crop protection chemicals. In addition, some government authorities have enacted, and others in the future might enact, regulations regarding genetically modified organisms or crop protection chemicals, which may delay and limit or even prohibit the development and sale of such products.”¹⁶ The GMO topic is relevant primarily because of consumer preferences and concerns, and is not related to existing chemical safety-related regulations.

Additionally, the relatively limited number of companies involved in producing GMO products, and the unique nature of the GMO debate, suggests that the topic should not be commingled with disclosure on traditional chemical product safety. Therefore, company action, and metrics designed to convey performance to investors, should be different for these different topics.

Stakeholder Consultation

Others: A large industry association supported separating the topic aspects because GMO products are relevant only for a minority of Chemicals industry companies.

Benefits

Improves the SASB standard: This proposed change improves the clarity of the standard by separating the distinct topics of traditional chemical safety and stewardship and that of GMO product stewardship.

¹⁵ Huntsman Corp., FY2014 Form 10-K for the period ending December 31, 2014 (filed on February 18, 2015), p. 44.

¹⁶ Syngenta AG, FY2014 Form 20-F for the period ending December 31, 2014 (filed on February 12, 2015), p. 7.

Proposed Update #7-8 – **Industry:** Chemicals; **Topic Name:** Political Spending

2017 Technical Agenda Item #7-8 Description

SASB is considering deleting this topic based on a lack of evidence that performance on this topic has the potential to significantly affect corporate value.

Description of Change – Remove Topic

SASB proposes to remove the Political Spending topic and the accompanying metrics¹⁷ based on a lack of evidence that the topic has the potential to significantly affect corporate value.

Adherence to Principles for Topic Selection

The provisional Chemicals industry standard contains a topic, Political Spending, which includes two quantitative metrics related to the amount companies spend on political campaigns, lobbying, and/or contributions to tax-exempt groups, including trade associations, as well as the five largest political, lobbying, or tax-exempt group expenditures. The metrics were intended to act as a proxy for a company's influence on political and regulatory policy. The proposal to remove the topic and the corresponding metrics is based on lack of evidence of systematic relevance of the topic across the chemicals industry, as well as stakeholder input. The speculative and inconclusive nature of the link between political spending and financial impact within the industry does not meet the relevance, decision-usefulness, and materiality requirements of SASB's Conceptual Framework. The removal of the topic will improve the cost-effectiveness of the standard.

Supporting Analysis

The Chemicals industry faces numerous environmental and safety regulations governing both its manufacturing processes and products. While lobbying is way for companies to influence policy, direct spending on political lobbying is not an accurate or decision-useful measure or proxy of a company's management of the regulatory environment in which it operates. Therefore, the topic is not relevant across the industry, and does not provide decision-useful information. Current Form 10-K disclosures implicitly support the lack of systematic relevance and significance of the information generated by the disclosure topic. Per a SASB analysis, only one company of the top ten in the chemicals industry provides 10-K (or 20-F) disclosures on the Political Spending topic, which is the lowest of the ten disclosure topics in the industry's provisional standard, indicating that the vast majority of companies in the industry do not view disclosures related to the topic as appropriate 10-K disclosures. Meanwhile, all companies discuss regulatory risk and policy within 10-K disclosure, especially as related to environmental topics and product lifecycle.

Additionally, SASB proposes to add a disclosure topic, Management of the Regulatory Environment (2017 Technical Agenda item 7-9), that will address the risks and opportunities related to a company's positions on government regulations and policies pertaining to sustainability issues that are likely to have a financial impact on operations.

Stakeholder Consultation

Investors: Through SEC comment letters and other channels, investors have expressed interest in information about corporate strategies, participation, and influence in the regulatory and legislative process. Some investors suggested

¹⁷ RT0101-13: Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade organizations; RT0101-14: Five largest political, lobbying, or tax-exempt group expenditures

that both qualitative and quantitative disclosures related to political lobbying, alignment with shareholder interests, and regulatory influence are decision-useful and relevant.

Issuers: The consensus among issuers is the topic deletion would improve the cost-effectiveness and relevance of the standard. There was concern that the focus on monetary contributions would be misleading and fail to provide sufficient context.

Others: A large chemicals industry association encouraged and supported the shift in the metric, providing similar rationale as issuers.

Benefits

Cost effective: The proposed change improves the cost-effectiveness of the standard by removing a topic that is not decision-useful or relevant across the industry.

Proposed Update #7-9 – **Industry:** Chemicals; **Topic Name:** Management of the Legal & Regulatory Environment

2017 Technical Agenda Item #7-9 Description

SASB is evaluating the potential for a new topic and associated metrics, based on the potential to affect corporate value. SASB will evaluate metrics RT0101-15¹⁸ and RT0101-16¹⁹ for relevance.

Description of Change – Add Topic and Metric

SASB proposes adding a Management of the Legal & Regulatory Environment topic with the following metric:

“Discussion of positions on the regulatory environment related to environmental and social factors, and description of efforts to manage risks and opportunities presented.”

Description of Topic

The Chemicals industry is heavily regulated in areas including environmental discharges, chemical safety, and process safety. These regulations provide clarity on the industry’s current and future policies and practices relating to key issues like air emissions, water and waste management, and product safety. Long-term regulatory trends, such as those addressing climate change policy, may affect the industry’s operating performance. Companies with a clear strategy for engaging regulators, aligned with corporate performance, long-term sustainable environmental outcomes, and accounts for societal externalities, could benefit from reduced regulatory risk and a stronger long-term license to operate. These strategies can help companies adjust to medium- to long-term regulatory changes, especially those that concern topics that directly affect the industry’s products or operations.

Supporting Analysis

Regulatory risk in the Chemicals industry can contribute to business uncertainty, and has the potential to affect long-term operating performance. Topics such as climate change, water quality, and chemical safety are critically important for the industry to manage; these are also topics in which regulations are undergoing significant transition, as evidenced by the 2015 Paris Agreement, the review of the EPA Waters of the United States rule, and the 2016 revised Toxic Substances Controls Act. Through disclosure of a company’s strategy for managing regulatory policy and risk, investors can better understand how companies manage the regulatory uncertainty created by legislative changes.

Additionally, investors have filed shareholder resolutions with Chemicals companies to request more transparency of issuer efforts to influence legislation and regulation that may prove contrary to the company’s long-term interests, suggesting that some investors are interested in this type of disclosure.

The proposed qualitative metric allows for a discussion of the risks and opportunities faced by the registrant from legislation and regulation that could impact relevant environmental, social or safety topics in the industry. Registrants will discuss efforts to manage the risks associated with legislation that affects emissions, energy, water and waste management, chemical safety, or process safety regulations. This disclosure can serve to ensure that companies maintain a strategy to manage important long-term regulatory uncertainty and business risk. By including these standardized elements, 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.

¹⁸ RT0101-15: Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups, including trade associations

¹⁹ RT0101-16: Five largest political, lobbying, or tax-exempt group expenditures

Stakeholder Consultation

Others: A large chemicals industry association commented during consultation that a qualitative discussion of regulatory management would be more appropriate than quantitative disclosure of political contributions.

Benefits

Improves the SASB standard: The proposed topic and associated qualitative metric will provide 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.

Proposed Update #7-10 – **Industry:** Chemicals; **Topic Name:** Health, Safety, and Emergency Management

2017 Technical Agenda Item #7-10 Description

SASB is evaluating the removal of metric RT0101-19²⁰ to improve the cost-effectiveness of the standard.

Description of Change – Remove Metric:

SASB proposes removing metric RT0101-19, “Challenges to the Safety Systems indicator rate (Tier 3).”

Adherence to Criteria for Accounting Metrics

The provisional Chemicals industry standard includes a topic, “Health, Safety and Emergency Management”, which describes the risks associated with technical failures, human errors, and/or external factors such as adverse weather events, and how these can lead to accidental releases of chemical substances into the environment at processing facilities or during storage and transportation. Process safety incidents can have direct financial consequences, including lost production from facility down-time, spill mitigation costs, capital expenditures for equipment replacement and upgrades, and regulatory penalties. The associated metrics provide decision-useful, comparable, and distributive information about a company’s past performance on process safety and employee safety. Specifically, RT0101-17 addresses the rate and number of process safety incidents in a given reporting period, which are indicative of a company’s ability to prevent incidents, and its likelihood of severe incidents. RT0101-18 characterizes the number of transport incidents, which can be normalized to the scope of a company’s operations in order to compare peer companies’ ability to safely transport materials and products. RT0101-20 assesses a company’s employee safety performance, which is closely linked to process safety events in the chemicals industry. Finally, RT0101-21 includes disclosure of the long-term implications and mitigation of exposure of employees to hazards in the workplace. Although these metrics provide a complete set of disclosures to describe company performance on risks related to the management of Health, Safety, and Emergencies, metric RT0101-19 may not produce comparable, neutral information. Specifically, Tier 3 incidents are not explicitly defined in the American Petroleum Institute (API) guidance referenced by the SASB standard, and the rate of Tier 3 incident reporting can vary widely among companies due to internal differences in definitions and/or the strength of data collection. The removal of RT0101-19 improves the cost-effectiveness of disclosure while retaining the decision-usefulness and comparability of the standard via the other metrics tied to this topic.

