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# **OIL & GAS – MIDSTREAM**

## **Sustainability Accounting Standard**

Sustainable Industry Classification System® (SICS®) EM-MD

Prepared by the  
Sustainability Accounting Standards Board

October 2018

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**INDUSTRY STANDARD | VERSION 2018-10**

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# OIL & GAS – MIDSTREAM

## Sustainability Accounting Standard

*As of August 2022, the International Sustainability Standards Board (ISSB) of the IFRS Foundation assumed responsibility for the SASB Standards. The ISSB has committed to build on the industry-based SASB Standards and leverage SASB's industry-based approach to standards development. The ISSB encourages preparers and investors to continue to provide full support for and to use the SASB Standards until IFRS Sustainability Disclosure Standards replace SASB Standards.*

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### Historical Information About the SASB Foundation

These materials were developed under the auspices of the SASB Foundation. The SASB Foundation was founded in 2011 as a not-for-profit, independent standards-setting organization. The SASB Foundation's mission was to establish and maintain industry-specific standards that assist companies in disclosing financially material, decision-useful sustainability information to investors. The SASB Foundation operated in a governance structure similar to the structure adopted by other internationally recognized bodies that set standards for disclosure to investors, including the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB). This structure included a board of directors ("the Foundation Board") and a standards-setting board ("the Standards Board" or "the SASB"). The Standards Board developed, issued, and maintained the SASB Standards. The Foundation Board oversaw the strategy, finances, and operations of the entire organization, and appointed the members of the Standards Board. The Foundation Board was not involved in setting standards, but was responsible for overseeing the Standards Board's compliance with the organization's due process requirements. As set out in the SASB Rules of Procedure, the SASB's standards-setting activities were transparent and followed careful due process, including extensive consultation with companies, investors, and relevant experts. The SASB Foundation was funded by a range of sources, including contributions from philanthropies, companies, and individuals, as well as through the sale and licensing of publications, educational materials, and other products.

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## INTRODUCTION

### Purpose of SASB Standards

The SASB's use of the term "sustainability" refers to corporate activities that maintain or enhance the ability of the company to create value over the long term. Sustainability accounting reflects the governance and management of a company's environmental and social impacts arising from production of goods and services, as well as its governance and management of the environmental and social capitals necessary to create long-term value. The SASB also refers to sustainability as "ESG" (environmental, social, and governance), though traditional corporate governance issues such as board composition are not included within the scope of the SASB's standards-setting activities.

SASB standards are designed to identify a minimum set of sustainability issues most likely to impact the operating performance or financial condition of the typical company in an industry, regardless of location. SASB standards are designed to enable communications on corporate performance on industry-level sustainability issues in a cost-effective and decision-useful manner using existing disclosure and reporting mechanisms.

Businesses can use the SASB standards to better identify, manage, and communicate to investors sustainability information that is financially material. Use of the standards can benefit businesses by improving transparency, risk management, and performance. SASB standards can help investors by encouraging reporting that is comparable, consistent, and financially material, thereby enabling investors to make better investment and voting decisions.

### Overview of SASB Standards

The SASB has developed a set of 77 industry-specific sustainability accounting standards ("SASB standards" or "industry standards"), categorized pursuant to SASB's [Sustainable Industry Classification System® \(SICS®\)](#). Each SASB standard describes the industry that is the subject of the standard, including any assumptions about the predominant business model and industry segments that are included. SASB standards include:

1. **Disclosure topics** – A minimum set of industry-specific disclosure topics reasonably likely to constitute material information, and a brief description of how management or mismanagement of each topic may affect value creation.
2. **Accounting metrics** – A set of quantitative and/or qualitative accounting metrics intended to measure performance on each topic.
3. **Technical protocols** – Each accounting metric is accompanied by a technical protocol that provides guidance on definitions, scope, implementation, compilation, and presentation, all of which are intended to constitute suitable criteria for third-party assurance.
4. **Activity metrics** – A set of metrics that quantify the scale of a company's business and are intended for use in conjunction with accounting metrics to normalize data and facilitate comparison.

Furthermore, the [SASB Standards Application Guidance](#) establishes guidance applicable to the use of all industry standards and is considered part of the standards. Unless otherwise specified in the technical protocols contained in the industry standards, the guidance in the SASB Standards Application Guidance applies to the definitions, scope, implementation, compilation, and presentation of the metrics in the industry standards.

The [SASB Conceptual Framework](#) sets out the basic concepts, principles, definitions, and objectives that guide the Standards Board in its approach to setting standards for sustainability accounting. The [SASB Rules of Procedure](#) is focused on the governance processes and practices for standards setting.

## Use of the Standards

SASB standards are intended for use in communications to investors regarding sustainability issues that are likely to impact corporate ability to create value over the long term. Use of SASB standards is voluntary. A company determines which standard(s) is relevant to the company, which disclosure topics are financially material to its business, and which associated metrics to report, taking relevant legal requirements into account<sup>1</sup>. In general, a company would use the SASB standard specific to its primary industry as identified in [SICS®](#). However, companies with substantial business in multiple SICS® industries can consider reporting on these additional SASB industry standards.

