



PROPOSED CHANGES TO PROVISIONAL STANDARDS

BASIS FOR CONCLUSIONS

Renewable Resources & Alternative Energy Sector

Biofuels

Solar Technology & Project Developers

Wind Technology & Project Developers

Fuel Cells & Industrial Batteries

Forestry Management

Pulp & Paper Products

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 [SASB Conceptual Framework](#) sets out the basic concepts, principles, definitions, and objectives that guide the SASB in its approach to setting standards for sustainability-related matters. The [SASB Rules of Procedure](#) establish the

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

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

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



RENEWABLE RESOURCES & ALTERNATIVE ENERGY SECTOR

BIOFUELS INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RR0101

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #10-1 – **Industry:** Biofuels; **Topic Name:** Product Formulation & Impacts on Food Markets

2017 Technical Agenda Item #10-1 Description

SASB is evaluating the removal of the topic, including the corresponding metrics RR0101-06⁴ and RR0101-07⁵ to improve the cost-effectiveness and relevance of the standard.

Summary of Change – Remove Topic and Metrics

The SASB proposes removing the provisional topic Product Formulation & Impacts on Food Markets and the following corresponding metrics:

- RR0101-06: Top five feedstocks used for biofuels production, by weight.
- RR0101-07: Percentage of feedstock grown in food-insecure countries.

Adherence to Principles for Topic Selection

The Biofuels industry provisional standard includes a topic, Product Formulation & Impacts on Food Markets, with associated metrics intended to capture risks and opportunities related to the potential impacts of industry demand for crop feedstocks and the possible financial consequences resulting from regulatory adjustments. The proposal to remove the topic, and the two corresponding quantitative metrics, is based on a lack of evidence demonstrating the topic's relevance across the industry or its potential for material financial impact, as well as on stakeholder input. In the absence of clear indications that the U.S. regulatory environment is likely to shift in the near to medium term due to concerns over food market impacts, the inclusion of the topic does not meet the principles for topic selection set forth in the SASB Conceptual Framework. These include topics that are relevant across the industry, that have the potential to affect corporate value, and that are reflective of stakeholder consensus. As a result, the topic is unlikely to represent a material risk or opportunity for Biofuels companies.

Supporting Analysis

The topic was included in the provisional standard based on the potential impacts of government policies around the world that limit the production of food-crop based biofuels. To date, such policies have had limited impact, for example, in the European Union (E.U.), where the amount of food crop permitted to be used as biofuel feedstock is capped at 7 percent of crops produced in the region, per 2015 legislation⁶. According to a SASB review of Securities and Exchange Commission filings, the top 10 listed companies in the Biofuels industry by market capitalization source their feedstock from (and operate in) the U.S. and, to a limited extent, Brazil. Thus, a similar regulatory decision in the U.S. could restrict the food-crop based biofuels market. Importantly, the existing U.S. Renewable Fuel Standard (RFS) has built-in provisions to gradually shift biofuels production from corn and soy feedstocks to so-called cellulosic feedstocks, which include crop waste, woody biomass, and algae, among other non-crops. This regulatory stipulation was the foundation of the SASB's initial view that the topic was reasonably likely to have material impacts on industry firms.

⁴ RR0101-06: Top five feedstocks used for biofuels production, by weight

⁵ RR0101-07: Percentage of feedstock grown in food-insecure countries

⁶ Flac, Bob et al., "E.U. Biofuels Annual 2017," European Commission, June 21, 2017, accessed August 12, 2017, https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Biofuels%20Annual_The%20Hague_EU-28_6-19-2017.pdf.

However, to date, production of cellulosic fuel has remained well below the amount projected by the RFS, so the U.S. Environmental Protection Agency (EPA) has waived annually the requirements of fuel blenders to include cellulosic biofuels in U.S. transportation fuels. Meanwhile, the production of corn and soy ethanol has tracked the amounts authorized by the RFS. Per the RFS, this type of food-based ethanol is never intended to rise above approximately 20 billion gallons per year. The primary driver of biofuels demand is therefore regulatory and unlikely to be influenced by concerns over food price impacts in the U.S. because production amounts in 2016 (18 billion gallons) nearly reached their capacity. Therefore, the likelihood of regulations forcing a significant shift in feedstock use appears unlikely, undermining the inclusion of the topic.