Supporting Analysis

SASB’s existing Tier 1 and 2 process safety metric (RT0101-17) aligns with the American Chemistry Council’s Responsible Care and API RP 754 process safety metrics, used by most companies in the chemicals and refining industries. Chemical companies provided feedback that Tier 3 incident metrics are designed for internal use by companies as part of their health and safety programs, and are not appropriate for external reporting due to the company-specific definition of which events qualify as an “incident.” Further, although API RP 754 recommends certain types of events qualify as Tier 3 incidents – such as Safe Operating Limit Excursions, Primary Containment Inspection or Testing Results Outside Acceptable Limits, Demands on Safety Systems, or other Loss of Primary Containment events—it specifically states that Tier 3 (and 4) incidents may use these definitions, or that companies

²⁰ RT0101-19: Challenges to the Safety Systems indicator rate (Tier 3)

may define their own performance indicators. In addition, the API notes that such indicators are intended for internal company use and for local (site) reporting to employees and managers.²¹

Thus, the data associated with Tier 3 incident rates may not be comparable across companies. Additionally, the information could be misinterpreted by investors. For example, a high number of Tier 3 incidents could indicate a strong safety culture that encourages reporting of all incidents regardless of potential severity, or alternatively represent a high occurrence rate of actual incidents that had significant potential to lead to property damage, environmental harm, or personnel impacts. Because these definitions are at the discretion of the issuer, Tier 3 disclosure may not be useful.

Stakeholder Consultation

Issuers: Multiple issuers stated during the public comment period and during consultation that API Tier 3 incidents should not be reported publicly because they are designed for facility-level reporting, and therefore are not comparable between companies at an aggregate level. Issuers otherwise support SASB's alignment with existing industry process safety metrics.

Investors: A limited number of investors commented that the measure was not useful because it is not comparable between companies.

Benefits

Improves the SASB Standard: The elimination of the metric will improve the cost-effectiveness of the standard for issuers while maintaining the quality of the information generated by the standard with respect to issuer management of risks related to Health, Safety, and Emergency Preparedness.

²¹ "Process Safety Assessment Report," The Bureau of Safety and Environmental Enforcement, May 2015, accessed June 6, 2017, <https://www.bsee.gov/sites/bsee.gov/files/tap-technical-assessment-program//732aa.pdf>.



RESOURCE TRANSFORMATION SECTOR

AEROSPACE & DEFENSE INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RT0201

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #7-11 – **Industry:** Aerospace & Defense; **Topic Name:** Hazardous Waste Management

2017 Technical Agenda Item #7-11 Description

SASB is evaluating the technical protocol associated with metric RT0201-02²² to improve its cost-effectiveness and alignment with existing reporting frameworks.

Summary of Change – Revise Technical Protocol

The SASB proposes removing the reference to the U.S. EPA’s Resource Conservation and Recovery Act (RCRA) in the technical protocol of provisional metric RT0201-02, “Amount of hazardous waste, percentage recycled,” and substituting the definition of hazardous waste established by the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

Adherence to Attributes of Technical Protocols

The Aerospace & Defense industry provisional standard includes a topic, Hazardous Waste Management, which has one associated metric intended to describe a registrant’s generation and recycling of hazardous wastes. The technical protocol associated with provisional metric RT0101-02 references the U.S. EPA Resources Conservation and Recovery Act (40 CFR 261.3) to establish a definition of hazardous materials for registrants to use in classifying their hazardous waste. While this definition is relevant for U.S. operations, companies with operations outside the U.S. use local regulations to classify wastes according to each jurisdiction in which they operate, as required by law. Requiring registrants to classify wastes in non-U.S. jurisdictions using the EPA standard adversely affects the applicability of the metric, and its lack of alignment with common industry practice reduces cost effectiveness.

To address this issue, the proposal would update the technical protocol associated with the metric to allow issuers to categorize waste according to local jurisdiction laws, an exercise that companies already undertake in most regions where they operate. Company operations in the U.S. would continue to report using EPA RCRA and any applicable state laws. The technical protocol would allow companies to state whether a certain percentage or majority of its hazardous wastes are classified per a particular regulation. By establishing criteria that are free from regional bias while still providing for consistent measurement among issuers, the revision would also improve the objectivity and measurability of the technical protocol underlying the metric.

Supporting Analysis

Hazardous waste management leads to operating expenses and, in some cases, capital expenditures or remediation costs. In most regions, including the U.S., Europe, and Asia, government regulations address the categorization, generation, reclamation, and disposal of hazardous waste. Noncompliance with such regulations can result in regulatory penalties. Thus, companies undertake hazardous waste classification across the majority of their operations according to the prevailing regulation at the point of waste generation. The SASB proposal thus aligns the standards with existing company practices, eliminating the requirement to reclassify waste according to one regulation, the EPA RCRA.

²² RT0101-02: Amount of hazardous waste, percentage recycled

The proposal will also align SASB's standard with the Global Reporting Initiative [Effluents and Waste 2016](#) Disclosure 306-2 a., which requires users of the standard to disclose total hazardous waste generated and recycled, among other measures, with hazardous waste classified according to local regulations.

This alignment would further reduce the reporting burden on companies. A review of the top 10 chemicals companies by market capitalization shows that all of them report per the GRI guidelines, and use the GRI definition for classifying hazardous waste within the GRI environmental indicator disclosures. Additionally, several top companies report total hazardous waste generated according to local regulatory classifications.

Stakeholder Consultation

Issuers: A limited number of issuers supported the proposed change on the basis that it would improve the cost-effectiveness of disclosing the data, and ease the reporting burden and improve cost-effectiveness because they already collect hazardous waste data based on local jurisdiction definitions of hazardous waste.

Benefits

Improves the SASB Standard: The proposed change would improve the applicability of the metric by establishing underlying protocols that are free from regional bias and support consistent measurement, thereby improving the decision-usefulness of information disclosed on the topic.

Improves cost-effectiveness: The proposed change would improve the cost-effectiveness of the standard by aligning the metric's underlying technical protocol with current reporting practices.

Proposed Update #7-12 – **Industry:** Aerospace & Defense; **Topic Name:** Data Security

Technical Agenda Item #7-12 Description

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

Summary of Change – Add Metric:

SASB proposes adding a metric to the Data Security topic describing “Percentage of operations, by revenue, independently certified to a suitable third-party party cybersecurity management standard.”

Adherence to Criteria for Accounting Metrics

The Aerospace & Defense industry standard includes a topic for Data Security, which describes a company’s ability to protect its customers’ data. The two associated metrics characterize a company’s performance as it relates to this issue. Quantitative metric RT0201-04 asks for a company’s record of data breaches, as well as the percentage of those breaches that contained personally identifiable information. Qualitative metric RT0201-05 asks companies to describe their strategy for mitigating security risks within the company’s operations and within products. Companies have a range of performance when it comes to cyber preparedness, and from qualitative descriptions alone it can be difficult to compare the relative cyber risks. The addition of a second quantitative metric asking what percentage of operations, by revenue, have been independently certified to a suitable third-party security standard will provide investors with a more complete and useful view of cyber security practices by company. Companies can have varying levels of cyber preparedness among different parts of their operations; thus this metric would detail the extent to which this preparedness covers all parts of the company. Adding a forward-looking quantitative metric will help investors assess the cyber risks of their portfolio.

Supporting Analysis

Cybersecurity is a rapidly-growing issue for the capital markets, yet there is currently no standardized approach for investors to evaluate related risks. Many companies are currently unprepared and underfunding this vital area, and investors are looking for ways to evaluate differences in performance.

SASB research and outreach has found increased investor and regulatory interest in cybersecurity preparedness. This parallels the increasing price tag of cybercrimes, which are estimated to have cost the global economy \$450 billion in 2016, a number that is projected to reach \$2 trillion by 2019.²³ The two provisional standard data security metrics would become more complete by adding a forward-looking quantitative metric that compares company preparedness.

