



SUSTAINABILITY ACCOUNTING STANDARD
NON-RENEWABLE RESOURCES SECTOR

OIL & GAS EXPLORATION & PRODUCTION

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #NR0101

Prepared by the
Sustainability Accounting Standards Board®

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Provisional Standard

OIL & GAS EXPLORATION & PRODUCTION

Sustainability Accounting Standard

About SASB

The Sustainability Accounting Standards Board (SASB) provides sustainability accounting standards for use by publicly-listed corporations in the U.S. in disclosing material sustainability information for the benefit of investors and the public. SASB standards are designed for disclosure in mandatory filings to the Securities and Exchange Commission (SEC), such as the Form 10-K and 20-F. SASB is an independent 501(c)3 non-profit organization. Through 2016, SASB is developing standards for more than 80 industries in 10 sectors.

SUSTAINABILITY ACCOUNTING STANDARDS BOARD

75 Broadway, Suite 202
San Francisco, CA 94111
415.830.9220
info@sasb.org

www.sasb.org

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INTRODUCTION

Purpose & Structure

This document contains the SASB Sustainability Accounting Standard (SASB Standard) for Oil & Gas - Exploration & Production.

SASB Standards are comprised of **(1) disclosure guidance and (2) accounting standards on sustainability topics** for use by U.S. and foreign public companies in their annual filings (Form 10-K or 20-F) with the U.S. Securities and Exchange Commission (SEC). To the extent relevant, SASB Standards may also be applicable to other periodic mandatory filings with the SEC, such as the Form 10-Q, Form S-1, and Form 8-K.

SASB's disclosure guidance identifies sustainability topics at an industry level, which may be material— depending on a company's specific operating context— to a company within that industry.

Each company is ultimately responsible for determining which information is material and is therefore required to be included in its Form 10-K or 20-F and other periodic SEC filings.

SASB's accounting standards provide companies with standardized accounting metrics to account for performance on industry-level sustainability topics. When making disclosure on sustainability topics, companies adopting SASB's accounting standards will help to ensure that disclosure is standardized and therefore useful, relevant, comparable and auditable.

Industry Description

Oil & Gas - Exploration & Production (E&P) companies explore for, extract, or produce energy products such as crude oil and natural gas, which comprise the upstream operations of the oil and gas value chain. Companies in the industry develop conventional and unconventional oil and gas reserves; these include, but are not limited to, shale oil and/or gas reserves, oil sands, and gas hydrates. Activities covered by this standard include the development of both on-shore and off-shore reserves, in the U.S. and international markets. The E&P industry creates contracts with the Oil and Gas Services industry to conduct several E&P activities and to obtain equipment

Note: The standards discussed below are for “pure-play” E&P activities, or independent E&P companies. Integrated oil and gas companies conduct upstream operations but are also involved in the distribution and/or refining or marketing of products. SASB has separate standards for the Oil and Gas Midstream (NR0102) and Refining & Marketing industries (NR0103). As such, integrated companies should also consider the disclosure topics and metrics from these standards. SASB also has separate standards for Oil and Gas Services (NR0104).

Guidance for Disclosure of Material Sustainability Topics in SEC filings

1. Industry-Level Material Sustainability Topics

For the Oil & Gas - Exploration & Production industry, SASB has identified the following material sustainability topics:

- **Greenhouse Gas Emissions**
- **Air Quality**
- **Water Management**
- **Biodiversity Impacts**
- **Security, Human Rights, and Rights of Indigenous Peoples**
- **Community Relations**
- **Health, Safety, and Emergency Management**
- **Business Ethics & Payments Transparency**
- **Reserves Valuation & Capital Expenditures**
- **Management of the Legal & Regulatory Environment**

2. Company-Level Determination and Disclosure of Material Sustainability Topics

Sustainability disclosures are governed by the same laws and regulations that govern disclosures by securities issuers generally. According to the U.S. Supreme Court, a fact is material if, in the event such fact is omitted from a particular disclosure, there is “a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of the information made available”.^{1,2}

SASB has attempted to identify those sustainability topics that it believes may be material for all companies within each SICS industry. SASB recognizes, however, that each company is ultimately responsible for determining what is material to it.

Regulation S-K, which sets forth certain disclosure requirements associated with Form 10-K and other SEC filings, requires companies, among other things, to describe in the Management’s Discussion and Analysis of Financial Condition and Results of Operations (MD&A) section of Form 10-K “any known trends or uncertainties that have had or that the registrant reasonably expects will have a material favorable or unfavorable impact on net sales or revenues or income from continuing operations. If the registrant knows of events that will cause a material change in the relationship between costs and revenues (such as known future increases in costs of labor or materials or price increases or inventory adjustments), the change in the relationship shall be disclosed.”²

Furthermore, Instructions to Item 303 state that the MD&A “shall focus specifically on material events and uncertainties known to management that would cause reported financial information not to be necessarily indicative of future operating results or of future financial condition.”²

In determining whether a trend or uncertainty should be disclosed, the SEC has stated that management should use a two-part assessment based on probability and magnitude:

- First, a company is not required to make disclosure about a known trend or uncertainty if its management determines that such trend or uncertainty is not reasonably likely to occur.

¹ TSC Industries v. Northway, Inc., 426 U.S. 438 (1976).

² C.F.R. 229.303(Item 303)(a)(3)(ii).

- If a company's management cannot make a reasonable determination of the likelihood of an event or uncertainty, then disclosure is required unless management determines that a material effect on the registrant's financial condition or results of operation is not reasonably likely to occur.

3. Sustainability Accounting Standard Disclosures in Form 10-K.

a. Management's Discussion and Analysis

Companies should consider making disclosure on sustainability topics as a complete set in the MD&A, in a sub-section titled "**Sustainability Accounting Standards Disclosures.**"³

b. Other Relevant Sections of Form 10-K

In addition to the MD&A section, companies should consider disclosing sustainability information in other sections of Form 10-K, as relevant, including:

- **Description of business**—Item 101 of Regulation S-K requires a company to provide a description of its business and its subsidiaries. Specifically Item 101(c)(1)(xii) expressly requires disclosure regarding certain costs of complying with environmental laws:

Appropriate disclosure also shall be made as to the material effects that compliance with Federal, State and local provisions which have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, may have upon the capital expenditures, earnings and competitive position of the registrant and its subsidiaries.

- **Legal proceedings**—Item 103 of Regulation S-K requires companies to describe briefly any material pending or contemplated legal proceedings. Instructions to Item 103 provide specific disclosure requirements for administrative or judicial proceedings arising from laws and regulations targeting discharge of materials into the environment or primarily for the purpose of protecting the environment.
- **Risk factors**—Item 503(c) of Regulation S-K requires filing companies to provide a discussion of the most significant factors that make an investment in the registrant speculative or risky, clearly stating the risk and specifying how a particular risk affects the particular filing company.

c. Rule 12b-20

Securities Act Rule 408 and Exchange Act Rule 12b-20 require a registrant to disclose, in addition to the information expressly required by law or regulation, "such further material information, if any, as may be necessary to make the required statements, in light of the circumstances under which they are made, not misleading."

More detailed guidance on disclosure of material sustainability topics can be found in the **SASB Conceptual Framework**, available for download via <http://www.sasb.org/approach/conceptual-framework/>.

³ SEC [Release Nos. 33-8056; 34-45321; FR-61] Commission Statement about Management's Discussion and Analysis of Financial Condition and Results of Operations: "We also want to remind registrants that disclosure must be both useful and understandable. That is, management should provide the most relevant information and provide it using language and formats that investors can be expected to understand. Registrants should be aware also that investors will often find information relating to a particular matter more meaningful if it is disclosed in a single location, rather than presented in a fragmented manner throughout the filing."

Guidance on Accounting of Material Sustainability Topics

For material sustainability topics in the Oil & Gas Exploration and Production industry, SASB identifies accounting metrics.

SASB recommends that each company consider using these sustainability accounting metrics when disclosing its performance with respect to each of the sustainability topics it has identified as material.

As appropriate—and consistent with Rule 12b-20⁴—for each sustainability topic, companies should consider including a narrative description of any material factors necessary to ensure completeness, accuracy and comparability of the data reported. Where not addressed by the specific accounting metrics, but relevant, the registrant should discuss the following related to the topic:

- the registrant's **strategic approach** to managing performance on material sustainability issues;
- the registrant's **competitive positioning**;
- the **degree of control** the registrant has;
- any **measures the registrant has undertaken** or **plans to undertake** to improve performance; and
- data for registrant's **last three completed fiscal years** (when available).

SASB recommends that registrants use SASB Standards specific to their primary industry as identified in the [Sustainable Industry Classification System \(SICSTTM\)](#). If a registrant generates significant revenue from multiple industries, SASB recommends that it consider the materiality of the sustainability issues that SASB has identified for those industries and disclose the associated SASB accounting metrics.

Users of the SASB Standards

The SASB Standards are intended for companies that engage in public offerings of securities registered under the Securities Act of 1933 (the Securities Act) and those that issue securities registered under the Securities Exchange Act of 1934 (the Exchange Act),⁵ for use in SEC filings, including, without limitation, annual reports on Form 10-K (Form 20-F for foreign issuers), quarterly reports on Form 10-Q, current reports on Form 8-K, and registration statements on Forms S-1 and S-3. Nevertheless, disclosure with respect to the SASB Standards is not required or endorsed by the SEC or other entities governing financial reporting, such as FASB, GASB, or IASB.