Additionally, as noted, U.S.-listed biofuels producers operate primarily in the U.S. and to a lesser extent Brazil, neither of which are food-insecure regions, according to the Global Food Security Index⁷. Therefore, localized impacts on food prices or supply are unlikely, further undermining the relevance of the topic.

Finally, a review of literature on the subject found that the link between biofuels crop demand and global food prices is likely minor. For example, a study by the Board of Governors of the Federal Reserve System found that U.S. and Brazilian biofuels demand accounted for 12 percent of the total rise in the International Monetary Fund's food price index between 2008 and 2010⁸. So, while there is an impact, it is speculative to assume that U.S. regulatory policy will shift due to any impacts on food prices. Therefore, evidence does not support the relevance of the topic.

Stakeholder Consultation

Investors: A limited number of investors that participated in consultation agreed that the topic was not likely relevant for companies in the industry and indicated that the likelihood of material financial impacts from this topic are very low.

Issuers: Issuers that participated in consultation agreed with the proposal to remove the topic on the basis of its weak link to financial impact as well as its indeterminate link to global food prices, which formed the basis of the sustainability impact related to the topic.

Benefits

Improves the SASB standard: The suggested change will improve the cost-effectiveness of the standard by removing a topic and associated metrics that are not likely to constitute material, relevant, or decision-useful information.

⁷ Global Food Security Index, "Country Profile" 2017, accessed August 12, 2017, <http://foodsecurityindex.eiu.com/Country>.

⁸ Baier, Scott et al., "Biofuels Impact on Crop and Food Prices: Using an Interactive Spreadsheet, Board of Governors of the Federal Reserve, March 2009, accessed August 12, 2017, <https://www.federalreserve.gov/pubs/ifdp/2009/967/ifdp967.pdf>.

Proposed Update #10-2 – **Industry:** Biofuels; **Topic Name:** Water Management in Manufacturing

2017 Technical Agenda Item #10-2 Description

SASB is evaluating revisions to the water quality metric RR0101-05⁹ to improve its decision-usefulness.

Summary of Change – Revise Metric

The SASB proposes to limit the scope of the metric RR0101-05, “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 Biofuels industry provisional standard includes a disclosure topic, Water Management in Manufacturing, which 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 RR0101-05 is designed to capture a company’s performance on complying with state- or federal-level water quality regulations, including regulations on water treatment and discharges. Performance on incidents of non-compliance are an indication of the strength of a company’s overall water quality management, its ability to comply with regulation, and its exposure to potential operational impacts associated with non-compliance, including costs related to permitting, penalties, remediation, and capital expenditures. However, the current metric scope, as defined in the technical protocol, is excessively broad as it states, “[a]n incident of non-compliance shall be disclosed regardless of whether it resulted in an enforcement action (e.g., fine, warning letter, etc.)” Incidents of non-compliance vary widely in terms of the nature and severity of impact, and they may or may not result in enforcement actions.

Given the broadly defined scope of non-compliance incidents, the provisional metric does not provide fair representation of corporate performance on the topic and it is less likely to be cost-effective. The proposed revision to the technical protocol for the metric will limit the scope of non-compliance incidents exclusively to those that result in formal enforcement actions—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 Biofuels 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 amount of wastewater over a given period. Incidents of non-compliance with water regulations may be the result of a variety of events relating to water quality management, including the failure to meet a reporting deadline or a water discharge above permit limits. The magnitude of the regulatory response will vary depending on the nature of the non-compliance. For example, failure to meet a reporting deadline may result in a

⁹ RT0101-05: Number of incidents of non-compliance with water quality and/or quantity permits, standards, and regulations

non-compliance notice or warning letter with little to no financial impact for the issuer. An effluent regulation exceedance could, however, result in a company being issued a formal enforcement action, resulting in remediation costs, fines, and/or reputational damage.