A 2016 Pew Research poll found that only nine percent of US business felt “very prepared” to prevent cyberattacks, while 35 percent felt either “not too prepared” or “not at all prepared.”²⁴ While no system can fully prevent a breach, it is likely that the least prepared will face the highest incidence rate. According to the Ponemon Institute, having a cybersecurity incident response plan in place reduces the final cost of a data breach by 10 percent.²⁵ The Institute also

²³Steve Morgan, “Cyber Crime Costs Projected to Reach \$2 Trillion by 2019,” *Forbes*, Jan 17, 2016, accessed May 22, 2017, <https://www.forbes.com/sites/stevemorgan/2016/01/17/cyber-crime-costs-projected-to-reach-2-trillion-by-2019/#1a65fdcc3a91>

²⁴Nick Hagar, “These Four Charts Show the Sorry State of Cybersecurity,” *Pacific Standard*, May 12, 2017, accessed May 22, 2017, <https://psmag.com/news/watch-out-computers>

²⁵“2016 Cost of Data Breach Study: Global Analysis 2016,” Ponemon Institute, June 2016, pg. 2, accessed May 23, 2017, <https://securityintelligence.com/media/2016-cost-data-breach-study/>

found that companies that could identify a breach within 100 days lost nearly 26 percent less than those that couldn't,²⁶ indicating that companies that have more robust systems in place will have fewer and less costly attacks. Dedicated cybersecurity resources and training can improve performance on this issue; the difficulty is in measuring it in a way that doesn't compromise system security.

The ISO 27001 standard (the suitable 3rd party standard example cited in the technical protocol) is commonly used, evidenced by the fact that 5,573 Information technology companies used ISO 27001 in 2015, a twenty percent increase over the previous year.²⁷

While provisional metric RT0201-05 asks companies to discuss their cybersecurity strategies, this new metric will provide an additional quantitative indicator of company data security performance that is useful and complete. The technical protocol of the metric requires issuer disclosure to be normalized by total revenue in order to provide a better understanding of the extent to which issuer operations are in compliance with a 3rd party cybersecurity management standard.

Stakeholder Consultation

Investors: A limited number of investors that participated in consultation commented that this topic deserves increased attention, and there was consensus that a focus on management indicators is the best path to quantify this subject. Investors noted that companies should use an externally-verified cybersecurity framework, to understand the magnitude of the related risk.

Others: The proposed metric was suggested by and discussed with multiple subject matter experts who believe it to be a good proxy for corporate data security performance.

Benefits

Improves the SASB standard: This metric provides comparable disclosure on company oversight of cybersecurity risks.

Improves decision usefulness: Adding a forward-looking quantitative metric will help investors assess cyber risks by improving the fair representation and comparability of this topic.

²⁶ Ibid., pg. 24

²⁷ "ISO Survey of certifications to management system standards- Full results," ISO Standards Development, September 18, 2017, accessed September 18, 2017, <http://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1>

Proposed Update #7-13 - **Industry:** Aerospace & Defense; **Topic Name:** Supply Chain Management & Materials Sourcing

2017 Technical Agenda Item #7-13 Description

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

Summary of Change – Rename Topic

SASB proposes to rename the existing “Supply Chain Management & Materials Sourcing” topic, which is currently included in the “Aerospace & Defense” provisional standard, to “Supply Chain Management.” Currently, the topic includes the following metrics:

- RT0201-14: Number of counterfeit parts detected, percentage avoided
- RT0201-15: Percentage of materials costs for items containing critical materials
- RT0201-16: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free
- RT0201-17: Discussion of the management of risks associated with the use of critical materials and conflict minerals

Adherence to Criteria for Topic Selection

The topic currently contains two aspects of supply chain management: 1) vetting of suppliers to reduce the risk of sourcing counterfeit products; and 2) the sourcing of constrained materials that are essential to production. The first aspect is related to product quality and safety, and the product liability risks that result from sourcing counterfeit parts; the second is related to how materials supply chain disruptions could impact a company’s operations. Renaming the topic will align it with SASB’s Supply Chain Management General Issues Category.

The counterfeit products aspect pertains to the risk of sourcing faulty or low-quality products from suppliers, potentially affecting the safety or functionality of finished aerospace or defense products. Product malfunctions and compromised safety can result in adverse reputational impacts, possibly affecting product demand. Additionally, mismanagement of this issue can result in regulatory actions and product liability claims.

The materials sourcing aspect relates to the potential for supply chain disruption, materials cost increases, U.S. defense department regulatory action, or adverse impacts on reputation from the sourcing of critical, constrained materials. Such materials may be constrained due to relative scarcity, a low substitution ratio, and/or geopolitical or environmental factors.

Stakeholder Consultation

Issuers: A limited number of issuers stated that both aspects of the topic are relevant to financial performance in the industry. No comments on the proposed topic name change were received.

Benefits

Improves the SASB standard: The proposed change improves the quality and presentation of the standard.

Proposed Update #7-14 – **Industry:** Aerospace & Defense; **Topic Name:** Materials Sourcing

2017 Technical Agenda Item #7-14 Description

SASB is evaluating the revision and/or removal of metrics RT0201-16²⁸ and RT0201-17²⁹ to improve the cost-effectiveness and decision-usefulness of the metrics associated with the topic.

Summary of Change – Revise Topic: Supply Chain Management & Materials Sourcing

The SASB proposes to revise the scope of the Supply Chain Management & Materials sourcing disclosure topic to better address financial impacts stemming from risks and opportunities related to resource scarcity. As a result of the topic revision, the SASB proposes to remove provisional metric RT0201-16, “Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free.” Additionally, SASB proposes to remove the term “conflict minerals” from the provisional metric RT0201-17, “Discussion of the management of risks associated with the use of critical materials and conflict minerals.”

Adherence to Criteria for Topic Selection

The Aerospace & Defense industry provisional standard contains a disclosure topic, Supply Chain Management & Materials Sourcing, which addresses risks related to sourcing of scarce or otherwise constrained materials. The provisional standard contains three metrics that focus on costs associated with critical materials³⁰ (RT0201-15), smelters that are verified “conflict-free” (RT0201-16), and risk mitigation strategies related to the sourcing of critical materials and conflict minerals³¹ (RT0201-17). Upon review of the financial impacts of this topic, it is apparent that resource scarcity is the factor that gives rise to financially material impacts that are systematically relevant across the industry, rather than the sourcing of materials from areas of conflict.

Resource scarcity can arise from low substitution ratio of inputs, the concentration of deposits in only a few regions, the environmental or social implications of extraction, and geopolitical considerations. These factors can lead to supply disruptions or price increases of key materials. The existence of conflict in certain regions is one of many contributing factors that can contribute to supply constraints. Therefore, it is appropriate to revise the scope of the topic to capture performance on exposure to resource scarcity and supply constraints. The topic revision will improve the relevance of the topic across the industry and ensure that the topic is more narrowly focused on financially material impacts. The topic revision will necessitate metric revisions; the SASB proposes to eliminate quantitative provisional metric RT0201-16, as well as eliminate the focus on conflict minerals in the qualitative provisional metric RT0201-17. These two metric revisions will improve the measurement of performance on the topic.

Supporting Analysis

Companies in the Aerospace & Defense industry may face risks related to sourcing critical materials due to the supply constraint factors mentioned above. For example, according to a 2013 RAND National Defense Research Institute study, a high percentage of material resources critical to U.S. manufacturing is imported from nations with shortfalls in quality of governance. Recycling rates of these substances are typically not high enough to meet global demand,

²⁸ RT0201-16: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free

²⁹ RT0201-17: Discussion of the management of risks associated with the use of critical materials and conflict minerals

³⁰ Defined by the National Research Council as materials that are both essential in use and subject to the risk of supply restriction

³¹ Within the SASB standards, the term “conflict minerals” refers to tantalum, tin, tungsten, or gold (3TG).

therefore extraction and processing of new deposits is required. According to the RAND report, approximately 97 percent of rare earth metals, which include materials such as tungsten and antimony that are used in a variety of Aerospace & Defense industry products such as lasers and electronics, are mined in China.³² Some countries impose production controls and export restrictions such as quotas and tariffs, which, in light of increasing demand for these materials, have, in some instances, had a significant impact on price and availability. For example, between 2010 and 2011 the price of rare earth metals doubled due to fears of Chinese export quotas.³³

Companies also face increasing competition for these materials due to growing global demand from other sectors, including transportation, renewable resources, and technology and communications, which can exacerbate supply constraints. Additionally, there is potential for reputational harm from indirectly funding social unrest or environmental damage by purchasing materials extracted in certain regions of the world.

Stakeholder Consultation

Issuers: A limited number of issuers that participated in consultation commented that conflict minerals disclosure is not relevant and not likely to result in material financial or reputational impacts. Issuers further indicated that the sourcing of certain materials could be financially impactful.

Benefits

Improves the SASB standard: The proposed changes improve the relevance and likely materiality of the Supply Chain Management & Materials Sourcing topic.

³² Richard Silbergliitt, James T. Bartis, Brian G. Chow, David L. An, and Kyle Brady, "Critical Materials Present Danger to U.S. Manufacturing," RAND National Defense Research Institute, 2013, http://www.rand.org/content/dam/rand/pubs/research_reports/RR100/RR133/RAND_RR133.pdf.