⁴ SEC Rule 12b-20: "In addition to the information expressly required to be included in a statement or report, there shall be added such further material information, if any, as may be necessary to make the required statements, in the light of the circumstances under which they are made not misleading."

⁵ Registration under the Securities Exchange Act of 1934 is required (1) for securities to be listed on a national securities exchange such as the New York Stock Exchange, the NYSE Amex and the NASDAQ Stock Market or (2) if (A) the securities are equity securities and are held by more than 2,000 persons (or 500 persons who are not accredited investors) and (B) the company has more than \$10 million in assets.

Scope of Disclosure

Unless otherwise specified, SASB recommends:

- That a registrant disclose on sustainability issues and metrics for itself and for entities in which the registrant has a controlling interest and therefore are consolidated for financial reporting purposes (controlling interest is generally defined as ownership of 50% or more of voting shares)⁶
- That for consolidated entities, disclosures be made, and accounting metrics calculated, for the whole entity, regardless of the size of the minority interest; and
- That information from unconsolidated entities not be included in the computation of SASB accounting metrics. A registrant should disclose, however, information about unconsolidated entities to the extent that such registrant considers the information necessary for investors to understand its performance with respect to sustainability issues (typically this disclosure would be limited to risks and opportunities associated with these entities).

Reporting Format

Activity Metrics and Normalization

SASB recognizes that normalizing accounting metrics is important for the analysis of SASB disclosures.

SASB recommends that a registrant disclose any basic business data that may assist in the accurate evaluation and comparability of disclosure, to the extent that they are not already disclosed in the Form 10-K (e.g., revenue, EBITDA, etc.).

Such data – termed “activity metrics” – may include high-level business data such as total number of employees, quantity of products produced or services provided, number of facilities, or number of customers. It may also include industry-specific data such as plant capacity utilization (e.g., for specialty chemical companies), number of transactions (e.g., for internet media and services companies), hospital bed days (e.g., for health care delivery companies), or proven and probable reserves (e.g., for oil and gas exploration and production companies).

Activity metrics disclosed should:

- Convey contextual information that would not otherwise be apparent from SASB accounting metrics.
- Be deemed generally useful for users of SASB accounting metrics (e.g., investors) in performing their own calculations and creating their own ratios.
- Be explained and consistently disclosed from period to period to the extent they continue to be relevant – however, a decision to make a voluntary disclosure in one period does not obligate a continuation of that disclosure if it is no longer relevant or if a better metric becomes available.

⁶ See US GAAP consolidation rules (Section 810).

Where relevant, SASB recommends specific activity metrics that – at a minimum – should accompany SASB accounting metric disclosures.

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Wellhead production of: (1) conventional oil, (2) unconventional oil, (3) conventional gas, and (4) unconventional gas	Quantitative	Thousand barrels per day (Mbbbl/day); Million standard cubic feet per day (MMscf/day)	NR0101-A
Number of offshore sites	Quantitative	Number	NR0101-B
Number of terrestrial sites	Quantitative	Number	NR0101-C

Units of Measure

Unless specified, disclosures should be reported in International System of Units (SI units).

Uncertainty

SASB recognizes that there may be inherent uncertainty when disclosing certain sustainability data and information. This may be related to variables like the imperfectness of third-party reporting systems or the unpredictable nature of climate events. Where uncertainty around a particular disclosure exists, SASB recommends that the registrant should consider discussing its nature and likelihood.

Estimates

SASB recognizes that scientifically-based estimates, such as the reliance on certain conversion factors or the exclusion of *de minimis* values, may be necessary for certain quantitative disclosures. Where appropriate, SASB does not discourage the use of such estimates. When using an estimate for a particular disclosure, SASB expects that the registrant discuss its nature and substantiate its basis.

Timing

Unless otherwise specified, disclosure shall be for the registrant's fiscal year.

Limitations

There is no guarantee that SASB Standards address all sustainability impacts or opportunities associated with a sector, industry, or company and, therefore, a company must determine for itself the topics—sustainability-related or otherwise—that warrant discussion in its SEC filings.

Disclosure under SASB Standards is voluntary. It is not intended to replace any legal or regulatory requirements that may be applicable to user operations. Where such laws or regulations address legal or regulatory topics, disclosure under SASB Standards is not meant to supersede those requirements. Disclosure according to SASB Standards shall not be construed as demonstration of compliance with any law, regulation, or other requirement.

SASB Standards are intended to be aligned with the principles of materiality enforced by the SEC. However, SASB is not affiliated with or endorsed by the SEC or other entities governing financial reporting, such as FASB, GASB, or IASB.

Forward Looking Statements

Disclosures on sustainability topics can involve discussion of future trends and uncertainties related to the registrant's operations and financial condition, including those influenced by external variables (e.g., environmental, social, regulatory and political). Companies making such disclosures should familiarize themselves with the safe harbor provisions of Section 27A of the Securities Act and Section 21E of the Exchange Act, which preclude civil liability for material misstatements or omissions in such statements if the registrant takes certain steps, including, among other things, identifying the disclosure as forward looking and accompanying such disclosure with "meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those in the forward-looking statements."

Assurance

In disclosing to SASB Standards, it is expected that registrants disclose with the same level of rigor, accuracy, and responsibility as all other information contained in their SEC filings.

SASB encourages registrants to use independent assurance (attestation), for example, an Examination Engagement to AT Section 101.

Table 1. Material Sustainability Topics & Accounting Metrics

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under a regulatory program, percentage by hydrocarbon resource	Quantitative	Metric tons CO ₂ -e, Percentage (%)	NR0101-01
	Amount of gross global Scope 1 emissions from: (1) combustion, (2) flared hydrocarbons, (3) process emissions, (4) directly vented releases, and (5) fugitive emissions/leaks	Quantitative	Metric tons CO ₂ -e	NR0101-02
	Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	n/a	NR0101-03
Air Quality	Air emissions for the following pollutants: NO _x (excluding N ₂ O), SO _x , volatile organic compounds (VOCs), and particulate matter (PM)	Quantitative	Metric tons (t)	NR0101-04
Water Management	Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress	Quantitative	Cubic meters (m ³), Percentage (%)	NR0101-05
	Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water	Quantitative	Cubic meters (m ³), Percentage (%), Metric tons (t)	NR0101-06
	Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used	Quantitative	Percentage (%)	NR0101-07
	Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline	Quantitative	Percentage (%)	NR0101-08
Biodiversity Impacts	Description of environmental management policies and practices for active sites	Discussion and Analysis	n/a	NR0101-09
	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume near shorelines with ESI rankings 8-10, and volume recovered	Quantitative	Number, Barrels (bbls)	NR0101-10
	(1) Proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	Quantitative	Million barrels (MMbbls), Million standard cubic feet (MMscf)	NR0101-11

Table 1. Material Sustainability Topics & Accounting Metrics (cont.)

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Security, Human Rights, and Rights of Indigenous Peoples	(1) Proved and (2) probable reserves in or near areas of conflict	Quantitative	Million barrels (MMbbls), Million standard cubic feet (MMscf)	NR0101-12
	(1) Proved and (2) probable reserves in or near indigenous land	Quantitative	Million barrels (MMbbls), Million standard cubic feet (MMscf)	NR0101-13
	Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	Discussion and Analysis	n/a	NR0101-14
Community Relations	Discussion of process to manage risks and opportunities associated with community rights and interests	Discussion and Analysis	n/a	NR0101-15
	Number and duration of non-technical delays	Quantitative	Number, Days	NR0101-16
Health, Safety, and Emergency Management	(1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees, (b) contract employees, and (c) short-service employees	Quantitative	Rate	NR0101-17
	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1)	Quantitative	Rate	NR0101-18
	Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout the exploration and production lifecycle	Discussion and Analysis	n/a	NR0101-19
Business Ethics & Payments Transparency	(1) Proved and (2) probable reserves in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Quantitative	Million barrels (MMbbls), Million standard cubic feet (MMscf)	NR0101-20
	Description of the management system for prevention of corruption and bribery throughout the value chain	Discussion and Analysis	n/a	NR0101-21

Table 1. Material Sustainability Topics & Accounting Metrics (cont.)

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Reserves Valuation & Capital Expenditures	Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	Quantitative	Million barrels (MMbbls), Million standard cubic feet (MMscf)	NR0101-22
	Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves	Quantitative	Metric tons CO ₂	NR0101-23
	Discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition, and development of assets	Discussion and Analysis	n/a	NR0101-24
Management of the Legal & Regulatory Environment	Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations	Quantitative	U.S. Dollars (\$)	NR0101-25
	Five largest political, lobbying, or tax-exempt group expenditures	Quantitative	U.S. Dollars (\$), by recipient	NR0101-26

Greenhouse Gas Emissions

Description

E&P activities generate significant direct GHG emissions, from combustion in stationary and mobile internal combustion engines and from gas processing equipment, venting, flaring, and fugitive methane. GHG emissions contribute to climate change and create additional regulatory compliance costs and risks for E&P companies due to climate change mitigation policies. With natural gas production from shale resources expanding, the management of highly potent methane emissions from oil and gas E&P systems has emerged as a major operational, reputational, and regulatory risk for companies. Furthermore, the development of other unconventional resources such as oil sands is more GHG-intensive than conventional oil and gas and is likely to increase regulatory risks. Energy efficiency, use of cleaner fuels, or process improvements to reduce fugitive emissions, venting, and flaring, can therefore provide benefits to E&P companies in the form of lower costs and risks, or higher revenues from the capture and sale of methane.