Formal enforcement actions, as defined¹⁰ by the EPA and some state agencies, are statutorily recognized actions to address a violation or threatened violation of water regulations, regulations, policy, or orders, and include administrative penalty orders, administrative orders, and judicial actions, among others. These types of enforcement actions can result in financial penalties and remediation requirements and can be indicative of overall management of water issues over time. Conversely, non-compliance incidents that result in informal enforcement actions—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.¹¹

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

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

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

Stakeholder Consultation

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

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

Others: Several subject matter experts commented that the proposed change would more accurately reflect performance on the aspect of the topic related to regulatory compliance. Additionally, two large industry associations supported the proposed revision based on the fact that incidents of non-compliance may not result in any significant financial impact on a company and that performance only on formal enforcement actions are relevant information to disclose.

¹⁰ "Informal and Formal Actions, Summary of Guidance and Portrayal on EPA Websites" U.S. Environmental Protection Agency, modified July 1, 2010, accessed August 30, 2017, <https://www.epa.gov/sites/production/files/2013-11/documents/actiondefs.pdf>.

¹¹ "Analyze Trends: State Water Dashboard" Enforcement and Compliance History Online, accessed August 30, 2017, <https://echo.epa.gov/trends/comparative-maps-dashboards/state-water-dashboard?view=performance&state=National>.

Benefits

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

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

Improves cost-effectiveness: The proposed change narrows the scope of disclosure to a more specific (and 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 #10-3 – **Industry:** Biofuels; **Topic Name:** Management of the Legal & Regulatory Environment

2017 Technical Agenda Item #10-3 Description

SASB is evaluating revisions to the topic, including the corresponding metric RR0101-10¹², to improve the cost-effectiveness and materiality of the standard.

Summary of Change – Revise Metric

SASB proposes to revise metric RR0101-10, “Discussion of positions on the regulatory and political environment related to environmental and social factors and description of efforts to manage risks and opportunities presented,” by eliminating references to political influence to improve the cost-effectiveness and materiality of the standard.

Adherence to Criteria for Accounting Metrics

The current Biofuels SASB industry standard includes the Management of the Legal and Regulatory Environment topic, due to the significant role of government subsidies in the industry and the potential risks the industry faces from supporting certain government renewable fuel policies. The Biofuels industry is subject to numerous sustainability-related regulations and a rapidly changing regulatory environment.

The standard currently contains disclosure about how a company’s strategy is aligned with governmental renewable fuel policy, and how government policy may or may not align with long-term sustainable environmental outcomes. In addition, the standard suggests additional disclosure requirements within metric RR0101-10 related to the amount spent by companies on political campaign spending, lobbying, and/or contributions to tax-exempt groups including trade associations, as well as the five largest political, lobbying, or tax-exempt group expenditures. While this disclosure may provide comparable data, the disclosures are not useful for or provide fair representation of the alignment of a company’s business model with government policies that may prove unsustainable, and financially harmful, in the long-term. As such, the topic and related metrics will be revised to remove mention of direct political contributions and lobbying. The metrics will continue to provide disclosure of positions on the regulatory environment related to environmental and social factors and descriptions of efforts to manage associated risks and opportunities. This revision will accomplish the core objectives of the standard by improving the usefulness, fair representation, and cost-effectiveness of the standard.

Supporting Analysis

The Biofuels industry is heavily dependent upon government policies such as the Renewable Fuel Standard (RFS) in the U.S. and similar programs in other markets including Europe, which create market demand and incentivize supply through tax breaks and other support for feedstock production. The RFS, implemented as part of 2007 energy policy legislation, set progressive biofuel production quotas that required transportation fuel blenders to include a minimum amount of ethanol in fuel, which had the effect of creating guaranteed demand for certain types of biofuels. While the regulatory environment is highly important to the industry, direct spending on political lobbying is not an accurate measure or proxy of a company’s influence on the legal and regulatory environment. Therefore, the metric does not provide decision-useful information.