It is up to a company to determine the means by which it reports SASB information to investors. One benefit of using SASB standards may be achieving regulatory compliance in some markets. Other investor communications using SASB information could be sustainability reports, integrated reports, websites, or annual reports to shareholders. There is no guarantee that SASB standards address all financially material sustainability risks or opportunities unique to a company's business model.

## Industry Description

The Oil and Gas - Midstream industry consists of companies involved in the transportation or storage of natural gas, crude oil, and refined petroleum products. Midstream natural gas activities involve gathering, transport, and processing of natural gas from the wellhead, as well as the removal of impurities, production of natural gas liquids, storage, pipeline transport, and shipping, liquefaction, or regasification of liquefied natural gas. Midstream oil activities mainly involve transport of crude oil and refined products over land, using a network of pipes and pumping stations, as well as trucks and rail cars, and over seas and rivers via tanker ships or barges. Companies that operate bulk stations and terminals, as well as those that manufacture and install storage tanks and pipelines, are also part of this industry.

Note: The standards discussed below are for “pure-play” midstream activities or independent midstream companies. Integrated oil and gas companies may own or operate midstream operations, but are also involved in the upstream operations of the oil and gas value chain and in the refining or marketing of products. SASB has separate standards for

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<sup>1</sup> **Legal Note:** SASB standards are not intended to, and indeed cannot, replace any legal or regulatory requirements that may be applicable to a reporting entity's operations.

the Oil and Gas Exploration & Production (EM-EP) and Refining & Marketing industries (EM-MD). As such, integrated companies should also consider the disclosure topics and metrics from these standards.

## SUSTAINABILITY DISCLOSURE TOPICS & ACCOUNTING METRICS

**Table 1. Sustainability Disclosure Topics & Accounting Metrics**

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	Quantitative	Metric tons (t) CO <sub>2</sub> -e, Percentage (%)	EM-MD-110a.1
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	n/a	EM-MD-110a.2
Air Quality	Air emissions of the following pollutants: (1) NO <sub>x</sub> (excluding N <sub>2</sub> O), (2) SO <sub>x</sub> , (3) volatile organic compounds (VOCs), and (4) particulate matter (PM <sub>10</sub> )	Quantitative	Metric tons (t)	EM-MD-120a.1
Ecological Impacts	Description of environmental management policies and practices for active operations	Discussion and Analysis	n/a	EM-MD-160a.1
	Percentage of land owned, leased, and/or operated within areas of protected conservation status or endangered species habitat	Quantitative	Percentage (%) by acreage	EM-MD-160a.2
	Terrestrial acreage disturbed, percentage of impacted area restored	Quantitative	Acres (ac), Percentage (%)	EM-MD-160a.3
	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume in Unusually Sensitive Areas (USAs), and volume recovered	Quantitative	Number, Barrels (bbls)	EM-MD-160a.4
Competitive Behavior	Total amount of monetary losses as a result of legal proceedings associated with federal pipeline and storage regulations <sup>2</sup>	Quantitative	Reporting currency	EM-MD-520a.1
Operational Safety, Emergency Preparedness & Response	Number of reportable pipeline incidents, percentage significant	Quantitative	Number, Percentage (%)	EM-MD-540a.1
	Percentage of (1) natural gas and (2) hazardous liquid pipelines inspected	Quantitative	Percentage (%)	EM-MD-540a.2
	Number of (1) accident releases and (2) non-accident releases (NARs) from rail transportation <sup>3</sup>	Quantitative	Number	EM-MD-540a.3
	Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project lifecycles	Discussion and Analysis	n/a	EM-MD-540a.4

<sup>2</sup> Note to **EM-MD-520a.1** – The entity shall briefly describe the nature, context, and any corrective actions taken as a result of the monetary losses.

<sup>3</sup> Note to **EM-MD-540a.3** – Disclosure shall include a discussion of processes, procedures, and strategies to manage non-accident and accident releases.

**Table 2. Activity Metrics**

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Total metric ton-kilometers of: (1) natural gas, (2) crude oil, and (3) refined petroleum products transported, by mode of transport <sup>4</sup>	Quantitative	Metric ton (t) kilometers	EM-MD-000.A

<sup>4</sup> Note to **EM-MD-000.A** – Relevant modes of transport include: pipeline, tanker, truck, etc.