Accounting Metrics

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

- .01 The registrant shall disclose gross global Scope 1 greenhouse gas (GHG) emissions to the atmosphere of the six greenhouse gases covered under the Kyoto Protocol: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.
 - Emissions of all gases shall be disclosed in metric tons of carbon dioxide equivalent (CO₂-e), calculated in accordance with published global warming potential (GWP) factors. To date, the preferred source for global warming potential factors is the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (2007).
 - Gross emissions are GHGs emitted to the atmosphere before accounting for any GHG reduction activities, offsets, or other adjustments for activities in the reporting period that have reduced or compensated for emissions.
- .02 Scope 1 emissions are defined by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD) [The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard](#), Revised Edition, March 2004 (hereafter, the "GHG Protocol").
 - These emissions include direct emissions of GHGs from stationary or mobile sources; these sources include but are not limited to: equipment at well sites, production facilities, refineries, chemical plants, terminals, fixed site drilling rigs, office buildings, marine vessels transporting products, tank truck fleets, mobile drilling rigs, and moveable equipment at drilling and production facilities.

- .03 GHG emission data shall be consolidated according to the approach with which the registrant consolidates its financial reporting data, which is generally aligned with:
- The Financial Control approach defined by the GHG Protocol and referenced by the [CDP Guidance for companies reporting on climate change on behalf of investors & supply chain members 2014](#) (hereafter, the “CDP Guidance”).⁷
 - The financial approach detailed in Chapter 3 of the IPIECA/API/OGP Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions, Second Edition, 2011 (hereafter, the “IPIECA GHG Guidelines”).
 - The approach detailed in Section 4.23 “Organizational boundary setting for GHG emissions reporting” of Climate Disclosure Standards Board (CDSB) Climate Change Reporting Framework (CCRF).⁸
- .04 The underlying technical approach to data collection, analysis, and disclosure shall be consistent with the IPIECA GHG Guidelines and the CDP Guidance.
- The registrant shall consider the CDP Guidance as a normative reference; thus, any updates made year-on-year shall be considered updates to this guidance.
- .05 The registrant shall provide a breakdown of its emissions by the following classifications of hydrocarbon resources, where relevant: (1) conventional oil, (2) unconventional oil, (3) conventional gas, and (4) unconventional gas.
- Consistent with the U.S. Energy Information Administration, unconventional (or nonconventional) resources are defined dynamically as hydrocarbon resources that do not meet the criteria for conventional production (i.e., crude oil and natural gas that is produced by a well drilled into a geologic formation in which the reservoir and fluid characteristics permit the oil and natural gas to readily flow to the wellbore).
 - Unconventional (or nonconventional) oil includes oil shales, oil sands, heavy oil, etc.
 - Unconventional (or nonconventional) gas includes coal seam gas, shale gas, etc.
- .06 The registrant shall disclose the percentage of its emissions that are covered under a regulatory program, such as the European Union Emissions Trading Scheme (EU ETS), Western Climate Initiative (WCI), California Cap-and-Trade (California Global Warming Solutions Act), or other regulatory programs.
- Regulatory programs include cap-and-trade schemes and carbon tax/fee systems.
 - Disclosure shall exclude emissions covered under voluntary trading systems and disclosure-based regulations (e.g., the U.S. Environmental Protection Agency (EPA) mandatory reporting rule).

⁷ “An organization has financial control over an operation if it has the ability to direct the financial and operating policies of the operation with a view to gaining economic benefits from its activities. Generally an organization has financial control over an operation for GHG accounting purposes if the operation is treated as a group company or subsidiary for the purposes of financial consolidation.” Guidance for companies reporting on climate change on behalf of investors & supply chain members 2014 (p. 94).

⁸ This approach is based on the requirements of the International Accounting Standards/International Financial Reporting Standards (IAS/IFRS) on consolidation and equity accounting. It is consistent with the way in which information relating to entities within a group, or interest in joint ventures/associates, would be included in consolidated financial statements. *Climate Change Reporting Framework*, CDSB.

- .07 The registrant should discuss any change in its emissions from the previous fiscal year, such as if the change was due to emissions reductions, divestment, acquisition, mergers, changes in output, and/or changes in calculation methodology.
- .08 In the case that current reporting of GHG emissions to the CDP or other entity (e.g., a national regulatory disclosure program) differs in terms of the scope and consolidation approach used, the registrant may disclose those emissions. However, primary disclosure shall be according to the guidelines previously mentioned.
- .09 The registrant should discuss the calculation methodology for its emission disclosure, such as if data are from continuous emissions monitoring systems (CEMS), engineering calculations, mass balance calculations, etc.
- .10 This accounting metric corresponds to section CC8.2 of the Carbon Disclosure Project (CDP) Questionnaire and section 4.25 of the Climate Disclosure Standards Board (CDSB) Climate Change Reporting Framework (CCRF).

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

- .11 The registrant shall disclose the amount of direct greenhouse gas (GHG) emissions in CO₂-e from the following sources:
- Combustion emissions, which includes the use of fuel in gas compression, power generation, heating, coke burn, etc.
 - Flaring of hydrocarbons, such as in depressurizing, start-up/shut-down, well testing and well work-over, etc.
 - Process emissions, which include vessel loading, tank storage and flushing, etc.
 - Venting of hydrocarbons, defined as the intentional (or designed), controlled release of gas to the atmosphere during normal operations.
 - Estimate of fugitive emissions or leaks of GHG gases, including leaks from piping and other equipment, well leaks, and non-routine events (e.g., pipeline maintenance, gas releases, equipment maintenance).
- .12 This accounting metric corresponds to:
- Section OG3.3 of the Investor CDP information request for Oil and Gas sector module.
 - “Other reporting elements” of E1 of the IPIECA Oil and Gas Industry Guidance on Voluntary Sustainability Reporting.

NR0101-03. Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets

- .13 The registrant shall discuss the following where relevant:
- The scope, including if strategies, plans, and/or reduction targets pertain differently to different business units, geographies, or emissions sources.

- If strategies, plans, and/or reduction targets are related to or associated with an emissions disclosure (reporting) or reduction program (e.g., EU ETS, Regional Greenhouse Gas Initiative (RGGI), WCI, etc.), including regional, national, international or sectoral programs.
- The activities and investments required to achieve the plans and any risks or limiting factors that might affect achievement of the plans and/or targets.

.14 For emission reduction targets, the registrant shall disclose:

- The percentage of emissions within the scope of the reduction plan.
- The percentage reduction from the base year.
 - The base year is the first year against which emissions are evaluated towards the achievement of the target.
- Whether the target is absolute or intensity-based, and the metric denominator, if it is an intensity-based target.
- The timelines for the reduction activity, including the start year, the target year, and the base year. Disclosure shall be limited to activities that were ongoing (active) or that reached completion during the fiscal year.
- The mechanism(s) for achieving the target, such as energy efficiency efforts, energy source diversification, carbon capture and storage, etc.

.15 Where necessary, the registrant shall discuss any circumstances in which the target base year emissions have been or may be re-calculated retrospectively, or in which the target base year has been reset.

.16 This accounting metric corresponds with:

- CDSB Section 4, "Management Actions"⁹
- CDP questionnaire "CC3. Targets and Initiatives"

⁹ 4.12, "Disclosure shall include a description of the organization's long-term and short-term strategy or plan to address climate change-related risks, opportunities and impacts, including targets to reduce GHG emissions and an analysis of performance against those targets." *Climate Change Reporting Framework* – Edition 1.1, October 2012, CDSB.

Air Quality

Description

Other air emissions from E&P operations include hazardous air pollutants, criteria air pollutants, and Volatile Organic Compounds (VOCs), which can have significant, localized human health and environmental impacts. Of particular concern are sulfur dioxide, nitrogen dioxide, and VOC emissions. The financial impacts on companies from air emissions will vary depending on the specific locations of operations and the prevailing air emissions regulations. As E&P operations expand close to population centers, the impacts on human health are likely to be exacerbated if air emissions limits are breached. Active management of the issue—through technological and process improvements—could allow companies to limit the impact of regulations in an environment of increasing regulatory and public concerns about air quality in the U.S. and globally. Companies could benefit from operational efficiencies that could lead to a lower cost structure over time.