¹² RR0101-10: Discussion of positions on the regulatory and political environment related to environmental and social factors and description of efforts to manage risks and opportunities presented

Consequently, biofuels companies could benefit from developing a clear strategy for engaging policymakers and regulators that is aligned with long-term sustainable business outcomes and that accounts for societal and environmental externalities. Through a combination of engaging with regulators and managing sustainability issues relevant to the industry, companies will likely be better prepared for medium- to long-term regulatory adjustments, thereby reducing business uncertainty. While company lobbying may influence policy, direct spending on political lobbying or other political influence is not a fair representation of or proxy for a company's influence on the legal and regulatory environment. Thus, the revised disclosure of a Biofuel company's long-term strategy for managing regulatory risks and opportunities related to key sustainability topics include air emissions, water and waste management, and process safety will provide useful disclosure and improve the fair representation of the standard.

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

Issuers: A limited number of issuers that participated in consultation identified qualitative disclosures as offering improved representation of the company's approach to management of the regulatory environment, as quantitative disclosures were inadequate in describing performance on the highly complex, nuanced topic.

Benefits

Improves the SASB standard: The proposed revisions to the standard will improve the usefulness and fair representation criteria of the standard.

Improves cost-effectiveness: The proposed revisions will improve the cost-effectiveness of the standard by removing disclosure that is not representative or useful.



RENEWABLE RESOURCES & ALTERNATIVE ENERGY SECTOR

SOLAR ENERGY INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RR0102

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #10-4 – **Industry:** Solar Energy; **Topic Name:** Management of Energy Infrastructure Integration & Related Regulations

2017 Technical Agenda Item #10-4 Description

SASB is evaluating revisions to the topic, including the corresponding metric RR0102-09¹³, to improve the cost-effectiveness and materiality of the standard.

Summary of Change – Revise Metrics

SASB proposes to revise RR0102-09, “Description of risks associated with integration of solar energy into existing energy infrastructure and discussion of efforts to manage those risks” to remove references to political spending and lobbying.

Adherence to Criteria for Accounting Metrics

The current Solar Energy SASB industry standard includes a topic and associated metrics for the Management of the Legal and Regulatory Environment. The standard currently includes two quantitative metrics related to the amount spent by companies on political campaign spending, 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 proposal to revise the metric is based on lack of evidence of systematic relevance of the political topic across the chemicals industry, as well as stakeholder input. As such, the topic and related metrics will be revised to provide a discussion of positions on the regulatory and political environment related to environmental and social factors and description of efforts to manage risks and opportunities presented.

Supporting Analysis

The Solar Energy industry faces numerous regulations and benefits from government subsidies governing the pricing and integration of its products into the energy grid. While spending on lobbying is a manner in which companies influence policy, direct spending on political lobbying or other influence on political candidates is not an accurate or relevant measure or proxy of a company’s influence on the regulatory environment and energy policy. Instead, relevant disclosure includes information on a company’s long-term strategy for managing regulatory risk related to key sustainability topics include air emissions, water and waste management, and process safety.

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

¹³ RR0102-09: Description of risks associated with integration of solar energy into existing energy infrastructure and discussion of efforts to manage those risks

Others: Feedback from third parties expressed the importance of disclosures regarding the alignment (or lack thereof) of a company's publicly stated positions versus the views expressed by the organizations or associations to which it provides funding.

Benefits

Improves the SASB standard: The proposed SASB standard provides a distributive information that fairly represents company management of risks associated with management of the regulatory environment.

Proposed Update #10-5 – **Industry:** Solar Energy; **Topic Name:** Materials Sourcing

2017 Technical Agenda Item #10-5 Description

SASB is evaluating revisions to the topic, including the corresponding metrics RR0102-14 and RR0102-15¹⁴, to improve the cost-effectiveness and materiality of the standard.

Summary of Change – Revise Topic

The SASB proposes to revise the scope of the Materials Sourcing disclosure topic to reframe the 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 RR0102-14, “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, RR0102-15, “Discussion of the management of risks associated with the use of critical materials and conflict minerals.”