# Greenhouse Gas Emissions

## Topic Summary

The midstream industry generates significant quantities of greenhouse gases and other air emissions from compressor engine exhausts, oil and condensate tank vents, natural gas processing, and fugitive emissions, in addition to emissions from mobile sources. GHG emissions contribute to climate change and create additional regulatory compliance costs and risks for midstream companies due to climate change mitigation policies. At the same time, the management of fugitive emissions of methane, a potent greenhouse gas, has emerged as a major operational, reputational, and regulatory risk. Financial impacts on companies will vary depending on the specific location of operations and the prevailing emissions regulations, and include higher operating or capital expenditures and regulatory or legal penalties. Companies that capture and monetize, or cost-effectively reduce emissions by implementing innovative monitoring and mitigation efforts and fuel efficiency measures could enjoy several benefits. These companies have the opportunity to reduce regulatory risks and to realize operational efficiencies in an environment of increasing regulatory and public concerns about air quality and climate change.

## Accounting Metrics

### EM-MD-110a.1. Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations

- 1 The entity shall disclose its gross global Scope 1 greenhouse gas (GHG) emissions to the atmosphere of the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>).
  - 1.1 Emissions of all GHGs shall be consolidated and disclosed in metric tons of carbon dioxide equivalents (CO<sub>2</sub>-e), calculated in accordance with published 100-year time horizon global warming potential (GWP) values. To date, the preferred source for GWP factors is the [Intergovernmental Panel on Climate Change \(IPCC\) Fifth Assessment Report \(2014\)](#).
  - 1.2 Gross emissions are GHGs emitted into the atmosphere before accounting for offsets, credits, or other similar mechanisms that have reduced or compensated for emissions.
- 2 Scope 1 emissions are defined and shall be calculated according to the methodology contained in [The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard](#), Revised Edition, March 2004 (hereafter, the “GHG Protocol”), provided by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD).
  - 2.1 These emissions include direct emissions of GHGs from stationary or 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.

- 2.2 Acceptable calculation methodologies include those that conform with the GHG Protocol as the base reference, but provide additional guidance, such as industry- or region-specific guidance. Examples include but are not limited to:

2.2.1 *GHG Reporting Guidance for the Aerospace Industry* provided by International Aerospace Environmental Group (IAEG)

2.2.2 Greenhouse Gas Inventory Guidance: Direct Emissions from Stationary Combustion Sources provided by the U.S. Environmental Protection Agency (EPA)

2.2.3 India GHG Inventory Program

2.2.4 ISO 14064-1

2.2.5 Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011, published by IPIECA

2.2.6 *Protocol for the quantification of greenhouse gas emissions from waste management activities* provided by Entreprises pour l'Environnement (EpE)

- 2.3 GHG emission data shall be consolidated according to the approach with which the entity consolidates its financial reporting data, which is generally aligned with the “financial control” approach defined by the GHG Protocol as well as:

2.3.1 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”)

2.3.2 The approach provided by the Climate Disclosure Standards Board (CDSB) that is described in REQ-07, “Organisational boundary,” of the [\*CDSB Framework for reporting environmental information, natural capital and associated business impacts\*](#) (April 2018)

- 3 The entity shall disclose the percentage of gross global Scope 1 emissions from methane emissions.

- 3.1 The percentage of gross global Scope 1 GHG emissions from methane emissions shall be calculated as the methane emissions in metric tons of carbon dioxide equivalents (CO<sub>2</sub>-e) divided by the gross global Scope 1 GHG emissions in metric tons of carbon dioxide equivalents (CO<sub>2</sub>-e).

- 4 The entity shall disclose the percentage of its emissions that are covered under an emissions-limiting regulation or that is intended to directly limit or reduce emissions, such as cap-and-trade schemes, carbon tax/fee systems, and other emissions control (e.g., command-and-control approach) and permit-based mechanisms.

- 4.1 Examples of emissions-limiting regulations include, but are not limited to:

- 4.1.1 California Cap-and-Trade (California Global Warming Solutions Act)
- 4.1.2 European Union Emissions Trading Scheme (EU ETS)
- 4.1.3 Quebec Cap-and-Trade (Draft Bill 42 of 2009)
- 4.2 The percentage shall be calculated as the total amount of gross global Scope 1 GHG emissions (CO<sub>2</sub>-e) that are covered under emissions-limiting regulations divided by the total amount of gross global Scope 1 GHG emissions (CO<sub>2</sub>-e).
  - 4.2.1 For emissions that are subject to multiple emissions-limiting regulations, the entity shall not account for those emissions more than once.
- 4.3 The scope of emissions-limiting regulations excludes emissions covered under voluntary emissions-limiting regulations (e.g., voluntary trading systems) as well as disclosure-based regulations [e.g., the U.S. Environmental Protection Agency (EPA) GHG Reporting Program].
- 5 The entity may discuss any change in its emissions from the previous reporting period, including whether the change was due to emissions reductions, divestment, acquisition, mergers, changes in output, and/or changes in calculation methodology.
- 6 In the case that current reporting of GHG emissions to the CDP or other entity (e.g., a national regulatory disclosure program) differs in terms of the scope and consolidation approach used, the entity may disclose those emissions. However, primary disclosure shall be according to the guidelines described above.
- 7 The entity may discuss the calculation methodology for its emissions disclosure, such as if data are from continuous emissions monitoring systems (CEMS), engineering calculations, or mass balance calculations.