³³ Ibid.



RESOURCE TRANSFORMATION SECTOR

ELECTRICAL & ELECTRONIC EQUIPMENT INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RT0202

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #7-15 - **Industry:** Electrical & Electronic Equipment; **Topic Name:** Product Lifecycle Management & Innovation for Environmental Efficiency

2017 Technical Agenda Item #7-15 Description

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

Summary of Change – Rename Topic

The SASB proposes to rename the provisional disclosure topic Product Lifecycle Management & Innovation for Environmental Efficiency to: Product Lifecycle Management.

Adherence to Principles of Topic Selection

Product Lifecycle Management refers to a company's management of potential adverse environmental or human health impacts stemming from chemical content in products that can be released at the product use phase and end-of-life. Electrical equipment typically contains many chemicals, some of which are hazardous to human health or the environment if not properly disposed of and contained at end of life. Companies could face customer or regulatory pressure to limit the use of hazardous substances or be responsible for proper disposal in some instances. The provisional metric associated with the proposed topic covering this aspect is RT0202-06, "Percentage of products by revenue that contain IEC 62474 declarable substances."

Product Efficiency refers to the development of products and services that enhance customer energy efficiency, emissions-reduction, or the use and integration of renewable energy technologies throughout the product lifecycle. This market segment is a major driver within the industry, as customers increasingly seek to reduce their energy use or emissions. All the top five companies in the industry by market capitalization have business segments dedicated to products that improve customer efficiency, and these segments are typically highlighted as growth areas. This aspect of the provisional topic falls under SASB's Product Design & Lifecycle Management issue category. The proposed topic covering this issue would include provisional metrics RT0202-07, "Percentage of eligible products by revenue that meet ENERGY STAR® criteria," and RT0202-08, "Revenue from renewable energy-related and energy efficiency-related products." These metrics provide decision-useful information about performance on this issue, and meet the criteria for completeness and fair representation. The SASB also proposes removing an additional metric associated with the provisional topic RT0202-09, which is addressed in Item 7-17.

Supporting Evidence

Product end of life is an important aspect of product lifecycle management in the industry. Due to concerns about growing amounts of e-waste and its environmental impacts, some state and national governments across the globe have introduced laws related to managing such waste. For example, the Waste Electronic and Electrical Equipment directive in the European Union applies the producer responsibility principle, requiring manufacturers or importers of electronic equipment to bear the cost of recycling at the end-of-life.³⁴ Penalties, costs, or lost revenues due to such laws, together with potential revenues from refurbishing and re-selling products, and cost savings and risk mitigation from critical materials recovery, are increasingly providing incentives for companies in the industry to manage end-of-life impacts.

³⁴ "WEEE compliance. Sharing Responsibility," *Veolia Environmental Services*, accessed March 16, 2015, http://www.veolia-environmentalservices.com/veolia/ressources/documents/2/1142,WEEE_Brochure.pdf

For example, a major company's healthcare segment has a four-part product take-back program, including system refurbishing, component reuse, parts extraction, and further use or recycling. The company has developed a network of disassembly and recycling facilities for customers' used equipment. This program frees customers from the hassle of disposing of their equipment and allows it the opportunity to extract valuable material or refurbish products for resale. The refurbishment process enables the reuse of an average of 90 percent of materials, while the refurbished systems are of the same quality as new systems, yet purchase costs for customers are an average of up to 20 percent lower.

Energy efficiency in the use phase of electrical and electronic equipment is also becoming a top priority for companies. This is driven by potential cost savings, customer demand, and legislative action. A large industry company stated in its 2015 CDP report that "energy efficiency is a growing need of our customers," and added that the opportunity expands addressable markets for their products.³⁵

Electrical equipment manufacturers are making large commitments to R&D for products that improve energy efficiency and reduce carbon emissions. One company listed the following two product objectives in its FY2014 Form 10-K, "(i) 50 percent reduction in the greenhouse gas refrigerant footprint of our products for customers by 2020 and lower global warming potential alternatives across our portfolio by 2030; (ii) \$500 million investment in product-related research and development over the next five years to fund the long-term reduction of greenhouse gas emissions."³⁶ In 2012, a major company spent \$439 million, its total R&D spend, on innovative products and solutions aimed at addressing the energy- and emission-reduction requirements of its customers.³⁷

Stakeholder Consultation

Investors: While a limited number of issuers may have provided input and suggested revisions to the standard, they did not provide any input or raise any concerns related to this specific proposed change. In general, however, the four investors (out of four contacted) who provided input during the consultation period were supportive of revisions that would improve the clarity of the standard.

Issuers: While a limited number of issuers may have provided input and suggested revisions to the standard, they did not provide any input or raise any concerns related to this specific proposed change. The three companies (out of nine contacted) that provided input during the consultation period were supportive of measures that would improve the clarity of the standard.

Benefits

Improves the SASB standard: The proposed change improves the clarity of the standard by aligning the topic name and description with SASB's general issue category.

³⁵ "CDP 2013 Climate Change Disclosure Information Request—Schneider Electric," CDP, 2013, accessed April 15, 2014, <https://www.cdp.net/sites/2013/23/16423/Investor%20CDP%202013/Pages/DisclosureView.aspx>

³⁶ Ingersoll Rand, FY2014 Form 10-K for the Period Ending December 31, 2014 (filed February 13, 2015).

³⁷ Eaton Corp., *Corporate Sustainability Report*, 2012, p. 18.

Proposed Updated #7-16 – **Industry:** Electrical & Electronic Equipment; **Topic Name:** Product Lifecycle & Innovation for Environmental Efficiency

2017 Technical Agenda Item #7-16 Description

SASB is evaluating the revision of metric RT0202-07³⁸ to improve the representativeness and decision-usefulness of the metrics associated with the topic.

Rationale for no proposed change

The Technical Agenda proposal to revise metric RT0202-07 was based upon a perceived redundancy in measuring revenues from electrical equipment that delivers energy efficiency gains to customers. The percentage of eligible products by revenue that meet ENERGY STAR® criteria (RT0202-07) is a measure of the market (revenue) *potential* for products that enhance customer efficiency. Conversely, the revenue from renewable energy-related and energy efficiency-related products (RT0202-08) measures the *current* revenue from products that can enhance customer efficiency. The two metrics thus measure different market angles and are independently useful and complete, and provide fair representation of performance.

³⁸ RT0202-07: Revenue from renewable energy-related and energy efficiency-related products

Proposed Update #7-17 – **Industry:** Electrical & Electronic Equipment; **Topic Name:** Product Lifecycle Management & Innovation for Environmental Efficiency

2017 Technical Agenda Item #7-17 Description

SASB is evaluating the removal of metric RT0202-09³⁹ to improve the cost-effectiveness of the standard and the applicability of the metrics associated with the topic.

Summary of Change – Remove Metric

SASB proposes removing provisional metric RT0202-09, “Total energy cost savings achieved through energy performance contracts”.

Adherence to Criteria for Accounting Metrics

The Electrical & Electronic Equipment industry provisional standard includes a topic, Product Lifecycle Management & Innovation for Environmental Efficiency, which describes the risks and opportunities associated with a company’s innovation, research, and development strategies to address the growing demand for energy-efficient products. The provisional disclosure topic includes three metrics designed to capture a company’s exposure to markets for products that help customers improve efficiency or reduce environmental impacts, an important and growing market segment. However, the third provisional metric, RT0202-09 (“Total energy cost savings achieved through energy performance contracts”), measures a relatively insignificant market within the broader market segment for efficiency-enhancing products. The other two metrics⁴⁰ together capture performance on this key market, while metric RT0202-09 does not produce useful, applicable information. The proposed removal of this metric would therefore retain the decision-usefulness of the set of disclosures for investors while improving the cost-effectiveness of the standard.

Supporting Analysis

The Energy Performance Contract (EPC) market is small, but growing: According to a study by the Lawrence Berkeley Laboratory, the estimated total U.S. market size for EPC was \$6 billion in 2013, and projected to rise to \$10 billion by 2020. Another market analysis, by Navigant Research, finds that the market was approximately \$6.3 billion in 2015, expected to rise to \$11.5 billion by 2024.

Despite the segment’s projected growth, the EPC segment is insignificant, representing less than one percent of the more than \$1 trillion total 2015 industry revenues, and is projected to remain a very small share of total revenues for the foreseeable future. Thus, the financial impact from any EPC-related revenues is unlikely to materially affect most companies. Additionally, based on a SASB review of SEC filings of the industry’s top 10 companies by market capitalization, EPC services are provided by only three companies. The EPC revenues of each of these three companies are less than five percent of total revenues. These numbers suggest that disclosure of this metric is not likely to be applicable to most companies in the industry, and has limited usefulness to investors or companies. The removal of

³⁹ RT0202-09: Total energy cost savings achieved through energy performance contracts

⁴⁰ RT0202-07: Percentage of eligible products by revenue that meet ENERGY STAR® criteria; and RT0202-08: Revenue from renewable energy-related and energy efficiency-related products

the metric would therefore improve the cost-effectiveness of the standard while preserving its ability to facilitate decision-useful disclosure of material information regarding the topic.