Adherence to Criteria for Topic Selection

The Solar Energy industry provisional standard contains a disclosure topic, Materials Sourcing, which addresses risks related to sourcing of scarce or otherwise constrained materials. The provisional disclosure topic contains three metrics intended to capture performance on this issue: metric RR0102-16, “Discussion of the management of environmental risks associated with the polysilicon supply chain,” is intended to provide investors with information about sourcing risks related specifically to polysilicon sourcing, which is one of the primary materials required for solar panel manufacturing. The provisional standard also includes a metric measuring the percentage of smelters that are verified “conflict-free” (RR0102-14), and a metric on a company’s risk mitigation strategies related to the sourcing of critical materials and conflict minerals¹⁵ (RR0102-15). 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 the relevance of the topic across the industry and ensures 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 RT0102-14, as well as to eliminate the focus on conflict minerals in the qualitative provisional metric RT0102-15. These two metric revisions will improve the measurement of performance on the topic.

¹⁴ RR0102-14: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free; and RR0102-15: Discussion of the management of risks associated with the use of conflict minerals

¹⁵ Within the SASB standards, the term “conflict minerals” refers to tantalum, tin, tungsten, or gold (3TG).

Supporting Analysis

Companies in the Solar Energy 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, 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 materials, several of which are essential to the production of solar panels, are mined in China.¹⁶ 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.¹⁷

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

Stakeholder Consultation

Investors: Investors did not comment on the proposed change. An investor that participated in consultation supported revisions that would improve the relevance and materiality of the standard.

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 impacts 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.

Improves cost-effectiveness: The removal of a metric improves the cost-effectiveness of the standard.

¹⁶ 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, p. 14-15, http://www.rand.org/content/dam/rand/pubs/research_reports/RR100/RR133/RAND_RR133.pdf.

¹⁷ Ibid.



RENEWABLE RESOURCES & ALTERNATIVE ENERGY SECTOR

WIND ENERGY INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RR0103

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #10-6 – **Industry:** Wind Energy; **Topic Name:** Materials Sourcing

2017 Technical Agenda Item #10-6 Description

SASB is evaluating the revision and/or removal of metrics RR0103-09¹⁸ and RR0103-10¹⁹ to improve the cost-effectiveness and decision-usefulness of the metrics associated with the topic.

Summary of Change – Revise Topic

The SASB proposes to revise the scope of the Materials sourcing disclosure topic to reframe the 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 RR0103-09, “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 the provisional metric, RR0103-10, “Discussion of the management of risks associated with the use of critical materials and conflict minerals.”

Adherence to Criteria for Topic Selection

The Wind Energy 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 costs associated with critical materials²⁰ (RR0103-08), smelters that are verified “conflict-free” (RR0103-09), and risk mitigation strategies related to the sourcing of critical materials and conflict minerals²¹ (RR0103-10). 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 the relevance of the topic across the industry and ensures 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 RR0103-09, as well as eliminate the focus on conflict minerals in the qualitative provisional metric RR0103-10. These two metric revisions will improve the measurement of performance on the topic.

Supporting Analysis

Companies in the Wind Energy 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, where primary producing nations have shortfalls in quality of governance. Recycling rates of these substances are typically not high enough to meet

¹⁸ RR0103-09: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free

¹⁹ RR0103-10: Discussion of the management of risks associated with the use of critical materials and conflict minerals

²⁰ Defined by the National Research Council as materials that are both essential in use and subject to the risk of supply restriction.

²¹ Within the SASB standards, the term “conflict minerals” refers to tantalum, tin, tungsten, or gold (3TG).

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 neodymium that are used in a variety of wind turbines, are mined in China.²² 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.²³

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

Stakeholder Consultation

Investors: Investors did not comment on the proposed revision. However, an investor that participated in consultation supported revisions that would improve the relevance and materiality of the standard.

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 impacts 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.

Improves cost-effectiveness: The removal of a metric improves the cost-effectiveness of the standard.

²² 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.

²³ Ibid.



RENEWABLE RESOURCES & ALTERNATIVE ENERGY SECTOR

FUEL CELLS & INDUSTRIAL BATTERIES INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RR0104

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #10-7 – **Industry:** Fuel Cells & Industrial Batteries; **Topic Name:** Product Efficiency

2017 Technical Agenda Item #10-7 Description

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

No Proposed Change

Based upon research and approval of the SASB Standards Board, no changes related to Technical Agenda item 10-7 are proposed to the provisional standard at this time.