## **EM-MD-110a.2. Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets**

- 1 The entity shall discuss its long-term and short-term strategy or plan to manage its Scope 1 greenhouse gas (GHG) emissions.
  - 1.1 Scope 1 emissions are defined according to [\*The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard\*](#) (GHG Protocol), Revised Edition, March 2004, published by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD).
  - 1.2 The scope of GHG emissions includes the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>).

- 2 The entity shall discuss its emission reduction target(s) and analyze its performance against the target(s), including the following, where relevant:
  - 2.1 The scope of the emission reduction target (e.g., the percentage of total emissions to which the target is applicable);
  - 2.2 Whether the target is absolute or intensity-based, and the metric denominator, if it is an intensity-based target;
  - 2.3 The percentage reduction against the base year, with the base year representing the first year against which emissions are evaluated towards the achievement of the target;
  - 2.4 The timelines for the reduction activity, including the start year, the target year, and the base year;
  - 2.5 The mechanism(s) for achieving the target; and
  - 2.6 Any circumstances in which the target or base year emissions have been, or may be, recalculated retrospectively or the target or base year has been reset which may include, but are not limited to energy efficiency efforts, energy source diversification, carbon capture and storage, or the implementation of leak detection and repair processes.
- 3 The entity shall discuss activities and investments required to achieve the plans and/or targets, and any risks or limiting factors that might affect achievements of the plans and/or targets.
- 4 The entity shall discuss the scope of its strategies, plans, and/or reduction targets, such as whether they pertain differently to different business units, geographies, or emissions sources.
  - 4.1 Categories of emissions sources generally correspond to those defined in the [API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry](#) (2009), and may include:
    - 4.1.1 Flared hydrocarbons, including all emissions emitted from flares and which are associated with the management and disposal of unrecoverable natural gas via combustion of hydrocarbon products from routine operations, upsets, or emergencies
    - 4.1.2 Other combusted emissions, including, but not limited to: (1) emissions from stationary devices, including, but not limited to boilers, heaters, furnaces, reciprocating internal combustion engines and turbines, incinerators, and thermal/catalytic oxidizers, (2) emissions from mobile sources, including, but not limited to barges, ships, railcars, and trucks for material transport; planes/helicopters and other company vehicles for personnel transport; forklifts, all terrain vehicles, construction equipment, and other off-road mobile equipment, and (3) other combusted emissions shall exclude those emissions disclosed as flared hydrocarbons

- 4.1.3 Process emissions, including, but not limited to those emissions that are not combusted and are intentional or designed into the process or technology to occur during normal operations and are a result of some form of chemical transformation or processing step. Such emissions include, but are not limited to those from hydrogen plants, amine units, glycol dehydrators, fluid catalytic cracking unit and reformer generation, and flexi-coker coke burn
  - 4.1.4 Vented emissions, including those emissions that are not combusted and are intentional or designed into the process or technology to occur during normal operations, and which include, but are not limited to: (1) venting from crude oil, condensate, or natural gas product storage tanks, gas-driven pneumatic devices, gas samplers, chemical injection pumps, exploratory drilling, loading/ballasting/transit, and loading racks, (2) venting resulting from maintenance/turn-arounds, including, but not limited to decoking of furnace tubes, well unloading, vessel and gas compressor depressurizing, compressor starts, gas sampling, and pipeline blowdowns, and (3) venting from non-routine activities, including but not limited to pressure relief valves, pressure control valves, fuel supply unloading valves, and emergency shut-down devices
  - 4.1.5 Fugitive emissions, including those emissions which can be individually found and “fixed” to make emissions “near zero” and which include, but are not limited to emissions from valves, flanges, connectors, pumps, compressor seal leaks, catadyne heaters, and wastewater treatment and surface impoundments
- 5 The entity shall discuss whether its strategies, plans, and/or reduction targets are related to, or associated with, emissions limiting and/or emissions reporting-based programs or regulations (e.g., the EU Emissions Trading Scheme, Quebec Cap-and-Trade System, California Cap-and-Trade Program), including regional, national, international, or sectoral programs.
  - 6 Disclosure of strategies, plans, and/or reduction targets shall be limited to activities that were ongoing (active) or reached completion during the reporting period.

# Air Quality

## Topic Summary

Air emissions from midstream companies 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. 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. Companies could benefit from operational efficiencies that could lead to a lower cost structure over time.