Accounting Metrics

NR0101-04. Air emissions for the following pollutants: NO_x (excluding N₂O), SO_x, volatile organic compounds (VOCs), and particulate matter (PM)

- .17 The registrant shall disclose its emissions released in the atmosphere of air pollutants associated with extraction and production operations, such as:
 - Direct air emissions from stationary or mobile sources include, but are not limited to: equipment at well sites, production facilities, refineries, chemical plants, terminals, fixed site drilling rigs, office buildings, marine vessels transporting products, tank truck fleets, mobile drilling rigs, and moveable equipment at drilling and production facilities.
- .18 The registrant shall disclose emissions consistent with IPIECA's Oil and Gas Industry Guidance on Voluntary Sustainability Reporting, as noted below.
- .19 The registrant shall disclose the following emissions released to the atmosphere from oil and natural gas operations by emissions type:
 - Oxides of nitrogen (including NO and NO₂ and excluding N₂O), reported as NO₂.
 - Oxides of sulfur (SO₂ and SO₃), reported as SO₂.
 - Non-methane volatile organic compounds (VOCs), defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and methane, which participates in atmospheric photochemical reactions, except those designated by the EPA as having negligible photochemical reactivity.
 - Particulate matter (PM), reported as the sum of PM₁₀ and PM_{2.5}, or all particulates less than 10 micrometers in diameter.

- .20 This scope does not include CO₂, CH₄, and N₂O, which are disclosed in NR0101-01, as Scope 1 GHG emissions.
- .21 Air emissions data shall be consolidated according to the approach with which the registrant consolidates its financial reporting data, which is aligned with the consolidation approach used for NR0101-01.
- .22 The registrant should discuss the calculation methodology for its emissions disclosure, such as whether data are from continuous emissions monitoring systems (CEMS), engineering calculations, mass balance calculations, etc.

Water Management

Description

Depending on the extraction technique, E&P operations need relatively large quantities of water, which may expose companies to the risk of reduced water availability, regulations limiting usage, or related cost increases, particularly in water-stressed regions. Contamination of local water resources can result from produced water, flowback water, hydraulic fracturing fluids, and methane leakage, particularly due to deficiencies in well casings. There is debate about whether or not hydraulic fracturing operations have contaminated groundwater supplies in the past, since there is difficulty in establishing causality without baseline data. In the U.S., concerns about chemicals used in hydraulic fracturing fluids have led to increased disclosure by companies through a voluntary industry registry, FracFocus. There have also been related state regulations, as well as legislative proposals to repeal federal exemptions for hydraulic fracturing operations. Reducing water use and contamination through recycling, other water management strategies, and use of non-toxic fracturing fluids could create operational efficiency for companies and lower their operating costs. They could also minimize the impacts that regulations, water supply shortages, and community-related disruptions have on operations.

Accounting Metrics

NR0101-05. Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress

- .23 The registrant shall disclose the amount of water (in cubic meters) that was withdrawn from freshwater sources for use in operations.
- Fresh water may be defined according to the local statutes and regulations where the registrant operates.
 - Where there is no regulatory definition, fresh water shall be considered to be water that has a total dissolved solids (TDS) concentration of less than 1000 mg/l per the Water Quality Association [definition](#).
- .24 Water obtained from a water utility can be assumed to meet the definition of freshwater.¹⁰
- .25 The registrant shall disclose the percentage of water recycled as the volume (in cubic meters) recycled divided by the volume of water withdrawn.
- Any volume of water reused multiple times shall be counted as recycled each time it is recycled and reused.
- .26 Using the World Resources Institute's (WRI) Water Risk Atlas tool, Aqueduct (publicly available online [here](#)), the registrant shall analyze all of its operations for water risks and identify facilities that are in a location with High (40–80%) or Extremely High (>80%) Baseline Water Stress. Water withdrawn in locations with High or Extremely High Baseline Water Stress shall be indicated as a percentage of the total water withdrawn.
- .27 This accounting metric corresponds to section W5. Water Accounting of the CDP's [2014 Water Information Request](#).

¹⁰ <http://water.epa.gov/drink/contaminants/secondarystandards.cfm>

NR0101-06. Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water

- .28 The registrant shall disclose the volume (in cubic meters) of produced water and flowback fluid generated during its activities.
- .29 Produced water is defined according to the U.S. EPA (40 CFR 435.41) as water (brine) obtained from the hydrocarbon bearing formation strata during the extraction of oil and gas. This can include formation water, injection water, and any chemicals added downhole or during the oil/water separation process.
- .30 Flowback is defined as the recovered hydraulic fracturing fluid that returns to the surface during a hydraulic fracturing operation that may often be mixed with produced water.
- .31 The registrant shall calculate the percentage of produced water and flowback fluid that was:
- Discharged directly to the environment or indirectly discharged through a third party, such as a local wastewater treatment plant.
 - Injected, such as into a Class II injection well under the U.S. EPA's Underground Injection Control (UIC) program, or equivalent.
 - Recycled for use in other wells in fracturing fluids or in other drilling and production processes.
- .32 The registrant shall disclose the amount (in metric tons) of hydrocarbons in produced water, flowback, or other water discharged to the environment.
- Other water discharges may include process water and storm water.
 - Measurements of hydrocarbon content should be made using test methods required or approved by local regulatory authorities (or equivalent applicable standards).

NR0101-07. Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used

- .33 The registrant shall calculate the percentage as: the number of hydraulically fractured wells for which it provides public disclosure of all of the chemical content of fracturing fluid, divided by the total number of hydraulically fractured wells.
- .34 The registrant shall count only wells for which all fluid chemicals are publicly disclosed, including the chemicals that meet the definition of a trade secret, according to [Appendix E to 29 CFR Part §1910.1200](#) and may be exempt from disclosure on a material safety data sheet (MSDS).
- .35 Public disclosure includes, but is not limited to, posting to a publicly accessible corporate website or fracfocus.org.

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

- .36 The registrant shall calculate the percentage as: the total number of hydraulic fracturing well sites for which it detected a deterioration in the ground or surface water surrounding the well site as compared to a baseline measurement, divided by the total number of hydraulic fracturing well sites.

- .37 Deterioration in water quality is, at a minimum, defined as occurring when testing indicates:
- Presence of thermogenic gas or a mixture of thermogenic and biogenic gas that was not present in baseline testing.
 - An increase in methane concentration by more than 5.0 mg/l between sampling periods.
 - Benzene, toluene, ethylbenzene, or xylenes (BTEX compounds) or total petroleum hydrocarbons (TPH) are present in higher concentrations as compared to the baseline.
- .38 The registrant shall determine whether water quality deteriorated against a baseline through monitoring of ground and surface water surrounding hydraulically fractured well sites.
- Determinations shall be consistent with Chapter 3 of the Wyoming Oil and Gas Conservation Commission (WOGCC) Rules and Regulations and/or The Colorado Oil and Gas Conservation Commission's (COGCC) Rule 609 – Statewide Groundwater Baseline Sampling and Monitoring.
- .39 A baseline water quality assessment includes testing of any water sources (including bodies of water and water wells) located near a hydraulically fractured well site location prior to drilling.
- The registrant shall sample water sources that are within the anticipated fracture radius, plus a safety factor.
- .40 The initial baseline sample shall occur:
- Prior to drilling or before installation of a surface oil and gas facility on a location.
 - Prior to re-stimulation of a well, if more than 12 months have passed since the initial pre-drilling sampling event or the most recent re-stimulation sampling event.
- .41 Ongoing monitoring shall occur with at least the following frequency:
- One subsequent sampling between 12 and 18 months after well completion or facility installation.
 - A second subsequent sampling between 60 and 78 months after the previous sampling event. Dry holes are exempt from this requirement.
- .42 The registrant shall collect initial baseline samples and subsequent monitoring samples from all available water sources, up to a maximum of a four, within a one-half mile radius of a proposed well, multi-well site, or dedicated injection well.
- The registrant shall follow sampling guidance from the WOGCC and COGCC, including for instances when few or no sampling sites exist or are accessible.
- .43 If the registrant does not conduct baseline water quality assessments and ongoing monitoring for any of its well sites, then it shall disclose the percentage of wells for which there is no baseline and/or ongoing monitoring.
- .44 The registrant may choose to disclose whether results of baseline groundwater quality tests and ongoing monitoring are communicated to local regulatory authorities (where not required by local law) and/or residents and business owners in proximity to hydraulic fracturing sites.

Biodiversity Impacts

Description

The E&P industry's activities can have significant impacts on biodiversity. These include habitat loss and alteration through land use for exploration, production, disposing of drilling and associated wastes, and decommissioning of onshore and offshore wells. Oil spills and leaks are a threat to many species and habitats. Biodiversity impacts of E&P operations can affect the valuation of oil and gas reserves and create operational risks. The environmental characteristics of the land where reserves are located could increase extraction costs as a result of increasing awareness and protection of ecosystems, making such reserves uneconomical to extract. Companies could also face regulatory or reputational barriers to accessing reserves in ecologically sensitive areas. This may include new protection statuses afforded to areas where reserves are located. Areas such as the Arctic and certain shorelines with mangroves and swamps are not only extremely ecologically sensitive, but also entail more complex and expensive cleanup operations if hydrocarbon spills or leaks occur there. Negative future impacts on the value of reserves could be mitigated by taking into consideration the location of reserves in or near protected areas when making investment or capital expenditure decisions. Companies with a good track record of minimizing biodiversity impacts could gain a competitive advantage in accessing new reserves in or near protected areas. Ongoing E&P operations could be at risk in the absence of effective environmental management plans for different stages of the project lifecycle, due to regulatory penalties, litigation, community protests, and associated costs.