Proposed Update #10-8 – **Industry:** Fuel Cells & Industrial Batteries; **Topic Name:** Materials Sourcing

2017 Technical Agenda Item #10-8 Description

SASB is evaluating the revision and/or removal of metrics RR0104-13²⁴ and RR0104-14²⁵ to improve the cost-effectiveness and decision-usefulness of the metrics associated with the topic.

Summary of Change – Revise Topic

The SASB proposes to revise the scope of the Materials sourcing disclosure topic to reframe the 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 RR0104-13, “Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free.”

Adherence to Criteria for Topic Selection

The Fuel Cells & Industrial Batteries 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 costs associated with critical materials²⁶ (RR0104-12), smelters that are verified “conflict-free” (RR0104-13), and risk mitigation strategies related to the sourcing of critical materials and conflict minerals²⁷ (RR0104-14). 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 the relevance of the topic across the industry and ensures 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 RR0104-13, as well as eliminate the focus on conflict minerals in the qualitative provisional metric RR0104-14. These two metric revisions will improve the measurement of performance on the topic.

Supporting Analysis

Companies in the Fuel Cells & Industrial Batteries 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, 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,

²⁴ RR0104-13: Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free

²⁵ RR0104-14: Discussion of the management of risks associated with the use of critical materials and conflict minerals

²⁶ Defined by the National Research Council as materials that are both essential in use and subject to the risk of supply restriction. FONT SIZE CHANGE

²⁷ Within the SASB standards, the term “conflict minerals” refers to tantalum, tin, tungsten, or gold (3TG).

approximately 37 percent of the global lithium supply, a key ingredient in lithium ion batteries, is found in Chile.²⁸ 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.²⁹

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

Stakeholder Consultation

Investors: Investors did not comment on the proposed revision. However, an investor that participated in consultation supported revisions that would improve the relevance and materiality of the standard.

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 impacts 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.

Improves cost-effectiveness: The removal of a metric improves the cost-effectiveness of the standard.

²⁸ 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.

²⁹ Ibid.



RENEWABLE RESOURCES & ALTERNATIVE ENERGY SECTOR

FORESTRY MANAGEMENT INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RR0201

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #10-9 – **Industry:** Forest Management; **Topic Name:** Ecosystem Services & Impacts

2017 Technical Agenda Item #10-9 Description

SASB is evaluating the revision of the technical protocol associated with metric RR0201-02³⁰ to improve the relevance of the metric.

Summary of Change – Revise Technical Protocol

The SASB proposes adjusting the technical protocol of the provisional quantitative metric RR0201-02, “Area of forestland with protected conservation status,” and provisional quantitative metric RR0201-03, “Area of forestland in endangered species habitat” as follows to improve their relevance:

RR0201-02

- .11: Update references for areas of protected conservation status to U.S.- and Canadian-based laws.
- .12: Add note to include public lands managed by the registrant.

RR0201-03

- .25: Change reference to IUCN regarding both the identification and protection of endangered species and their habitat to U.S. laws.

Adherence to Attributes of Technical Protocols

The Forestry & Logging industry provisional standard includes a topic, Ecosystem Services & Impacts, associated with three quantitative metrics and one qualitative metric intended to characterize a company’s management of risks and opportunities related to managing forestlands and operating in areas of relative environmental sensitivity. Specifically, provisional quantitative metric RR0201-02 specifies that issuers shall disclose the area of managed forestlands that have a protected conservation status as an indicator of potential impacts from regulatory changes or reputational factors. The current technical protocol details what is meant by protected conservation status using an international standard. While the current technical protocol provides measurable guidance, it does not provide a relevant definition for companies with operations in the U.S. and Canada, where the industry’s top exchange-listed companies operate. To address this, the protocol would be updated to use a definition based on U.S. and Canadian law, improving the relevance and completeness of the criteria underlying the metric. Additionally, provisional metric RR0201-03 addresses the area of the registrant’s managed forestlands classified as endangered species habitat per applicable regulatory endangered species lists. The associated technical protocol allows the registrant to discuss the likelihood that an area of operation will change its classification. However, the standard references a definition of threatened species that may be misleading, because, for example, the list includes species of trees that are commonly planted in managed forests and are not threatened. Thus, the proposed revisions will improve the completeness and relevance attributes technical protocols.