## Accounting Metrics

### **EM-MD-120a.1. Air emissions of the following pollutants: (1) NO<sub>x</sub> (excluding N<sub>2</sub>O), (2) SO<sub>x</sub>, (3) volatile organic compounds (VOCs), and (4) particulate matter (PM<sub>10</sub>)**

- 1 The entity shall disclose its emissions of air pollutants, in metric tons per pollutant, that are released into the atmosphere.
  - 1.1 The scope of disclosure includes air pollutants associated with the entity's direct air emissions resulting from all of the entity's activities and sources of emissions, including, but not limited to, stationary and mobile sources, production facilities, office buildings, and transportation fleets.
- 2 The entity shall disclose emissions consistent with IPIECA's Oil and Gas Industry Guidance on Voluntary Sustainability Reporting, as noted below.
- 3 The entity shall disclose its emissions of (1) oxides of nitrogen (NO<sub>x</sub>), reported as NO<sub>x</sub>.
  - 3.1 The scope of NO<sub>x</sub> includes NO and NO<sub>2</sub>, but excludes N<sub>2</sub>O.
- 4 The entity shall disclose its emissions of (2) oxides of sulfur (SO<sub>x</sub>), reported as SO<sub>x</sub>.
  - 4.1 The scope of SO<sub>x</sub> includes SO<sub>2</sub> and SO<sub>3</sub>.
- 5 The entity shall disclose its emissions of (3) non-methane volatile organic compounds (VOCs).
  - 5.1 VOCs are defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and methane, that participates in atmospheric photochemical reactions, except those designated by the U.S. Environmental Protection Agency (EPA) as having negligible photochemical reactivity.

- 5.1.1 This definition is aligned with U.S. 40 CFR Part 51.100, where a list of compounds that have been determined to have negligible photochemical reactivity can be obtained.
  - 5.1.2 Where applicable regulatory definitions of VOCs may conflict with this definition, such as the EU Paints Directive (Directive 2004/42/EC), and Schedule 1 of the Canadian Environmental Protection Act 1999, the entity may define VOCs as per the applicable regulatory definition.
- 6 The entity shall disclose its emissions of (4) particulate matter 10 micrometers or less in diameter (PM<sub>10</sub>), reported as PM<sub>10</sub>.
- 6.1 PM<sub>10</sub> is defined, according to U.S. 40 CFR Part 51.100, as any airborne finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 10 micrometers.
- 7 The entity may discuss the calculation methodology for its emissions disclosure, such as whether data are from continuous emissions monitoring systems (CEMS), engineering calculations, or mass balance calculations.

# Ecological Impacts

## Topic Summary

The storage and transport of crude oil, natural gas, and related products through a vast system of maritime transportation vehicles, pipelines, trains, and trucks presents considerable risk to the environment and to local communities. Leaks, accidental discharges, pipeline rights-of-way, and open easements over ecologically sensitive land could impact ecosystems in several ways, including natural habitat loss and changes in species movement. Regulatory agencies, supported by legislation that protects endangered species and ecologically sensitive areas, require plans to mitigate or remediate negative ecological impacts prior to project approval. Together with regulatory compliance costs, these can require significant capital and operational expenditures. As concerns over ecological impacts grow, companies could face the risk that additional areas are designated as protected areas under new or existing laws. Companies that prevent and proactively manage ecological impacts can avoid project delays, remediation, and litigation liabilities, and gain easier access to new projects and sources of revenue.

## Accounting Metrics

### EM-MD-160a.1. Description of environmental management policies and practices for active operations

- 1 The entity shall describe its environmental management plan(s) implemented at active operations, including, where relevant:
  - 1.1 Lifecycle stages to which the plan(s) apply, such as: land acquisition and surveying, development and pipeline construction, revegetation, pipeline operations, closure, decommissioning and removal, and restoration.
  - 1.2 The topics addressed by the plan(s), such as: ecological and biodiversity impacts (including land disturbance and/or restoration as well as that which occurs within areas of protected conservation status or endangered species habitat), waste generation, noise impacts, emissions to air, discharges to water, spill prevention (including those to environmentally sensitive areas), natural resource consumption, and hazardous chemical usage.
  - 1.3 The underlying references for its plan(s), including whether they are codes, guidelines, standards, or regulations; whether they were developed by the entity, an industry organization, a third-party organization (e.g., a non-governmental organization), a governmental agency, or some combination of these groups.
- 2 The scope of disclosure includes all terrestrial and offshore operations in which the entity is involved as an operator, partner, or contractor and which are in the exploration, development, production, or decommissioning phase.
- 3 Where applicable and relevant, the entity shall describe differences between policies and practices in terrestrial areas and in marine areas.



- 4 Where environmental management plans differ significantly by activity, the entity shall describe for each the relevant differences.
- 5 Where applicable and relevant, the entity 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:
  - 5.1 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.<sup>5</sup>
- 6 If the management policies and practices do not apply to all of the entity's sites or operations, it shall indicate the percentage of sites to which they were applied.
- 7 The entity 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:
  - 7.1 Performance Standard 1 — Assessment and Management of Environmental and Social Risks and Impacts
  - 7.2 Performance Standard 3 — Resource Efficiency and Pollution Prevention
  - 7.3 Performance Standard 4 — Community Health, Safety, and Security
  - 7.4 Performance Standard 6 — Biodiversity Conservation and Sustainable Management of Living Natural Resources
- 8 Additional relevant references may include:
  - 8.1 ["Environmental management in oil and gas exploration and production — An overview of issue and management approaches,"](#) Joint E&P Forum/UNEP Technical Publication 1997
  - 8.2 ["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

## **EM-MD-160a.2. Percentage of land owned, leased, and/or operated within areas of protected conservation status or endangered species habitat**

- 1 The entity shall calculate percentage as the acreage of land (owned, leased, and/or operated) in sites with protected conservation status, plus the acreage of land in areas of endangered species habitat divided by the entity's total

<sup>5</sup> International Finance Corporation (IFC), Performance Standard 6, *Biodiversity Conservation and Sustainable Management of Living Natural Resources*, January 1, 2012.

acreage of land (owned, leased, and/or operated).