Accounting Metrics

NR0101-09. Description of environmental management policies and practices for active sites

- .45 The registrant shall provide a brief description of its environmental management plan(s) implemented at active sites, including where relevant:
- Lifecycle stages to which the plan(s) apply, such as: pre-bid (when the registrant is considering acquisition of a site), exploration and appraisal, site development, hydrocarbon production, and during closure, decommissioning, and restoration.
 - The topics addressed by the plan(s), such as: ecological and biodiversity impacts, waste generation, noise impacts, emissions to air, discharges to water, natural resource consumption, and hazardous chemical usage.
 - The underlying references for its plan(s), including whether they are codes, guidelines, standards, or regulations; whether they were developed by the registrant, an industry organization, a third-party organization (e.g., a non-governmental organization), a governmental agency, or some combination of these groups.
- .46 The scope of disclosure includes all terrestrial and offshore operations in which the registrant is involved as an operator, partner, or contractor, and which are in the exploration, development, production, or decommissioning phase.
- .47 Where applicable and relevant, the registrant shall describe differences between policies and practices in terrestrial areas and in marine areas.

- .48 Where environmental management policies and practices differ significantly by hydrocarbon resource (e.g., conventional oil as compared to unconventional natural gas), then the registrant shall describe differences for each resource.
- .49 Where applicable and relevant, the registrant shall describe specific policies and practices that apply to areas with protected conservation status and/or areas of critical habitat, which are [defined](#) by the International Finance Corporation (IFC) as:
- Areas with high biodiversity value, including (i) habitat of significant importance to Critically Endangered and/or Endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes.¹¹
- .50 If the management policies and practices do not apply to all of the registrant's sites or operations, it shall indicate the percentage of sites to which they were applied.
- .51 The registrant shall disclose the degree to which its policies and practices are aligned with the International Finance Corporation's (IFC) [Performance Standards on Environmental and Social Sustainability](#), January 1, 2012, including specifically:
- Performance Standard 1 – Assessment and Management of Environmental and Social Risks and Impacts.
 - Performance Standard 3 – Resource Efficiency and Pollution Prevention.
 - Performance Standard 4 – Community Health, Safety, and Security.
 - Performance Standard 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources.
- .52 Additional relevant references may include:
- [“Environmental management in oil and gas exploration and production – An overview of issue and management approaches,”](#) Joint E&P Forum/UNEP Technical Publication 1997.
 - [“Towards Sustainable Decommissioning and Closure of Oil Fields and Mines: A Toolkit to Assist Government Agencies,”](#) DRAFT Version 2.0, November 2009, World Bank Multistakeholder Initiative.

NR0101-10. Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume near shorelines with ESI rankings 8-10, and volume recovered

- .53 The registrant shall disclose the total number and volume (in barrels) of hydrocarbon spills where:
- Spills are defined as greater than 1 bbl (42 U.S. gallons or 159 liters).
 - Spills include those that reached the environment and exclude spills that were contained within impermeable secondary containment.

¹¹ International Finance Corporation (IFC), Performance Standard 6, *Biodiversity Conservation and Sustainable Management of Living Natural Resources*, January 1, 2012.

- .54 Consistent with IPIECA's Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (hereafter, "IPIECA Guidance"), the volume reported shall represent the total estimated amount spilled that reached the environment and not be reduced by the amount of such hydrocarbon subsequently recovered, evaporated, or otherwise lost.
- .55 Consistent with IPIECA Guidance, the scope of releases from operations and events includes:
- Above-ground and below-ground facilities.
 - Sabotage, earthquakes, or other events outside operational control.
 - Company-owned and operated transport.
 - Leakage over time, which is counted once at the time it is identified.
- .56 The registrant may choose to disclose spills to soil and water separately. A spill that qualifies as a spill to both soil and water should be reported as a single spill to water, with the volume properly apportioned to soil and water.
- .57 The registrant shall disclose the volume of spills (in bbls) that occurred in the Arctic, which is considered to be the area north of the Arctic Circle, or north of the parallel of latitude at 66° 33' north.
- .58 The registrant shall disclose the volume of spills near shorelines with Environmentally Sensitive Index (ESI) levels 8 through 10, where levels are defined according to U.S. National Oceanic and Atmospheric Administration (NOAA)'s [shoreline sensitivity rankings list](#).
- .59 The registrant shall calculate the volume of spills recovered as the amount of spilled hydrocarbons (in bbls) removed from the environment through short-term spill response activities, excluding:
- Amounts that were recovered during longer-term remediation at spill sites.
 - Amounts that evaporated, burned, or were dispersed.
- .60 The registrant shall calculate recovery rates using an accepted standard or guideline, such as [California Code of Regulations, Title 14, Division 1, Subdivision 4, Chapter 7, Subchapter 2, Determining Amount of Petroleum Hydrocarbons Recovered, Sections 877-880, Effective June 13, 2009](#).

NR0101-11. (1) Proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat

- .61 The registrant shall disclose the amount of net proved reserves in sites with protected conservation status, plus the amount of net proved reserves in areas of endangered species habitat.
- .62 The registrant shall disclose the amount of net probable reserves in sites with protected conservation status, plus the amount of net probable reserves in areas of endangered species habitat.

- .63 Reserves are considered to be in areas of protected conservation status if they are located within:
- International Union for Conservation of Nature (IUCN) Protected Areas (categories I-VI).
 - Ramsar Wetlands of International Importance.
 - UNESCO World Heritage Sites.
 - Biosphere Reserves recognized within the framework of UNESCO's Man and the Biosphere (MAB) Programme.
 - Natura 2000 sites.
 - Sites that meet the IUCN's definition of a protected area: "A protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values."¹²
 - These sites may be listed in the World Database of Protected Areas (WDPA) and mapped on ProtectedPlanet.net.
- .64 Reserves are considered to be in endangered species habitat if they are in or near areas where IUCN Red List of Threatened Species that are classified as Critically Endangered (CR) or Endangered (EN) are extant.
- A species is considered extant in an area if it is a resident, present during breeding or non-breeding season, or if it makes use of the area for passage.
- .65 For the purposes of this disclosure, "near" is defined as within 5 kilometers (km) of the boundary of an area of protected conservation status or an endangered species habitat.
- .66 The registrant shall follow guidance published by the Securities and Exchange Commission (SEC) in its [Oil and Gas Reporting Modernization](#) (Section §229.1202 [Item 1202] Disclosure of Reserves) for the classifying of reserves as proved and probable.
- Reserves of oil products shall be calculated in millions of barrels.
 - Reserves of natural gas products shall be calculated in millions of standard cubic feet.
- .67 The registrant may choose to separately identify reserves in areas with additional ecological, biodiversity, or conservation designations such as those listed by the [A-Z Guide of Areas of Biodiversity Importance](#) prepared by the United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC).
- .68 The registrant may choose to provide discussion around reserves that are located in protected areas or endangered species habitat, but present low risk to biodiversity or ecosystem services; the registrant may choose to provide similar discussion for reserves located in areas with no official designation of high biodiversity value but that present high biodiversity or ecosystem services risks.

¹² Dudley, N. (ed.) (2008) Guidelines for Applying Protected Areas Management Categories. IUCN: Gland, Switzerland. p.8-9.

Security, Human Rights, and Rights of Indigenous Peoples

Description

E&P companies face additional community-related risks when operating in conflict zones; in areas with weak or absent governance institutions, rule of law, and legislation to protect human rights; or in areas with vulnerable communities such as indigenous peoples. Companies using private or government security forces to protect their workers and assets may knowingly or unknowingly contribute to extreme cases of human rights violations, including use of excessive force. Indigenous people are often the most vulnerable sections of the population, with limited capacity to defend their unique rights and interests. Companies perceived as contributing to human rights violations or failing to account for indigenous peoples' rights may be affected due to protests, riots, or suspension of permits. They could face substantial costs related to compensation or settlement payments and write-downs in the value of their reserves in such areas. In the absence of country laws to address such cases, several international instruments have emerged to provide guidelines for companies, including obtaining the free, prior, and informed consent of indigenous peoples for decisions that affect them. With greater awareness, several countries are also beginning to implement specific laws protecting indigenous peoples' rights, creating increasing regulatory risk for companies.

Accounting Metrics

NR0101-12. (1) Proved and (2) probable reserves in or near areas of conflict

- .69 The registrant shall disclose the amount of net proved reserves that are located in or near areas of active conflict.
- .70 The registrant shall disclose the amount of net probable reserves that are located in or near areas of active conflict.
- .71 Active conflict is defined according to the Uppsala Conflict Data Program (UCDP) [definition](#) as:
- A conflict, both state-based and non-state, is deemed to be active if there are at least 25 battle-related deaths per calendar year in one of the conflict's dyads.
- .72 Reserves shall be considered to be in or near an area of active conflict if they are located in the same country as the active conflict.
- If the registrant can demonstrate that a conflict is contained to a region, state, or designated area that is not proximate to its reserves, then it may exclude these from the scope of disclosure.
 - If reserves are located in a country, region, or state adjacent to an active conflict and/or can be reasonably expected to be operationally impacted by the conflict, then these reserves shall be included in the scope of disclosure.

.73 The registrant shall follow guidance published by the Securities and Exchange Commission (SEC) in its [Oil and Gas Reporting Modernization](#) (Section §229.1202 [Item 1202] Disclosure of Reserves) for the classifying of reserves as proved and probable.

- Reserves of oil products shall be calculated in millions of barrels.
- Reserves of natural gas products shall be calculated in millions of standard cubic feet.