³⁰ RR0201-02: Area of forestland with protected conservation status; RR0201-02: Area of forestland in endangered species habitat

Supporting Analysis

The proposed updates to the technical protocols of the provisional metrics would improve the completeness and relevance of the technical protocol.

According to a SASB analysis of financial filings, three of the five listed companies in the industry operate entirely in the U.S. and Canada, one operates approximately 25 percent of its timberlands outside North America, and another operates approximately 2.3 percent of its timberlands outside North America.³¹

RR0201-02

.11: Referencing U.S. and Canadian law for identification of protected conservation areas and not programs that do not apply to U.S. and Canadian forest landowners will improve the relevance and completeness of the technical protocol. Credible references that are relevant to U.S. and Canadian operators include NatureServe and State Natural Resource Agencies, and agencies associated with the network of Natural Heritage, or Conservation Data Centers.

.12: Companies that manage public lands (very common in Canada) frequently have obligations to set aside areas for conservation or protection and no logging; however, these areas should be included within the aspect described in RR0201-02.12 for completeness. Approximately 10 percent of Canada's timber harvest comes from forestlands owned by private parties, including forestry companies. The rest of timber production occurs on government-owned lands, some of which are managed by publicly traded forestry companies.

RR0201-03

.25: Referencing the International Union for Conservation of Nature list of endangered species can have unintended consequences, such as categorizing longleaf southern pine as an endangered species, when in fact it is among the most common trees in the Southeastern U.S. and a large contributor to timber production in the U.S. Referencing U.S. and Canadian laws is more relevant for companies with operations there.

Stakeholder Consultation

Investors: A limited number of investors that participated in consultation commented that the proposed changes could help improve the comparability of disclosure.

Others: Subject matter experts advised the SASB not to rely on international programs as indicators for protected conservation areas, as they are not relevant in key geographic regions, including the U.S. and Canada, where most listed companies own or manage forests.

Benefits

Improves the SASB standard: The proposed changes improve the standard by increasing the relevance and completeness of the criteria that inform disclosure.

³¹ Data as of the end of fiscal year 2016.



RENEWABLE RESOURCES & ALTERNATIVE ENERGY SECTOR

PULP & PAPER PRODUCTS INDUSTRY

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RR0202

Prepared by the
Sustainability Accounting Standards Board®

October 2017

Proposed Changes to Provisional Standard - Basis for Conclusion

Proposed Update #10-10 – **Industry:** Pulp & Paper Products; **Topic Name:** Air Quality

2017 Technical Agenda Item #10-10 Description

SASB is evaluating the revision of metric RR0202-03³² to improve its cost-effectiveness and alignment with existing regulations.

Summary of Change – Revise Metric

SASB proposes to revise metric RR0202-03 from “Air emissions for the following pollutants: NO_x (excluding N₂O), SO_x, volatile organic compounds (VOCs), particulate matter (PM), and hazardous air pollutants (HAPS).” to “Air emissions for the following pollutants: NO_x (excluding N₂O), SO₂, volatile organic compounds (VOCs), total filterable particulate matter emissions, and hazardous air pollutants (HAPS).” 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 of Accounting Metrics

The Pulp & Paper industry provisional standard includes a topic, Air Quality, with one associated metric 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 RR0202-03 specifies that issuers should disclose gross emissions of five categories of substances, which can then be normalized using SASB activity 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, volatile organic compounds, and HAPS. 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 such as the U.S. and Canada. Additionally, the provisional SASB metric 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 does not affect the completeness, objectivity, or usefulness of the standard. 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

Specific laws exist in the Pulp & Paper Products industry’s primary markets of the U.S. and Canada for reporting of emissions data. The information below provided by subject matter experts, details how the proposed changes align the standard with existing industry reporting practices and improve the fair representation and 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. Most source emissions of SO_x are the result of combustion of fuels that contain sulfur, with the exception of some plants that manufacture sulfuric acid. In general, most paper products facilities do not conduct tests for SO₃/H₂SO₄ emissions from their sources. Additionally, no more than 2 to 3 percent of