- 2 Land is considered to be in areas of protected conservation status if it is located within:
  - 2.1 International Union for Conservation of Nature (IUCN) Protected Areas (categories I-VI)
  - 2.2 Ramsar Wetlands of International Importance
  - 2.3 UNESCO World Heritage Sites
  - 2.4 Biosphere Reserves recognized within the framework of UNESCO's Man and the Biosphere (MAB) Programme
  - 2.5 Natura 2000 sites
  - 2.6 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"<sup>6</sup>
    - 2.6.1 These sites may be listed in the World Database of Protected Areas (WDPA) and mapped on [ProtectedPlanet](#)
- 3 Land is considered to be endangered species habitat if it is in or near areas where IUCN Red List of Threatened Species that are classified as Critically Endangered (CR) or Endangered (EN) are extant.
  - 3.1 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.
    - 3.1.1 For the purposes of disclosure, "passage" is defined as all areas of land or water that a migratory species inhabits, stays in temporarily, crosses or overflies at any time on its normal migration route.
- 4 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 to the boundary area of the entity's facilities and/or operations.
- 5 The scope of land for which the entity shall provide disclosure includes that which is owned, leased, and/or operated (e.g., rights-of-way, easements, and land concessions).
- 6 The entity may separately identify land 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).
- 7 The entity may provide discussion around land that is located in protected areas or endangered species habitat but that presents low risk to biodiversity or ecosystem services; the entity may provide similar discussion for land located

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<sup>6</sup> Dudley, N. (ed.) (2008) Guidelines for Applying Protected Areas Management Categories. IUCN: Gland, Switzerland. p.8-9.

in areas with no official designation of high biodiversity value but that present high biodiversity or ecosystem services risks.

### **EM-MD-160a.3. Terrestrial acreage disturbed, percentage of impacted area restored**

- 1 The entity shall disclose the total acreage of disturbed land, where the scope includes land that is owned, leased, and/or operated (e.g., rights-of-way, easements, and land concessions).
  - 1.1 This disclosure shall be a cumulative total of all currently active sites, recently decommissioned sites, or sites being restored, and is not limited to land newly disturbed during the reporting period.
  - 1.2 Land shall no longer be considered disturbed once post-closure restoration and remediation efforts are substantially complete (even if monitoring is ongoing).
- 2 The entity shall disclose the acreage of land impacted by operations that was restored during the reporting period, where, at a minimum, restoration meets the Society for Ecological Restoration's [definition](#): "the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed."
  - 2.1 Restoration may be further defined by local, state, or national laws, industry standards, or the entity's own guidelines.
  - 2.2 The entity shall disclose the definition of restoration and accompanying practices it follows in its description of its best practice environmental management plan.
- 3 Relevant references may include:
  - 3.1 "[Environmental management in oil and gas exploration and production — An overview of issue and management approaches](#)," Joint E&P Forum/UNEP Technical Publication 1997
  - 3.2 "[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

### **EM-MD-160a.4. Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume in Unusually Sensitive Areas (USAs), and volume recovered**

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

- 2 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.
- 3 Consistent with IPIECA Guidance, the scope of releases from operations and events includes:
  - 3.1 Above-ground and below-ground facilities
  - 3.2 Sabotage, earthquakes, or other events outside operational control
  - 3.3 Company-owned and operated transport
  - 3.4 Leakage over time, which is counted once at the time that it is identified
- 4 The entity may 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.
- 5 The entity 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.
- 6 The entity shall disclose the volume of spills in Unusually Sensitive Areas (USAs) as identified by the National Pipeline Mapping System of the Office of Pipeline Safety.
- 7 The entity 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:
  - 7.1 Amounts that were recovered during longer-term remediation at spill sites
  - 7.2 Amounts that evaporated, burned, or were dispersed
- 8 The entity 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](#).

# Competitive Behavior

## Topic Summary

Companies that own natural gas pipelines and storage facilities face numerous and constantly changing regulations from the Federal Energy Regulatory Commission (FERC) in all aspects of their operations, including rates charged, access offered to pipelines, and siting and construction of new facilities. Pipeline companies enjoy a natural monopoly, and FERC regulations ensure that companies do not abuse this position through unfair pricing, discriminatory service, or by other means. Due to concerns about the impacts of oil and gas market distortions on American consumers and businesses, new market manipulation regulations issued by the Federal Trade Commission or the Commodity Futures Trading Commission could also affect the Midstream industry. Companies could be affected by prospective rate changes, compensation payments, or regulatory penalties for violating regulations governing competitive behavior. Midstream companies face uncertainty in relation to their ability to change the rates charged, which could affect their ability to recover higher costs.