Stakeholder Consultation

Investors: The limited investor feedback received during consultation supported the view that the metric was not likely to be a decision-useful tool to measure performance on the topic.

Issuers: During the public comment period, a limited number of issuers indicated that the metric addressed a very small market segment, was relevant to a minority of companies in the industry, and was therefore not likely to be decision-useful.

Benefits

Improves cost-effectiveness: The proposal would improve the cost-effectiveness of the standard by reducing the number of metrics a company must implement.

Proposed Update #7-18 – **Industry:** Electrical & Electronic Equipment; **Topic Name:** Materials Sourcing

2017 Technical Agenda Item #7-18 Description

SASB is evaluating the revision and/or removal of metrics RT0202-14⁴¹ and RT0202-15⁴² to improve the cost-effectiveness and decision-usefulness of the metrics associated with the topic.

Summary of Change – Revise Topic: Materials Sourcing

The SASB proposes to revise the scope of the Materials Sourcing disclosure topic to better address financial impacts stemming from risks and opportunities related to resource scarcity. As a result of the topic revision, the SASB proposes to remove provisional metric RT0202-14, “Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free.” Additionally, SASB proposes to remove the term “conflict minerals” from the provisional metric, RT0202-15, “Discussion of the management of risks associated with the use of critical materials and conflict minerals.”

Adherence to Criteria for Topic Selection

The Electrical & Electronic Equipment industry provisional standard contains a disclosure topic called Materials Sourcing that addresses risks related to sourcing of scarce or otherwise constrained materials.⁴³ The provisional standard contains three metrics that focus on risks associated with materials sourcing (RT0202-13), smelters that are verified “conflict-free” (RT0202-14), and risk mitigation strategies related to the sourcing of critical materials and conflict minerals⁴⁴ (RT0202-15). Upon review, it is apparent that resource scarcity is the factor that gives rise to financially material impacts that are systematically relevant across the industry, rather than the sourcing of materials from areas of conflict.

Resource scarcity can arise from low substitution ratio of inputs, the concentration of deposits in only a few regions, the environmental or social implications of extraction, and geopolitical considerations. These factors can lead to supply disruptions or price increases of key materials. Conflict is one of many contributing factors that can contribute to supply constraints. Therefore, it is appropriate to revise the scope of the topic to capture performance on exposure to resource scarcity and supply constraints. The topic revision will improve the relevance of the topic across the industry and ensure that it is more narrowly focused on financially material impacts. The topic revision will necessitate metric revisions; the SASB proposes to eliminate quantitative provisional metric RT0202-14, as well as the focus on conflict minerals in qualitative provisional metric RT0202-15. These two metric revisions will improve the measurement of performance on the topic.

Supporting Analysis

Companies in the Electrical & Electronic Equipment industry may face risks related to sourcing critical materials due to the supply constraint factors mentioned above. For example, according to a 2013 RAND National Defense Research Institute, a high percentage of material resources critical to U.S. manufacturing is imported from regions where primary producing nations have shortfalls in quality of governance. Recycling rates for these substances are typically

⁴¹ RT0202-14: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free

⁴² RT0202-15: Discussion of the management of risks associated with the use of critical materials and conflict minerals

⁴³ Defined by the National Research Council as materials that are both essential in use and subject to the risk of supply restriction

⁴⁴ Within the SASB standards, the term “conflict minerals” refers to tantalum, tin, tungsten, or gold (3TG).

not high enough to meet global demand, therefore extraction and processing of new deposits is necessary. According to the RAND report, approximately 97 percent of rare earth metals—which include materials such as tungsten that are essential to the production of many Electrical & Electronic Equipment industry products—are mined in China.⁴⁵ Some countries impose production controls and export restrictions such as quotas and tariffs, which, in light of increasing demand for these materials, have in some instances had a significant impact on price and availability. For example, between 2010 and 2011 the price of rare earth metals doubled due to fears of Chinese export quotas.⁴⁶

Companies also face increasing competition for these materials due to growing global demand from other sectors—including transportation, renewable resources, and technology and communications—which can exacerbate supply constraints. Additionally, companies could face reputational harm from indirectly funding social unrest or environmental damage by purchasing materials extracted in certain regions of the world.

Stakeholder Consultation

Investors: A limited number of investors commented that disclosure pertaining to conflict minerals is not likely to be a focal point in their investment decisions, and believed that resource constraints are more likely to cause financial impacts.

Issuers: A limited number of issuers that participated in consultation commented that conflict minerals disclosure is not relevant and not likely to result in material financial or reputational impacts. Issuers further indicated that the sourcing of certain materials could be material.

Benefits

Improves the SASB standard: The proposed changes improve the relevance and likely materiality of the Materials Sourcing topic.

⁴⁵ Richard Silbergliitt, James T. Bartis, Brian G. Chow, David L. An, and Kyle Brady, “Critical Materials Present Danger to U.S. Manufacturing”, RAND National Defense Research Institute, 2013, http://www.rand.org/content/dam/rand/pubs/research_reports/RR100/RR133/RAND_RR133.pdf.

⁴⁶ Ibid.



RESOURCE TRANSFORMATION SECTOR

INDUSTRIAL MACHINERY & GOODS INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RT0203

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #7-19 – **Industry:** Industrial Machinery & Goods; **Topic Name:** Fuel Economy & Emissions in Use-phase

2017 Technical Agenda Item #7-19 Description

SASB is evaluating the revision of metric RT0203-06⁴⁷ to improve its decision-usefulness.

Summary of Change – Revise Metrics

The SASB proposes revising provisional metric RT0203-06, “Sales-weighted emissions of (a) NO_x and (b) PM for: (1) marine diesel engines, (2) locomotive diesel engines, and (3) other non-road diesel engines” by adding a fourth product category, “(4) on-road medium- and heavy-duty engines.”

Adherence to Criteria for Accounting Metrics

The Industrial Machinery & Goods industry provisional standard includes a topic, Fuel Economy & Emissions in Use-phase, which includes associated metrics to describe a company’s regulatory and product development risks and opportunities in the context of a growing market for fuel-efficient technologies. The suite of metrics for the provisional disclosure topic are designed to capture sales-weighted emissions and fuel efficiency-performance of a company’s products. Specifically, disclosure on emissions of nitrogen oxides (NO_x) and particulate matter (PM) is likely to constitute material information for a company’s major product categories because of regulatory drivers. The provisional metric, however, does not address emissions and efficiency from on-road vehicles, an important product category for the industry in terms of its market size and its exposure to increasing regulatory risks related to product emission performance. The proposal to include an additional product category in the scope of the metric is intended to improve the usefulness, completeness, and fair representation of the metric.

Supporting Analysis

The provisional metric captures product performance on emissions of key regulated air pollutants, which is an indicator of exposure to regulatory risk and product demand for several product categories. The medium- and heavy-duty on-road engine category of industrial machinery products was not originally included in the scope of the provisional metric because emissions performance was not identified as a primary financial driver within this product category.

Improved understanding by the SASB of the regulatory and demand drivers that affect on-road engines suggests that the metric should include this product category. Regulations promulgated by the Environmental Protection Agency (EPA)⁴⁸, European Commission⁴⁹, and regulators in Asia⁵⁰ include on-road, heavy-duty vehicles in emissions-limiting (targeting NO_x, SO_x, particulate matter) rules put forth in the past decade. Additionally, an analysis of disclosure practices in SEC filings by the top 10 companies in the industry by market capitalization shows that the majority of companies provide disclosure on the topic, mostly in the form of metrics and tailored narrative. This inclusion underscores the importance of the topic to the issuers. The analysis also shows that top companies that manufacture on-road engines indicate that regulations targeting product emissions are key drivers of competitive advantage for

⁴⁷ RT0203-06: Sales-weighted emissions of (a) NO_x and (b) PM for: (1) marine diesel engines, (2) locomotive diesel engines, and (3) other non-road diesel engines

⁴⁸ <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P10009ZY.pdf>

⁴⁹ “EU Heavy-duty Bus and Truck Engines,” Dieselnet, accessed August 13, 2017, <https://www.dieselnet.com/standards/eu/hd.php>

⁵⁰ “China Heavy-duty Bus and Truck Engines,” Dieselnet, accessed August 13, 2017, <https://www.dieselnet.com/standards/cn/hd.php>

their products. Therefore, the proposed change would improve the fair representation, completeness, and usefulness of the metric.

Stakeholder Consultation

Investors: Comments from a limited number of investors suggested that the proposed change would improve the decision-usefulness of disclosure because the provisional metric omitted a relevant product category.