³² RR0202-03: Air emissions for the following pollutants: NO_x (excluding N₂O), SO_x, volatile organic compounds (VOCs), particulate matter (PM), and hazardous air pollutants (HAPS)

SO₂ converts to SO₃/H₂SO₄ in combustion sources. Thus, if facilities are required to report SO_x emissions, they either would need to use emission factors or to conduct expensive source tests. However, because the uncertainty in any stack measurement is greater than 2 to 3 percent, 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 product 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 PM₁₀ emissions. In the US, the current definition of PM₁₀ includes both filterable and condensable components. Different methodologies are applied by companies to measure condensable PM. Complicating the issue are different countries and/or regulatory jurisdictions that 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, different data are likely to be reported by facilities in different countries.

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 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 impractical and in some cases not possible, making an accurate and cost-effective measurement impractical.³³ Reporting as carbon allows companies to utilize estimates of carbon-compound emissions, excluding compounds such as CO₂ and carbon monoxide.

Stakeholder Consultation

Issuers: A limited number of issuers 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 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.

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 which do not contribute materially to a company's emissions yet would cause undue burden to measure.

³³ National Council for Air and Stream Improvement

Proposed Update #10-11 – **Industry:** Pulp & Paper Products; **Topic Name:** Energy Management

2017 Technical Agenda Item #10-11 Description

SASB is evaluating revisions to metric RR0202-04³⁴ to improve the decision-usefulness and completeness of the metrics associated with the topic.

Summary of Change – Revise Metric

SASB proposes to revise metric RR0202-04 “Total energy consumed, (1) percentage grid electricity, (2) percentage from biomass, and (3) percentage from other renewables” 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 of Accounting Metrics

The current SASB Pulp & Paper Products industry standard includes a topic Energy Management with associated metrics to describe a company’s management of risks and opportunities associated with a company’s energy profile. The current metrics require disclosure of energy consumption and percentage grid electricity and percentage renewable. The current technical does not provide guidance for disclosure of self-generated energy, which is a typically a significant component of a chemical 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 protocol will be updated to allow issuers to disclose the amount of self-generated energy.

Supporting Analysis

Per the U.S. Energy Information Administration’s 2013 Manufacturer Energy Consumption Survey, the Pulp & Paper Products industry generates a significant share (electricity and steam) energy of all manufacturing industries, approximately 20 percent of the manufacturing sector’s total. Of the total electricity consumed in the industry, approximately 32 percent was generated on-site, primarily through combustion of biomass and other process residues, in addition to purchased fuels. Because of the high levels of self-generated energy, companies have a unique energy profile and may not face as significant risks related to energy sourcing as other industries heavily reliant on purchased fuel or electricity. Companies also may sell excess energy generated to other users or into the grid, generating additional revenue. This relatively unique energy profile can translate into more stable supplies of energy and mitigate impacts from fluctuating electricity or fossil fuel prices, and it is important for investors to understand a company’s energy profile. The proposed change will complete the set of information required.

A review of the top ten companies by market capitalization showed that most companies disclose energy produced by the company in sustainability reporting, and that biomass contributes significantly as a fuel source. Energy metrics do not appear in Securities and Exchange Commission filings. Additionally, information collected by the U.S. Energy Information Administration in its Manufacturers Energy Consumption Survey includes energy self-generated by the registrant. The proposed addition will thus reflect industry public reporting of energy use as well as government energy reporting protocol.

³⁴ RR0202-04: Total energy consumed, (1) percentage grid electricity, (2) percentage from biomass, and (3) percentage from other renewables

Stakeholder Consultation

Investors: Limited investor feedback indicated that self-generated and total energy consumption are important factors to consider when analyzing a company's energy profile, and can directly be tied to energy-related operating costs.

Issuers: Issuers strongly believe that self-generated energy in this industry is essential to provide a complete understanding of a company's energy profile.

Others: A large industry association commented during the public comment period and again in consultation the importance of allowing companies to report self-generated energy to improve the accuracy of reporting a company's energy profile.

Benefits

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