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

.74 The registrant shall disclose the amount of net proved reserves that are located in or near areas that are considered to be indigenous peoples' land.

.75 The registrant shall disclose the amount of net probable reserves that are located in or near areas that are considered to be indigenous peoples' land.

.76 Indigenous lands are those occupied by those who self-identify as indigenous, and likely have one or more of the following characteristics based the [working definition](#) of "Indigenous Peoples" adopted by the United Nations:

- Historical continuity with pre-colonial and/or pre-settler societies
- Strong link to territories and surrounding natural resources
- Distinct social, economic, or political systems
- Distinct language, culture, and beliefs
- Form non-dominant groups of society
- Resolve to maintain and reproduce ancestral environments and systems as distinctive peoples and communities

.77 For the purposes of this disclosure, "near" is defined as within 5 km of the recognized boundary of an area considered to be indigenous land.

.78 The registrant shall follow guidance published by the Securities and Exchange Commission (SEC) in its [Oil and Gas Reporting Modernization](#) (Section §229.1202 [Item 1202] Disclosure of Reserves) for the classifying of reserves as proved and probable.

- Reserves of oil products shall be calculated in millions of barrels.
- Reserves of natural gas products shall be calculated in millions of standard cubic feet.

NR0101-14. Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict

.79 The registrant shall describe its due diligence practices and procedures with respect to indigenous rights of communities in which it operates or intends to operate, including:

- Upholding ILO Convention No. 169.
- Use of free, prior, and informed consent (or consultation) processes.

.80 The registrant shall describe its due diligence practices and procedures with respect to human rights, including:

- Upholding the fundamental International Labour Organization (ILO) conventions on freedom of association (No. 87), collective bargaining (No. 98), forced labor (No. 29, No. 105), child labor (No. 138, No. 182), fair wages (No. 100), and discrimination (No. 111).
- Implementation of the European Commission's "Oil and Gas Sector Guide on Implementing the UN Guiding Principles on Business and Human Rights," specifically Human Rights Due Diligence (Principle 17a-c).
- Implementation of Voluntary Principles on Security and Human Rights.

.81 The registrant shall discuss its practices and procedures while operating in areas of conflict, such as:

- Describing its approach according to IPIECA's "Guide to operating in areas of conflict for the oil and gas industry," which includes "do no harm," "do something," and "do something + +."

.82 An area of conflict is located in the same country as an active conflict, or adjacent to an active conflict that can be reasonably expected to impact the registrant's operations.

.83 Active conflict is defined according to the Uppsala Conflict Data Program (UCDP) [definition](#) as:

- A conflict, both state-based and non-state, is deemed to be active if there are at least 25 battle-related deaths per calendar year in one of the conflict's dyads.

.84 The discussion shall include due diligence processes employed during all stages of project development (i.e., prior, during, and post).

.85 The discussion shall include how practices apply to business partners, such as contractors, sub-contractors, suppliers, and joint venture partners.

Community Relations

Description

E&P activities take place over a number of years, and companies may be involved in multiple projects in a region that can have a wide range of community impacts. Community rights and interests may be affected by environmental and social impacts of E&P operations, such as competition for access to local energy or water resources, air and water emissions, and waste from operations. E&P companies need support from local communities to be able to obtain permits and leases and conduct their activities without disruptions. The expected value of reserves could be affected if the community interferes, or lobbies its government to interfere, with the rights of an E&P company in relation to those reserves. In addition to community concerns about the direct impacts of projects, the presence of E&P activities may give rise to associated socioeconomic concerns related to education, health, livelihoods, and food security for the community. E&P companies that are perceived as engaging in rent-seeking and exploiting a country or community's resources without providing any socioeconomic benefits in return may be exposed to the risk of resource nationalism actions by host governments and communities. These could include imposition of ad hoc taxes and export restrictions. These risks may vary depending on the country, and could be higher in countries heavily reliant on oil and gas for their economic growth. Companies in the extractives industries can adopt various community engagement strategies in their global operations to manage risks and opportunities associated with community rights and interests, such as integrating community engagement into each phase of the project cycle. Companies are beginning to adopt a "shared value" approach to provide a key socioeconomic benefit to the community that also creates value for the company itself.

Accounting Metrics

NR0101-15. Discussion of process to manage risks and opportunities associated with community rights and interests

.86 The registrant shall describe its processes, procedures, and practices to manage risks and opportunities associated with the rights and interests of communities in areas where it conducts business, where community rights and interests include:

- Economic rights and interests, including the right to employment, fair wages, payment transparency, and respect of infrastructure and agricultural land.
- Environmental rights and interests, including the right to clean local air and water, as well as safe discharge and disposal of waste.
- Social rights and interests, including the rights to adequate health care, education, and housing.
- Cultural rights and interests, including the right to protection of places of cultural significance (e.g., sacred sites or burial sites).

.87 The registrant shall disclose the following, as relevant:

- Lifecycle stages to which its practices apply, such as: pre-bid (when the registrant is considering acquisition of a site), exploration and appraisal, site development, hydrocarbon production, and during closure, decommissioning, and restoration.

- The community rights and interests (enumerated above) specifically addressed by the practices.
 - The underlying references for its procedures, including whether they are codes, guidelines, standards, or regulations and whether they were developed by the registrant, an industry organization, a third-party organization (e.g., a non-governmental organization), a governmental agency, or some combination of these groups.
- .88 Risks and opportunities include, but are not limited to: non-technical delays, availability and development of local content, availability and access to adequate infrastructure, community actions related to resource nationalism, and challenges associated with resettlement and access to land.
- .89 The registrant shall disclose the degree to which its policies and practices are aligned with the International Finance Corporation's (IFC) [Performance Standards on Environmental and Social Sustainability](#), January 1, 2012, including specifically:
- Performance Standard 4 – Community Health, Safety, and Security
 - Performance Standard 5 – Land Acquisition and Involuntary Resettlement
 - Performance Standard 8 – Cultural Heritage
- .90 The discussion shall include how practices apply to business partners such as contractors, sub-contractors, suppliers, and joint venture partners.
- .91 The registrant should describe its efforts to eliminate or mitigate community risks and/or address community concerns, including, but not limited to:
- The use of social impact assessment (SIA) that evaluates, manages, and mitigates risks.
 - Efforts to engage with stakeholders, build consensus, and collaborate with communities.
 - “Shared” or “blended” value projects that provide quantifiable benefits to the community and the registrant.
- .92 The registrant may choose to quantify its community risks by calculating the aggregate estimated value at risk (in U.S. dollars) to its capital expenditure projects as the difference in value (in U.S. dollars) between a project free from country, regional, and/or community risks (hereafter, country risk) and the value of a project adjusted for these risks.
- This calculation should be conducted using an appropriate valuation model; variations of the Capital Asset Pricing Model (CAPM) are commonly used to assess country risk:
 - Value at risk can be calculated by applying an additional discount rate premium when calculating the net present value of a project using discounted cash flow (DCF) analysis.
 - Value at risk can be expressed as a reduction in the expected cash flows of a project due to country risk when calculating the net present value of a project using discounted cash flow (DCF) analysis.
 - If a project is insured for country risks, the value at risk can be expressed as a reduction in the cash flows of a project due to the cost of insurance when calculating the net present value of a project using discounted cash flow (DCF) analysis.

- Country, regional, and/or community risks include, but are not limited to: corruption, business legal structure, political stability, regulation, resource nationalism, ethnic conflict, stability of the local market, labor force (skills) availability, resettlement and access to land, quality of access to infrastructure (e.g., ports, roads, shipping channels), and/or general license to operate.
 - These risks are likely to manifest differently at the country (national), regional (state), community (local) levels, and project levels.
 - This risk differs from sovereign risk, which is defined as the potential for a central bank or government-backed entity to willingly or unwillingly default on debt obligations, or significantly alter key economic variables such as foreign exchange rates, import ratios, and money supply.
- The registrant should identify and describe country risks specific to its projects and unique operating context.
 - This may include the identification of country, regional, and community risks and/or the discussion of specific projects.
 - This may include discussion of how the registrant has mitigated these risks through community engagement partnerships, blended value projects, etc.; the registrant shall quantify this reduction in risk according to the methods described above.
 - Discussion should be in addition to broad country risk classification (e.g., OECD Prevailing Country Risk classification, Standard & Poor's Country Risk ratings, World Economic Forum Global Competitiveness Index, etc.).
- The registrant should describe the model or approach used to value capital expenditure projects such as adjusted discount rate, expected cash flow, or other methods.

NR0101-16. Number and duration of non-technical delays

- .93 The registrant shall disclose the total number and aggregate duration (in days) of site shutdowns or project delays due to non-technical factors.
- .94 The scope includes shutdowns and project delays including, but not limited to, those resulting from pending regulatory permits or other political delays, community or stakeholder resistance or protest, and armed conflict.
- .95 The registrant may choose to discuss specific delays including associated costs, root cause and corrective actions for resolved delay, and status of ongoing delays.

Additional references

International Convention on Economic, Social and Cultural Rights (1966).