## Accounting Metrics

### **EM-MD-520a.1. Total amount of monetary losses as a result of legal proceedings associated with federal pipeline and storage regulations**

- 1 The entity shall disclose the total amount of monetary losses it incurred during the reporting period as a result of legal proceedings associated with federal pipeline and storage regulations, including, but not limited to, those related to rates, pipeline access, price gouging, or price fixing.
- 2 The legal proceedings shall include any adjudicative proceeding in which the entity was involved, whether before a court, a regulator, an arbitrator, or otherwise.
- 3 The losses shall include all monetary liabilities to the opposing party or to others (whether as the result of settlement or verdict after trial or otherwise), including fines and other monetary liabilities incurred during the reporting period as a result of civil actions (e.g., civil judgments or settlements), regulatory proceedings (e.g., penalties, disgorgement, or restitution), and criminal actions (e.g., criminal judgment, penalties, or restitution) brought by any entity (e.g., governmental, business, or individual).
- 4 The scope of monetary losses shall exclude legal and other fees and expenses incurred by the entity in its defense.
- 5 The scope of disclosure shall include, but is not limited to, legal proceedings associated with the enforcement of relevant industry regulations promulgated by regional, federal, state, and local regulatory authorities, such as:
  - 5.1 U.S. Federal Energy Regulatory Commission (FERC)
  - 5.2 U.S. Commodities Futures Trade Commission
  - 5.3 U.S. Federal Trade Commission

Note to **EM-MD-520a.1**

- 1 The entity shall briefly describe the nature (e.g., judgment or order issued after trial, settlement, guilty plea, deferred prosecution agreement, non-prosecution agreement) and context (e.g., price fixing and/or pipeline access) of all monetary losses as a result of legal proceedings.
- 2 The entity shall describe any corrective actions it has implemented as a result of legal proceedings. This may include, but is not limited to, specific changes in operations, management, processes, products, business partners, training, or technology.

# Operational Safety, Emergency Preparedness & Response

## Topic Summary

Midstream companies operate a vast network of assets that face risks of spills and accidents. Any incident that results in the unintended releases of hydrocarbons could have wide-ranging impacts on the environment, employees, and local communities. As a result of these concerns, new safety regulations related to pipeline and rail operations are emerging. Significant events could create one-time costs from fines and corrective actions and contingent liabilities for remediation or damages in lawsuits. These factors could also erode a company's social license to operate. In order to avoid or minimize such risks, investigations of past incidents show that it is extremely important to develop a strong safety culture, and establish a thorough and systematic approach to safety and risk management. This includes emergency preparedness and response and operational integrity across the company and in relationships with contractors.

## Accounting Metrics

### EM-MD-540a.1. Number of reportable pipeline incidents, percentage significant

- 1 The entity shall disclose the total number of reportable pipeline accidents and incidents, including those associated with transportation of hazardous liquid systems and those associated with gas transmission, gathering, and distribution.
- 2 Reportable accidents associated with hazardous liquid pipeline systems are defined based on 49 CFR Part §195.50 as:
  - 2.1 Failure in a pipeline system in which there is a release of the hazardous liquid or carbon dioxide transported resulting in any of the following:
    - 2.1.1 Explosion or fire not intentionally set by the operator
    - 2.1.2 Release of 5 gallons (19 liters) or more of hazardous liquid or carbon dioxide, except for a release of less than 5 barrels (0.8 cubic meters) resulting from a pipeline maintenance activity if the release is:
      - 2.1.2.1 Not otherwise reportable under 49 CFR Part §195
      - 2.1.2.2 Not one described in §195.52(a)(4)
      - 2.1.2.3 Confined to company property or pipeline right-of-way
      - 2.1.2.4 Cleaned up promptly
  - 2.2 Death of any person
  - 2.3 Personal injury necessitating hospitalization