Issuers: Limited issuer feedback suggested that air emissions are an important driver of value for the on-road product category, and therefore the proposed change would improve the usefulness of the standard.

Benefits

Improves the SASB standard: The addition of a key product category will improve the completeness, fair representation, and usefulness of disclosure to investors, thereby enhancing its decision-usefulness.

Proposed Update #7-20 – **Industry:** Industrial Machinery & Goods; **Topic Name:** Materials Sourcing

2017 Technical Agenda Item #7-20 Description

SASB is evaluating the revision and/or removal of metrics RT0203-09⁵¹ and RT0203-10⁵² to improve the cost-effectiveness and decision-usefulness of the metrics associated with the topic.

Summary of Change – Revise Topic: Materials Sourcing

The SASB proposes to revise the scope of the Materials Sourcing disclosure topic to better address financial impacts stemming from risks and opportunities related to resource scarcity. SASB proposes to remove provisional metric RT0203-09, “Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free.” Additionally, SASB proposes to remove the term “conflict minerals” from provisional metric RT0203-10, “Discussion of the management of risks associated with the use of critical materials and conflict minerals.”

Adherence to Criteria for Topic Selection

The Industrial Machinery & Goods industry provisional standard contains a disclosure topic, Materials Sourcing, which addresses risks related to sourcing of scarce or otherwise constrained materials. The provisional standard contains three metrics that focus on risks associated with sourcing critical materials (RT0203-08), smelters that are verified “conflict-free” (RT0203-09), and risk mitigation strategies related to the sourcing of critical materials and conflict minerals (RT0203-10). Upon review of the financial impacts from this topic, it is apparent that resource scarcity is the factor that gives rise to financially material impacts that are systematically relevant across the industry, rather than the sourcing of materials from areas of conflict.

Resource scarcity can arise from low substitution ratio of inputs, the concentration of deposits in only a few regions, the environmental or social implications of extraction, and geopolitical considerations. These factors can lead to supply disruptions or price increases of key materials. The existence of conflict in certain regions is one of many contributing factors that can contribute to supply constraints. Therefore, it is appropriate to revise the scope of the topic to capture performance on exposure to resource scarcity and supply constraints. The topic revision will improve its relevance across the industry and ensure that the topic is more narrowly focused on financially material impacts. The topic revision will necessitate metric revisions; the SASB proposes to eliminate quantitative provisional metric RT0203-09, as well as the focus on conflict minerals in qualitative provisional metric RT0203-10. These two metric revisions will improve the measurement of performance on the topic.

Supporting Analysis

Companies in the Electrical & Electronic Equipment industry may face risks related to sourcing critical materials due to the supply constraint factors mentioned above. For example, according to a 2013 RAND National Defense Research Institute report, a high percentage of material resources critical to U.S. manufacturing is imported in regions where primary producing nations have shortfalls in quality of governance. Recycling rates of these substances are typically not high enough to meet global demand; therefore extraction and processing of new deposits is required. According to the RAND report, approximately 97 percent of rare earth metals, which include materials such as tungsten and

⁵¹ RT0202-09: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free

⁵² RT0202-10: Discussion of the management of risks associated with the use of critical materials and conflict minerals

antimony that are essential to a variety of Industrial Machinery & Goods industry products, are mined in China.⁵³ Some countries impose production controls and export restrictions like quotas and tariffs, which, in light of increasing demand for these materials, have in some instances had a significant impact on price and availability. For example, between 2010 and 2011 the price of rare earth metals doubled due to fears of Chinese export quotas.⁵⁴

Companies also face increasing competition for these materials due to growing global demand from other sectors—including transportation, renewable resources, and technology and communications—which can exacerbate supply constraints. Additionally, companies could face reputational harm from indirectly funding social unrest or environmental damage by purchasing materials extracted in certain regions of the world.

Stakeholder Consultation

Investors: A limited number of investors commented that disclosure pertaining to conflict minerals is not likely to be a focal point in their investment decisions, and believed resource constraints are more likely to cause financial impacts.

Issuers: A limited number of issuers that participated in consultation commented that conflict minerals disclosure is not relevant and not likely to result in material financial or reputational impacts. Issuers further indicated that the sourcing of certain materials could be material.

Benefits

Improves the SASB standard: The proposed changes improve the relevance and likely materiality of the Materials Sourcing topic.

⁵³ Richard Silbergliitt, James T. Bartis, Brian G. Chow, David L. An, and Kyle Brady, "Critical Materials Present Danger to U.S. Manufacturing," RAND National Defense Research Institute, 2013, http://www.rand.org/content/dam/rand/pubs/research_reports/RR100/RR133/RAND_RR133.pdf.

⁵⁴ Ibid.



RESOURCE TRANSFORMATION SECTOR

CONTAINERS & PACKAGING INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RT0204

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #7-21 – **Industry:** Containers & Packaging; **Topic Name:** Air Quality

2017 Technical Agenda Item #7-21 Description

SASB is evaluating the revision of metric RT0204-03⁵⁵ to improve its cost-effectiveness and alignment with existing regulations.

Summary of Change – Revise Metric

SASB proposes to revise metric RT0204-03 from “Air emissions for the following pollutants: NO_x (excluding N₂O), SO_x, particulate matter (PM), and volatile organic compounds (VOCs)” to allow companies within the paper products segment to report air emissions per existing industry practices. The technical protocol will be updated to reflect these changes and provide guidance regarding associated definitions, scope, compilation, and presentation of the revised metric.

Adherence to Criteria for Accounting Metrics

The Containers & Packaging industry provisional standard includes a topic, Air Quality, which includes associated metrics to describe a company’s regulatory and operational risks related to the discharge of pollutants into the atmosphere. The air quality metric describes a company’s management of risks and opportunities associated with the emissions of certain regulated pollutants. Metric RT0204-03 specifies that issuers should disclose gross emissions of four categories of substances, which can then be normalized using SASB activity level metrics to compare emissions intensity. The current technical protocol details the scope of emissions data to be collected, specifically NO_x (excluding N₂O), SO_x, particulate matter, and volatile organic compounds. However, the scope, as defined by SASB, requires companies to collect additional data about SO_x emissions than are currently required by emissions regulations in major markets like the U.S. and Canada, which are limited to SO₂. Additionally, the provisional SASB guidance requires measurement of multiple carbon compounds that comprise VOCs. While the current technical protocol provides measurable, relevant guidance, it is not cost-effective for companies to collect the additional SO_x and full VOC emissions data because they are not currently required to do so. The data collected by either measurement approach will not be materially different, and therefore does not affect the completeness, objectivity, or relevance of disclosure. Therefore, the scope of disclosure will be updated to align with existing emissions reporting requirements, thereby better accomplishing the core objectives of the standards by providing decision-useful information in a manner that is cost-effective for issuers.

Supporting Analysis

In the U.S., Canada, and some other major markets there are laws that specify the manner of reporting air emissions data from paper production facilities. These laws are relevant within the paper segment of the Containers & Packaging industry, which represents approximately 75 percent of the industry’s revenues. The information below details how the proposed changes will align the standard with existing industry reporting practices and improve the cost-effectiveness of disclosure.

Oxides of sulfur (SO₂ and SO₃) reported as SO_x: The provisional standard requires the reporting of SO_x emissions defined as the sum of SO₂, SO₃, and H₂SO₄. In general, most paper products facilities do not conduct tests for SO₃/H₂SO₄ emissions from their sources. Additionally, no more than 2-3% of SO₂ converts to SO₃/H₂SO₄ in combustion

⁵⁵ RT0204-03: Air emissions for the following pollutants: NO_x (excluding N₂O), SO₂, particulate matter (PM), and volatile organic compounds (VOCs)

sources. Thus, if facilities are required to report SO_x emissions, they either would need to use emission factors conduct expensive source tests. However, because the uncertainty in any stack measurement is greater than 2-3%, the reporting of SO₃ and H₂SO₄ as part of SO_x emissions would not add materially to the understanding of a company's aggregated SO_x emissions.

Particulate Matter (PM): Paper packaging manufacturing facilities are required to report their filterable PM emissions in three different forms – total particulate matter (PM), particulate matter with aerodynamic diameter equal to or less than 10 micrometers (PM₁₀), and particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers (PM_{2.5}).

There are significant differences and limitations to the methods that are used to measure these forms of PM. These differences result in facilities obtaining and providing different information regarding PM emissions.

In addition to total filterable PM or total PM, some jurisdictions require facilities to report their PM₁₀ emissions. In the US, the current definition of PM₁₀ includes both filterable and condensable components. Companies apply different methodologies to measure condensable PM. Complicating the issue, different countries and/or regulatory jurisdictions have different requirements when reporting PM₁₀. For example, Canada does not require condensable PM to be included when reporting PM₁₀. Thus, unless PM₁₀ reporting specifies filterable PM₁₀ only, facilities in different countries are likely to report different data.