Health, Safety, and Emergency Management

Description

Workers involved in E&P activities face significant health and safety risks due to the harsh working environments and hazards of handling oil and gas. In addition to acute impacts resulting from accidents, workers may develop chronic health conditions, including those caused by silica or dust inhalation, as well as mental health problems. A significant proportion of the workforce at oil and gas drilling sites consists of temporary workers and employees of Oil and Gas Services companies. Therefore, health impacts on, and the safety performance of, such workers also have impacts on E&P companies. Additional health and safety protocols may be needed to protect women and minorities, particularly when they operate in regions where they continue to face discrimination. Significant releases of hydrocarbons or other hazardous substances as a result of accidents can also have wide-ranging negative social and environmental consequences. In addition to effective process safety management practices, it is important for a company to develop a culture of safety in order to reduce the probability that accidents and other health and safety incidents will occur. If accidents and other emergencies do occur, companies with a strong safety culture can effectively detect and respond to such incidents. A culture that engages and empowers employees and contractors to work with management to safeguard their own health, safety, and well-being and prevent accidents is likely to help companies reduce production downtime, mitigate costs, ensure workforce productivity, and maintain their license to operate.

Accounting Metrics

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

- .96 For registrants whose workforce is entirely U.S.-based, the registrant shall disclose its total recordable injury rate (TRIR) and fatality rate as calculated and reported in the Occupational Safety and Health Administration's (OSHA) Form 300.
- OSHA guidelines provide details on determination of whether an event is a recordable occupational incident and definitions for exemptions for incidents that occurred in the work environment but are not occupational.
- .97 For registrants whose workforce includes non-U.S.-based employees, the registrant shall calculate its total recordable injury rate and fatality rate according to the U.S. Bureau of Labor Statistics [guidance](#) and/or using the U.S. Bureau of Labor Statistics [calculator](#).
- .98 The registrant shall disclose its Near Miss Frequency Rate (NMFR), where a near miss is defined as an incident in which no property or environmental damage or personal injury occurred, but where damage or personal injury easily could have occurred but for a slight circumstantial shift.
- The registrant should refer to organizations such as the National Safety Council (NSC) for guidance on implementing near miss reporting.
 - The registrant should disclose its process for classifying, identifying, and reporting near miss incidents.

.99 The registrant shall disclose its TRIR, Fatality Rate, and NMFR for each of the following categories of employee:

- Direct, full-time employees
- Contract employees
- Short-service employees (full-time and contract)

.100 Short-Service Employee (SSE) is defined as a newly placed full-time or temporary employee or subcontractor with less than six months' experience in the assigned job.

.101 The scope includes all employees domestic and foreign.

.102 Rates shall be calculated as: (statistic count / total hours worked)*200,000.

NR0101-18. Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1)

.103 The registrant shall disclose Tier 1 process safety events rates (PSE), as defined by the International Association of Oil & Gas Producers (OGP), for instances of loss of primary containment (LOPC) using terms and definitions from the OGP's Process Safety – Recommended Practice on Key Performance Indicators, Report No. 456.

.104 A PSE is defined as a loss of primary containment (LOPC) from a process that meets the Tier 1 definition below, is recordable, and for the purpose of recording a PSE:

- Drilling facilities are considered to be part of a process when operations are "in-hole."
- Land or marine vessels (trucks and ships) are considered to be part of a process when physically connected to a production facility.

.105 A loss of primary containment (LOPC) is defined as an unplanned or uncontrolled release of any material from primary containment, including non-toxic and non-flammable materials (e.g., steam, hot condensate, nitrogen, compressed CO₂ or compressed air). For drilling operations, any unplanned or uncontrolled release to the surface (seabed or ground level) should be included. LOPC is a type of event. An unplanned or uncontrolled release is an LOPC irrespective of whether the material is released into the environment, secondary containment, or into other primary containment not intended to contain the material released under normal operating conditions.

.106 A Tier 1 PSE is defined as a loss of primary containment (LOPC) as the greatest consequence, resulting in one or more of the following consequences:

- An employee, contractor, or subcontractor experiencing a "days away from work" injury and/or fatality.
- A hospital admission and/or fatality of a third-party.
- An officially declared community evacuation or community shelter-in-place.
- A fire or explosion resulting in greater than, or equal to, \$25,000 of direct cost to the Company.
- A pressure relief device (PRD) discharge to atmosphere, whether directly or via a downstream destructive device, that results in one or more of the following four consequences:

- liquid carryover
- discharge to a potentially unsafe location
- an onsite shelter-in-place
- public protective measures (e.g., road closure) and a PRD discharge quantity greater than the threshold quantities specified in Appendix B of the OGP Process Safety – Recommended Practice on Key Performance Indicators, Report No. 456 in any one-hour period
- A release of material greater than the threshold quantities specified in Appendix B of the OGP Process Safety – Recommended Practice on Key Performance Indicators, Report No. 456 in any one-hour period.

.107 The Tier 1 PSE Rate shall be calculated as (Total Tier 1 PSE Count / Total Hours Worked) x 200,000.

.108 Total work hours include employees and contractors.

NR0101-19. Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout the exploration and production lifecycle

.109 Discussion shall include how the registrant integrates a culture of safety and emergency preparedness throughout its value chain, such as through training, joint management by the workforce and leadership, rules and guidelines, and use of technology.

.110 The registrant shall include a description of how emergency preparedness is coordinated amongst business partners (e.g., contractors and sub-contractors).

.111 Disclosure may focus broadly on safety and emergency management systems, but shall specifically address the systems to avoid and manage emergencies, accidents, and incidents that could have catastrophic human health, local community, and environmental impacts.

.112 The exploration and production lifecycle phases include, at a minimum: geological and seismic surveys, site surveys, exploratory drilling, appraisal drilling, site development, production, and decommissioning.

Business Ethics & Payments Transparency

Description

Managing business ethics and maintaining an appropriate level of transparency in payments to governments or individuals are significant issues for the E&P companies. This is due to the importance of government relations to companies' ability to conduct business in this industry and to gain access to oil and gas reserves. The emergence of several anti-corruption, anti-bribery, and payments-transparency laws and initiatives in the U.S. and abroad create regulatory risks. Enforcement of these could lead to significant one-time costs or higher ongoing compliance costs and even affect a company's social license to operate. Companies with significant reserves or operations in corruption-prone countries could face heightened risks. Companies are under pressure to ensure that their governance structures and business practices can address corruption and willful or unintentional participation in illegal or unethical payments or gifts to government officials or private persons.

Accounting Metrics

NR0101-20. (1) Proved and (2) probable reserves in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index

- .113 The registrant shall disclose the amount of its net proved reserves located in the countries with the 20 lowest rankings in Transparency International's Corruption Perception Index (CPI).
- .114 The registrant shall disclose the amount of its net probable reserves located in the countries with the 20 lowest rankings in Transparency International's Corruption Perception Index (CPI).
- .115 The 20 lowest numerical ranks shall be used to generate the scope of countries; therefore, due to the fact that multiple countries share many ranks, the scope may include more than 20 countries.
- .116 The registrant shall use the most current version of the CPI via Transparency International's publicly accessible [website](#).
- .117 The registrant may choose to provide discussion around operations that are located in countries with low rankings in the index but present low business ethics risks; the registrant may choose to provide similar discussion for operations located in countries that do not have one of the 20 lowest rankings in the index but which present unique or high business ethics risks.
- .118 The registrant shall follow guidance published by the Securities and Exchange Commission (SEC) in its [Oil and Gas Reporting Modernization](#) (Section §229.1202 [Item 1202] Disclosure of Reserves) for the classifying of reserves as proved and probable.
 - Reserves of oil products shall be calculated in millions of barrels.
 - Reserves of natural gas products shall be calculated in millions of standard cubic feet.

NR0101-21. Description of the management system for prevention of corruption and bribery throughout the value chain

- .119 The registrant shall discuss its management system and due diligence procedures for assessing and managing corruption and bribery risks internally and associated with business partners in its value chain.
- Relevant business partners include customer, suppliers, contractors, subcontractors, and JV partners.
- .120 Relevant aspects of a management system include employee awareness programs, internal mechanisms for reporting and following up on suspected violations, anti-corruption policies, and participation in the Extractive Industry Transparency Initiative (EITI).
- .121 The registrant may choose to discuss the implementation of one or more of the following:
- Key Organization for Economic Co-operation and Development (OECD) [guidelines](#)
 - International Chamber of Commerce (ICC): Rules of Conduct against Extortion and Bribery
 - Transparency International: Business Principles for Countering Bribery
 - United Nations Global Compact: 10th Principle
 - World Economic Forum (WEF): Partnering Against Corruption Initiative (PACI)

Reserves Valuation & Capital Expenditures

Description

Estimates suggest that E&P companies are unlikely to be able to extract a significant proportion of their proved and probable oil and gas reserves if GHG emissions are to be controlled to limit global temperature increases to two degrees Celsius. Companies with more carbon-intensive reserves and production and higher capital costs are likely to face greater risks. Regulatory limits on GHG emissions, together with improved competitiveness of alternative energy technologies, could lower or reduce the growth in global demand, and therefore reduce prices for oil and gas products. Extraction costs could increase with regulations that put a price on GHG emissions. These factors could affect the net present value of oil and gas reserves. Regulatory actions that are more abrupt than anticipated, or those focusing on industries with high emissions, could impair asset values substantially over a short period of time. Stewardship of capital resources and production decisions that take into account near- and long-term trends related to climate change mitigation actions can help prevent current asset impairment and maintain profitability and creditworthiness.