- 2.4 Estimated property damage, including cost of clean-up and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding \$50,000 U.S. dollars
- 3 Incidents associated with gas transmission, gathering, and distribution are defined based on 49 CFR Part §191.3 as any of the following events:
  - 3.1 An event that involves a release of gas from a pipeline, or of liquefied natural gas, liquefied petroleum gas, refrigerant gas, or gas from a Liquefied Natural Gas (LNG) facility, and that results in one or more of the following consequences:
    - 3.1.1 A death, or personal injury necessitating in-patient hospitalization
    - 3.1.2 Estimated property damage of \$50,000 U.S. dollars or more, including loss to the operator and others, or both, but excluding cost of gas lost
    - 3.1.3 Unintentional estimated gas loss of three million cubic feet or more
  - 3.2 An event that results in an emergency shutdown of an LNG facility. Activation of an emergency shutdown system for reasons other than an actual emergency does not constitute an incident.
  - 3.3 An event that is significant in the judgment of the operator, even though it did not meet the criteria of the above paragraphs of this definition.
- 4 The entity shall disclose the percentage of reportable accidents that were significant, where a significant accident or incident is defined according to the U.S. Pipeline and Hazardous Materials Safety Administration's (PHMSA) pipeline and hazardous materials safety reporting guidelines as those that resulted in:
  - 4.1 Fatality or injury requiring in-patient hospitalization
  - 4.2 \$50,000 or more in total costs, measured in 1984 U.S. dollars
  - 4.3 Highly volatile liquid releases of 5 bbls or more or other liquid releases of 50 barrels or more
  - 4.4 Liquid releases resulting in an unintentional fire or explosion

## **EM-MD-540a.2. Percentage of (1) natural gas and (2) hazardous liquid pipelines inspected**

- 1 The entity shall disclose the percentage of (1) natural gas and (2) hazardous liquid pipelines inspected, where:
  - 1.1 The percentage of (1) hazardous liquid pipelines inspected is calculated as the length, in kilometers, of hazardous liquid a pipeline inspected divided by the total length, in kilometers, of hazardous liquid pipelines.



- 1.2 The percentage of (2) natural gas pipelines inspected is calculated as the length, in kilometers, of natural gas pipeline inspected divided by the total length, in kilometers, of natural gas pipelines.
- 1.3 Inspection activities include those listed under U.S. 49 CFR 192 for gas pipelines and U.S. 49 CFR 195 for liquid pipelines, including:
  - 1.3.1 Internal inspection tool or tools capable of detecting corrosion, and any other threats to which the covered segment is susceptible
  - 1.3.2 Pressure test
  - 1.3.3 Direct assessment to address threats of external corrosion, internal corrosion, or stress corrosion cracking
  - 1.3.4 Other technology that an operator demonstrates can provide an equivalent understanding of the condition of the line pipe
- 1.4 If other technologies were used by the entity to conduct inspections per U.S. 49 CFR 192 or U.S. 49 CFR 195, the entity shall disclose which technology was used.
- 2 The entity shall disclose the percentage separately by natural gas pipelines and hazardous liquid pipelines, where:
  - 2.1 Natural gas pipeline is defined according to U.S. 49 CFR 192 as all parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies.
  - 2.2 Hazardous liquid pipeline is defined per U.S. 49 CFR 195 as all parts of a pipeline facility through which a hazardous liquid or carbon dioxide moves in transportation, including, but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

### **EM-MD-540a.3. Number of (1) accident releases and (2) non-accident releases (NARs) from rail transportation**

- 1 The entity shall disclose the total number of accident releases of hazardous material and the total number of non-accident releases (NARs) of hazardous materials from rail transportation activities, where:
  - 1.1 Hazardous material is defined according to U.S. Code of Federal Regulations (CFR) Title 49 as: "A substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and is designated as hazardous under section 5103 of U.S. Federal hazardous materials transportation law (49 U.S.C. 5103)."

- 1.2 An accident release is defined as a release of hazardous materials, reportable to the U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA) via DOT 5800.1 report form.
- 1.3 A non-accident release is defined according to the Association of American Railroads (AAR) as the unintentional release of a hazardous material while in transportation, including loading and unloading while in railroad possession that is not caused by a derailment, collision or other rail-related accident. NARs consist of leaks, splashes, and other releases from improperly secured or defective valves, fittings, and tank shells, and also include venting of non-atmospheric gases from safety relief devices. (Normal safety venting of atmospheric gases, such as carbon dioxide and nitrogen, is not considered a NAR).
- 2 Where relevant, the entity should provide a breakdown of spills and releases by type, such as hydrocarbons and hazardous substances.

Note to **EM-MD-540a.3**

- 1 The entity shall discuss its processes, procedures, and strategies to manage non-accident and accident releases.
- 2 Relevant topics of discussion include, but are not limited to, the use of management systems, such as the American Chemistry Council's Responsible Care Management System, use of safety technologies, employee training, implementation of work shift limits, and safe-arrival pay incentives.

**EM-MD-540a.4. Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project lifecycles**

- 1 The entity shall discuss how it integrates a culture of safety and emergency preparedness throughout its value chain and project lifecycles.
  - 1.1 The scope of the discussion shall include, but is not limited to training, joint management by the workforce and leadership, rules and guidelines, and use of technology.
  - 1.2 The entity shall include a description of how emergency preparedness is coordinated amongst business partners (e.g., contractors and sub-contractors).
  - 1.3 The scope of midstream oil and gas project lifecycle includes, at a minimum, land acquisition (e.g., right-of-way easement negotiations), site surveys, site development and pipeline installation, revegetation, operation, and decommissioning and removal.
- 2 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.



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