The discussion above for PM₁₀ also applies to PM_{2.5}.

Given the uncertainties associated with the measuring and reporting of PM₁₀, PM_{2.5}, and condensable PM, it would be more cost effective to require only the reporting of "total filterable PM." This would put all source reporting on a common basis and allow for a comparison of PM emissions between sources equipped with different types of control devices, or for a given source over a period of time.

VOC emissions: The US Environmental Protection Agency (EPA) and Environment and Climate Change Canada allow for reporting of total VOCs "as carbon," because full speciation of carbon compounds from biomass processing facilities is costly and technically difficult, and in some cases not possible, making an accurate and cost-effective measurement impractical.⁵⁶

Stakeholder Consultation

Issuers: A limited number of issuers that participated in the public comment period and consultation expressed concerns regarding the cost-effectiveness of the existing disclosure.

Others: Third parties, including a large industry association and a technical subject matter expert, commented that the standard could be made more cost-effective by aligning with existing industry emissions measurement methodologies.

Benefits

Improves the SASB standard: The proposed change will align the SASB standard with existing industry reporting practices, while maintaining the quality of the data generated by the standard.

⁵⁶ National Council for Air and Stream Improvement

Improves cost-effectiveness: The proposed changes would improve the cost-effectiveness of the standard by eliminating the need for companies to collect additional data on the emissions of substances that do not contribute materially to a company's emissions, yet would cause undue burden to measure.

Proposed Update #7-22 – **Industry:** Containers & Packaging; **Topic Name:** Energy Management

2017 Technical Agenda Item #7-22 Description

SASB is evaluating revisions to metric RT0204-04⁵⁷ to improve the decision-usefulness and completeness of the metrics associated with the topic.

Summary of Change – Revise Technical Protocol

SASB proposes revising the technical protocol of the provisional metric RT0204-04, “Total energy consumed, percentage grid electricity, percentage renewable,” to permit registrants to report the share of self-generated energy by adding the following line to the technical protocol: “The registrant may choose to disclose the amount of energy self-generated and the amount of energy that it sells to an electric utility or end-use customer in excess of what it generates”.

Adherence to Attributes of Technical Protocols

The Containers & Packaging industry provisional standard includes a topic, Energy Management, which includes an associated quantitative metric to describe a company’s management of risks and opportunities associated with its energy profile. The current metric requires disclosure of energy consumption, the percentage of energy consumption that is grid electricity, and the percentage of energy consumption that is renewable. The provisional technical protocol does not provide guidance for disclosure of self-generated energy, which is typically a significant component of a company’s energy profile, and therefore is highly relevant information for investors. While the current technical protocol provides measurable, relevant guidance, it does not offer a complete view of company management of risks and opportunities related to its energy profile. To address this, the proposal would revise the technical protocol to allow issuers to disclose the amount of self-generated energy, thereby providing a more complete disclosure and better accomplishing the core objective of the standards, to generate decision-useful information.

Supporting Analysis

Per the U.S. Energy Information Administration’s (EIA) 2013 Manufacturer Energy Consumption Survey, the Containers & Packaging industry generates a significant share of the energy (electricity and steam) generated by all manufacturing industries—approximately 13.5% of the manufacturing sector’s total. Of total electricity consumed in the industry, approximately 20% was generated on-site in 2013, primarily through combustion of biomass and other process residues, in addition to purchased fuels. Because of the high levels of self-generated energy, companies may benefit from reduced risks related to energy sourcing and consumption. The industry’s relatively unique energy profile can translate into more stable supplies of energy, and mitigate impacts from fluctuating electricity or fossil fuel prices. Companies also may sell excess energy to other users or to the grid, generating additional revenue. The proposed revision would improve the completeness of the technical protocol, and therefore facilitate a more decision-useful understanding of a company’s energy profile and the related financial impacts.

A review of the industry’s top five companies by market capitalization showed that all companies disclose the self-generated energy corporate sustainability reporting or frameworks including CDP reports and the Global Reporting Initiative. Additionally, information collected from companies by the EIA in its Manufacturers Energy Consumption

⁵⁷ RT0204-04: Total energy consumed, percentage grid electricity, percentage renewable

Survey includes energy self-generated by companies. The proposed revision will therefore align the SASB standard with industry practices of reporting of energy use, as well as reflect U.S. government energy reporting protocols.

Stakeholder Consultation

Issuers: A limited number of issuers suggested that the reporting of self-generated energy in this industry is essential to provide a complete set of information regarding a company's energy profile.

Others: Two industry associations stressed the importance of allowing companies to report self-generated energy.

Benefits

Improves the SASB standard: The proposed change will improve the completeness of the technical protocol and thereby improve the quality and decision-usefulness of the energy generated by the standard.

Improves decision-usefulness: The proposed change would improve the decision-usefulness of the standard by providing more complete and representative disclosure of company performance with respect to Energy & Feedstock Management.

Improves alignment: The proposed revision more closely aligns the standard with other commonly-used external reporting initiatives and collected by the U.S. government.

Proposed Update #7-23 – **Industry:** Containers & Packaging; **Topic Name:** Water Management

2017 Technical Agenda Item #7-23 Description

SASB is evaluating revisions to the water quality metric RT0204-06⁵⁸ to improve its decision-usefulness.

Summary of Change – Revise Metric:

SASB proposes to limit the scope of the metric RT0204-06, “Number of incidents of non-compliance with water quality and/or quantity permits, standards, and regulations,” to incidents that result in a formal enforcement action, as opposed to all incidents of non-compliance, regardless of whether such incidents resulted in enforcement actions.

Adherence to Criteria for Accounting Metrics:

The Containers & Packaging 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 RT0204-06 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. The number of formal enforcement actions can be 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, 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 Containers & Packaging 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 certain amounts 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

⁵⁸ RT0204-06: Number of incidents of non-compliance with water quality and/or quantity permits, standards, and regulations

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

Formal enforcement actions, as defined⁵⁹ by the U.S. Environmental Protection Agency (EPA) and some state agencies, are statutorily recognized actions to address a violation or threatened violation of water 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 – for 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 regulations, only 519 resulted in formal enforcement actions.⁶⁰

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 action, 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

Issuers: A limited number of issuers provided input on the proposed revision. This 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 related to regulatory compliance. Two industry associations also stated during the public comment period and during consultation that the proposed revision would improve the standard.

Benefits

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

⁵⁹ "Informal and Formal Actions, Summary of Guidance and Portrayal on EPA Websites," United States Environmental Protection Agency, modified July 2010, accessed August 29, 2017, <https://www.epa.gov/sites/production/files/2013-11/documents/actiondefs.pdf>.

⁶⁰ "Analyze Trends: State Water Dashboard," United States Environmental Protection Agency, accessed August 29, 2017, <https://echo.epa.gov/trends/comparative-maps-dashboards/state-water-dashboard?view=performance&state=National>.

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 more 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 #7-24 – **Industry:** Containers & Packaging; **Topic Name:** Hazardous Waste Management

2017 Technical Agenda Item #7-24 Description

SASB is evaluating the technical protocol associated with metric RT0204-07⁶¹ to improve its cost-effectiveness and alignment with existing reporting frameworks.

Summary of Change – Revise Technical Protocol: Waste Management

The SASB proposes removing the reference to the U.S. EPA’s Resource Conservation and Recovery Act (RCRA) in the technical protocol of provisional metric RT0101-09, “Amount of hazardous waste, percentage recycled,” and revising the protocol to allow companies to report hazardous waste and hazardous waste recycled, as defined by local regulation at the point of waste generation.

Adherence to Attributes of Technical Protocols

The Containers & Packaging industry provisional standard includes a topic, Hazardous Waste Management, which includes one associated metric intended to describe a registrant’s generation and recycling of hazardous wastes. The technical protocol associated with provisional metric RT0204-07 references the U.S. EPA Resources Conservation and Recovery Act (RCRA, 40 CFR 261.3) to establish a definition of hazardous materials for registrants to use in classifying their hazardous waste. While this definition is relevant for U.S. operations, companies with operations outside the U.S. use local regulations to classify wastes according to each jurisdiction in which they operate, as required by law. Requiring registrants to classify wastes in non-U.S. jurisdictions using the EPA standard adversely affects the applicability of the metric, and its lack of alignment with common industry practice reduces cost effectiveness.

To address this, the proposal would update the technical protocol associated with the metric to allow issuers to categorize waste according to local jurisdiction laws, an exercise that companies already undertake in most regions where they operate. Company operations in the U.S. will continue to report using EPA RCRA and any applicable state laws. The technical protocol will allow companies to state whether a certain percentage or majority of its hazardous wastes are classified per a particular regulation. By establishing criteria that are free from regional bias, while still providing for consistent measurement among issuers, the revision will also improve the objectivity and measurability of the technical protocol underlying the metric.