Accounting Metrics

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

- .122 The registrant shall conduct an analysis of its reserves to determine how several future scenarios may affect its determination of whether the reserves are proved or probable.
- .123 The registrant shall base its sensitivity analysis on potential price changes derived from the following scenarios conducted by the International Energy Agency (IEA) in its annual World Energy Outlook (WEO) publication:
- New Policies Scenario, which assumes that broad policy commitments and plans that have been announced by countries (including national pledges to reduce greenhouse-gas emissions and plans to phase out fossil-energy subsidies), occur even if the measures to implement these commitments have yet to be identified or announced. This broadly serves as the IEA baseline scenario.
 - 450 Scenario, which assumes that an energy pathway occurs that is consistent with the goal of limiting the global increase in temperature to 2°C by limiting concentration of greenhouse gases in the atmosphere to around 450 parts per million of CO₂.
 - Current Policies Scenario, which assumes no changes in policies from the mid-point of the year of publication of the WEO.
- .124 The registrant shall analyze the sensitivity of its current proven and probable reserves using the following differences in price for crude oil and natural gas that the IEA projects between its Current Policies Scenario and (1) its New Policies Scenario and (2) its 450 Scenario:
- IEA crude oil import prices are 8.7% lower per barrel in the New Policies Scenario than in the Current Policies Scenario
 - IEA crude oil import prices are 15.7% lower per barrel in the 450 Scenario than in the Current Policies Scenario

- Natural gas (United States) prices are 6.9% lower per MBtu in the New Policies Scenario than in the Current Policies Scenario
- Natural gas (United States) prices are 3.4% lower per MBtu in the 450 Scenario than in the Current Policies Scenario

- .125 Nota bene – Scenarios above are illustrative based on price differences projected in 2025 and published in the World Energy Outlook 2013; the registrant shall use IEA’s most current 2025 price projections in each scenario. As appropriate, and based on updates to IEA scenarios, SASB will provide updates to the future scenario year to be used in projections.
- .126 The registrant shall follow guidance published by the Securities and Exchange Commission (SEC) in its [Oil and Gas Reporting Modernization](#) (Section §229.1202 [Item 1202] Disclosure of Reserves) for the following:
- Classifying of reserves as proved and probable
 - Conducting a reserves sensitivity analysis
 - Current (or base) case of reserve levels

.127 The registrant shall summarize its findings in the following table format:

Table1. Sensitivity of Reserves to Prices By Principal Product Type and Price Scenario

Price Case	Proved Reserves			Probable Reserves		
(Scenario)	Oil	Gas	Product A	Oil	Gas	Product A
	MMbbls	MMscf	measure	MMbbls	MMscf	measure
Current (base)						
New Policies Scenario*						
450 Scenario*						

*using the percentage difference in price in 2025 between the scenario and the Current Policies Scenario

- .128 The registrant may choose to disclose the sensitivity of its reserve levels in other price and demand scenarios in addition to those described above, particularly if these scenarios differ depending on the type of hydrocarbon reserves, regulatory environment in the countries or regions where exploration occurs, end-use of the registrant’s products, or other factors.

NR0101-23. Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves

- .129 The registrant shall calculate and disclose an estimate of the carbon dioxide emissions embedded in its proved hydrocarbon reserves.

- Nota bene – this estimate applies a factor for potential CO₂ only and does not include an estimate for all potential greenhouse gas emissions, as these are dependent on downstream use (e.g., utility electricity generation, industrial heating and electricity generation, residential heating and cooling, transportation, or use in petrochemicals, agrochemicals, asphalt, lubricants, etc.).
- .130 Estimated potential carbon dioxide emissions from proved hydrocarbon reserves shall be calculated according to the following formula, derived from [Meinshausen et al.](#):
- $E = R \times V \times C$, where
 - E are the potential emissions in kilograms of carbon dioxide (kg CO₂);
 - R are the proved reserves in gigagrams (Gg);
 - V is the net calorific value in terajoules per gigagram (TJ/Gg); and
 - C is the effective carbon dioxide emission factor in kilograms CO₂ per terajoule (kg/TJ).
- .131 In the absence of data specific to the registrant's hydrocarbon reserves, carbon content shall be calculated using default data for each major hydrocarbon resource published by the Intergovernmental Panel on Climate Change (IPCC) in its 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
- The registrant shall use default carbon content values per unit of energy that is listed in IPCC Table 1.3 Default Values of Carbon Content, Volume 2: Energy, Chapter 1.
 - The registrant shall use calorific values per weight of hydrocarbon contained in IPCC Table 1.2 Default Net Calorific Values (NCVs) and Lower and Upper Limit of the 95% Confidence Intervals, Volume 2: Energy, Chapter 1.
- .132 The registrant shall use engineering estimates to determine the weight of its hydrocarbons reserves in gigagrams, such as the type of hydrocarbon reserves and its API gravity as published by the American Petroleum Institute.
- .133 For other assumptions required to estimate the carbon content of hydrocarbon reserves, the registrant shall rely on guidance from the IPCC, Greenhouse Gas Protocol, U.S. Energy Information Agency (EIA), or the International Energy Agency (IEA).

NR0101-24. Discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition, and development of assets

- .134 The registrant shall discuss how projections for price and demand for hydrocarbon products and the path of climate regulation (including findings from NR0101-22 and NR0101-23) influence the registrant's capital expenditure (CAPEX) strategy.
- This discussion should include the registrant's projections and assumptions about future hydrocarbon prices and the likelihood that certain price and demand scenarios occur.
- .135 The registrant shall discuss the implications of how price and demand scenario planning (i.e., NR0101-22) may affect decisions to explore, acquire, and develop new reserves.

- .136 It may be relevant for the registrant to discuss what factors materially influence its CAPEX decision making, including, for example:
- How the scope of climate change regulation—such as which countries, regions, and/or industries are likely to be impacted—may influence the type of hydrocarbon on which the registrant focuses its exploration and development.
 - Its view of the alignment between the time horizon over which price and demand for hydrocarbons may be affected by climate regulation and time horizons for returns on capital expenditures on reserves.
 - How the structure of climate regulation—i.e., a carbon tax versus cap-and-trade—may differently affect price and demand, and thus the registrant’s capital expenditure decision making.
- .137 The registrant should discuss how these trends affect decision-making in the context of different types of reserve expenditures, including development of assets, acquisition of properties with proved reserves, acquisition of properties with unproved reserves, and exploration activities.
- The registrant shall discuss capital expenditures, regardless of the accounting method it uses (i.e., full cost or successful efforts).
- .138 This accounting metric corresponds to Section OG1.6a and OG1.6b of the Investor CDP information request for Oil and Gas sector module.

Management of the Legal & Regulatory Environment

Description

The interaction of companies in the E&P industry with their legal and regulatory environment can have material impacts on shareholder value. This can be a result of E&P companies' significant spending on lobbying and political contributions or as a result of changes in laws or policies that can affect their operations. In particular, climate change and environmental laws and regulations can have material impacts on business. However, given the scientific consensus that human-induced climate change is occurring, efforts to delay climate-related policy or legislative changes may prove counterproductive to the industry in the long term, by creating regulatory, and therefore investment, uncertainty, or incurring higher costs in the future. Efforts to influence environmental laws and regulations unfairly may affect companies' reputations and social license to operate. Companies with a clear strategy for engaging policymakers and regulators that accounts for societal externalities and is aligned with their goals and activities for long-term sustainable outcomes could benefit from a stronger, long-term license to operate. Such companies will likely be better prepared for medium- to long-term regulatory adjustments to deal with global, high-impact issues such as climate change.

Accounting Metrics

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

- .139 The registrant shall disclose its total monetary contributions to political campaigns, lobbyists or lobbying organizations, and those to tax-exempt groups, including trade associations that aim to influence political campaigns or participate in political lobbying.
- .140 The scope of disclosure includes the following:
- Political spending, which includes any direct or indirect contributions or expenditures in support of, or opposition to, a candidate for public office or a ballot measure.
 - Any payments made to trade associations or tax-exempt entities that are used to influence a political campaign (including advocacy organizations, commonly classified as social welfare organizations under Section 501(c)(4) of the Internal Revenue Code).
 - Any direct or indirect political expenditure (one-time or recurring) that must be reported to the Federal Election Commission, the Internal Revenue Service, or a state disclosure agency.
 - Any direct or indirect contributions to registered lobbyists or lobbying organizations, including contributions made to trade organizations, which in turn contribute to political lobbying efforts.

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

- .141 The registrant shall disclose the recipients of its five largest contributions disclosed in NR0101-25, defined as the five largest amounts in aggregate during the fiscal year that were contributed to an individual candidate, organization, ballot measure, or lobbying issue topic.
- .142 The registrant shall disclose the amount (in U.S. dollars) contributed to each individual, organization, ballot measure, or lobbying issue topic.
- .143 The registrant shall consider lobbying issue topics, at a minimum, to be general lobbying issue codes [defined](#) by The Lobbying Disclosure Act of 1995, but should include specific lobbying issues where available.

SUSTAINABILITY ACCOUNTING STANDARDS BOARD®

75 Broadway, Suite 202
San Francisco, CA 94111
415.830.9220
info@sasb.org

www.sasb.org