Supporting Analysis

Hazardous waste management leads to operating expenses and, in some cases, capital expenditures or remediation costs. In most regions, including the U.S., Europe, and Asia, government regulations address the categorization, generation, reclamation, and disposal of hazardous waste. Noncompliance with these regulations can result in regulatory penalties. Thus, companies undertake hazardous waste classification across the majority of their operations according to the prevailing regulation at the point of waste generation. The SASB proposal thus aligns the standards with existing company practices, eliminating the requirement to reclassify waste according to one regulation, the EPA RCRA.

⁶¹ RT0204-07: Amount of total waste from manufacturing, percentage hazardous, percentage recycled

The proposal will also align SASB's standard with the Global Reporting Initiative [Effluents and Waste 2016](#) Disclosure 306-2 a., which requires users of the standard to disclose total hazardous waste generated and recycled, among other measures, with hazardous waste classified according to local regulations.

This alignment would further reduce the reporting burden on companies. A review of the top 10 chemicals companies by market capitalization showed that all report per the GRI guidelines, and use the GRI definition for classifying hazardous waste within the GRI environmental indicator disclosures. Additionally, several top companies report total hazardous waste generated according to local regulatory classification.

Stakeholder Consultation

Issuers: A limited number of issuers strongly supported the proposed change on the basis that it would improve the cost-effectiveness of disclosing the data, and ease the reporting burden because they already collect hazardous waste data based on local jurisdiction definitions of hazardous waste.

Others: A large industry association indicated that requiring companies to categorize hazardous waste in global operations per the EPA's definition of hazardous waste is unnecessarily burdensome and costly, and would not materially affect the outcome of reporting of total waste generated.

Benefits

Improves the SASB Standard: The proposed change would improve the applicability of the metric by establishing underlying protocols that are free from regional bias and support consistent measurement, thereby improving the decision-usefulness of information disclosed on the topic.

Improves cost-effectiveness: The proposed change would improve the cost-effectiveness of the standard by aligning the metric's underlying technical protocol with current reporting practices.

Proposed Update #7-25 – **Industry:** Containers & Packaging; **Topic Name:** Product Lifecycle Management

2017 Technical Agenda Item #7-25 Description

SASB is evaluating the revision of metric RT0204-10⁶² to improve its decision-usefulness and representativeness

Summary of Change – Revise Metric:

The SASB proposes revising provisional metric RT0204-10 from “Percentage of raw materials from (1) recycled content (2) renewable resources” to “Percentage of raw materials from (1) recycled content (2) renewable resources (3) recycled and renewable content.”

Adherence to Criteria for Accounting Metrics

The Containers & Packaging industry provisional standard includes a topic, Product Lifecycle Management, which includes three associated metrics intended to describe the risks and opportunities related to the use of sustainable materials or packaging designs. Provisional metric RT0204-11, “Percentage of products that are (1) reusable, (2) recyclable, and (3) compostable,” is designed to capture the share of a company’s product suite that has certain attributes that may provide market benefits. Provisional metric RT0204-10 is meant to capture performance on the use of recycled and/or renewable raw materials in the manufacturing of packaging, which represents a key attribute of the product lifecycle. Likewise, RT0204-12 details the efforts a company makes to minimize the environmental impacts of packaging during its lifecycle. In some instances, however, materials may be both renewable and recycled, such as in the case of wood fiber. While the technical protocol provides measurable, relevant guidance, the metric does not offer a complete view of the use of raw materials because the scope of disclosure does not include materials that are both recycled and renewable. To address this, the SASB proposes revising the metric to include a third category of raw materials—those that are both recycled and renewable, such as recycled paper. This change will improve the usefulness, completeness, and fair representation of the metric.

Supporting Analysis

Companies are increasingly seeking to use recycled and renewable materials as an input to meet rising customer demand for products with these attributes. Wood fiber and some bioplastics are renewable as well as recycled/recyclable; this benefit should be recognized in the SASB metric to draw contrast with materials that do not possess both of these attributes. The provisional metric does not allow companies to count a material as both in order to avoid double-counting; the proposal will thus allow issuers to identify a material as recycled, renewable, or as having both of these attributes.

In corporate sustainability reporting, the top five industry companies report the amount of their raw materials (wood fiber, plastics) that are recycled, while two report the share that are renewable. While it is understood that wood fiber is renewable, companies are increasingly seeking to develop fully renewable products, including components that traditionally were made from non-renewable plastics. For example, among the attributes of sustainable packaging identified by the Sustainable Packaging Coalition, an industry working group that includes many of the largest industry companies, sustainable packaging is packaging that “Optimizes the use of renewable or recycled source materials.”

⁶² RT0204-10: Percentage of raw materials from (1) recycled content (2) renewable resources

Reporting the share of raw materials that are both renewable and recycled will constitute a percentage of total materials. Reporting will thus be in three categories: 1. Recycled materials; 2. Renewable materials; and 3. Both recycled and renewable materials.

Stakeholder Consultation

Issuers: A limited number of issuers commented that the ability to recognize products as having both recycled as well as renewable content is an important value driver in the industry and should be recognized in the metric.

Others: Two large industry associations strongly encouraged the SASB to adopt the proposed revision to improve the accuracy and completeness of disclosure on the product lifecycle topic.

Benefits

Improves decision-usefulness: The proposed change would improve the usefulness, completeness, and fair representation of the metric, thereby enhancing the decision-usefulness of disclosure.

Proposed Update #7-26 - **Industry:** Containers & Packaging; **Topic Name:** Materials Sourcing

2017 Technical Agenda Item #7-26 Description

SASB is evaluating the revision of metric RT0204-13⁶³ to improve the decision-usefulness and completeness of the metrics associated with the topic.

Description of Change – Revise Metric:

The SASB proposes changing the word “purchased” to “procured” in the provisional metric and technical protocol of RT0204-13, “Total wood fiber purchased, percentage from certified sources.”

Adherence to Criteria for Accounting Metrics

The Containers & Packaging industry provisional standard includes a topic, Materials Sourcing, which includes two associated quantitative metrics. Metric RT0204-13, which addresses the share of wood fiber sourced by a registrant that is certified to a third-party sustainability sourcing standard, is designed to act as a proxy for risks and opportunities related to materials sourcing practices. For example, the procurement of materials from uncertified sources may increase the risk of reputational damage or loss of customer demand. Similarly, products produced with certified wood fiber may experience relatively high market demand. The scope of the provisional metric includes wood fiber purchased by the registrant. To better represent performance on materials sourcing, however, the scope of disclosure should include all major materials procured by the registrant. As the provisional metric and technical protocol is written, the registrant is not required to report the share of materials certified to third-party sourcing standards when those materials are sourced from within its own operations. Therefore, the metric scope does not meet the criteria for fair representation and completeness, as established in the *SASB Conceptual Framework*. The proposed change is thus intended to improve the completeness and fair representation of a company’s materials sourcing risks and opportunities, thereby improving the decision-usefulness of the standard.

Supporting Analysis

Containers and packaging companies that manufacture paper-based products source wood fiber (recycled and virgin) from a variety of suppliers as well as from their own forests and by-products of product processing. The share sourced from external or internal sources varies widely among companies, depending on factors such as whether the company owns or manages forestlands.

In the provisional metric, the word “purchased” implies that the scope of the metric is limited to materials that are acquired from third parties, while the term “procured” entails materials sourced in any form as an input into manufacturing processes. The use of the word “procured” thus allows companies to report the amount of certified materials sourced as a share of total materials sourced.

Stakeholder Consultation

Issuers: The consensus among a limited number of issuers that participated in consultation was that it is highly relevant to include materials sourced from a company’s own operations because they can represent a significant share of inputs.

⁶³ RT0204-13: Total wood fiber purchased, percentage from certified sources

Others: Two large industry associations supported the proposed change on the basis of improving the completeness and decision-usefulness of disclosure.

Benefits

Improves the SASB standard: The proposed change would improve the fair representation and completeness of disclosure.

Improves decision-usefulness: By including all wood fiber procured by the registrant, the proposed change will provide a more complete view of performance on the topic, thereby improving the decision-usefulness of disclosure.

Proposed Update #7-27 – **Industry:** Containers & Packaging; **Topic Name:** Materials Sourcing

2017 Technical Agenda Item #7-27 Description

SASB is evaluating the revision of the technical protocol associated with metric RT0204-13⁶⁴ to improve its clarity.

Rationale for No Proposed Change

The proposed technical protocol revision in Technical Agenda item 7-27 is now addressed within Technical Agenda item 7-26, wherein the scope of metric RT0204-13 is revised by replacing the word “purchased” with the word “procured” in the metric and in the technical protocol.

⁶⁴ RT0204-13: Total wood fiber purchased, percentage from certified sources