Enbridge Inc. - Climate Change 2018

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Enbridge is North America's largest energy infrastructure company and is a continental leader in energy delivery—connecting people to the energy they need, safely and reliably. Through subsidiaries and equity affiliates, we own and operate a diversified portfolio of complementary energy assets that includes crude oil and natural gas pipelines, gathering, processing and storage facilities, natural gas distribution utilities and renewable power generation assets. Headquartered in Calgary, Alberta, Canada we operate in 41 states, seven Canadian provinces and have investments in renewable energy and power in North America and Europe. Our success is driven by our approximately 12,700 employees and their steadfast commitment to safety, environmental protection, responsible operations and respect for our communities.

On February 27, 2017, we announced the closing of the CAD$37 billion Spectra Energy Corp acquisition, a leading natural gas franchise. This strategic move realized a critical component of our 2016 Strategic Plan, which emphasized the importance of re-balancing our business mix to establish new platforms for organic growth that are responsive to the future energy mix. The diversification of our business mix is a priority for Enbridge. In late 2017, we announced our intention to sell or monetize certain non-core assets as part of our Strategic Plan and Outlook for 2018-2020.

We recognize that climate change is a global issue, and as the world transitions to more low-carbon energy sources, our climate change strategy is focused on improving the carbon performance of our existing operations and critical infrastructure, diversifying our asset mix by expanding our investment in lower-carbon sources of energy, particularly natural gas and renewables, and bringing safe, reliable, low-cost and low-carbon solutions to scale in North America.

As a transporter of energy, Enbridge operates the world's longest crude oil and liquids transportation system. We safely deliver an average of 2.8 million barrels of oil a day—or 28 percent of the crude produced in North America. We provide transmission and storage of natural gas to customers in various regions of the northeastern and southeastern United States, the Maritime Provinces in Canada and the Pacific Northwest in the United States and Canada, and in the province of Ontario, Canada, in addition to natural gas gathering and processing services to customers. As a distributor of energy, we also provide natural gas sales and distribution services to about 3.7 retail customers in Ontario, Quebec, New Brunswick, and the State of New York through our natural gas distribution business, which is comprised of Enbridge Gas Distribution Inc. (EGD), Union Gas Limited (Union Gas), Gazifère and Enbridge Gas Distribution New Brunswick. We are a significant Canadian investor in wind and solar, including assets in the U.S. and a growing renewables presence in offshore wind in Europe. Our renewable energy and transmission projects generate and transmit enough energy to power 1.8 million homes. We're also investing in geothermal and hydro power, using heat from the earth and the force of running rivers to generate electricity with zero emissions.

In addition, we own a 50 percent interest in DCP Midstream, LLC (DCP Midstream), based in Denver, Colorado, one of the leading natural gas gatherers based on wellhead volumes and one of the largest producers and marketers of natural gas liquids in the United States. We also have a 50 percent interest in the Alliance Pipeline, which transports natural gas. Our business operations other than DCP Midstream and Alliance Pipeline may be referred to collectively as Enbridge.

Our activities are carried out through five business segments: Gas Transmission and Midstream (GTM), Gas Distribution, Liquids Pipelines (LP), Green Power and Transmission and Energy Services. In this report, Enbridge accounts for 2017 energy consumption and greenhouse gas (GHG) emissions for the company's business segments where Enbridge has operational control: GTM, Gas Distribution, LP, and Green Power and Transmission. In addition, we include GHG emissions and energy consumption data for our Corporate Services, which covers Enbridge's corporate head office in Calgary, Alberta and our Houston, Texas office operations, and which provide centralized company-wide services and management.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2017	December 31 2017	No	<Not Applicable>
Row 2	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 3	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 4	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

Canada

United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

CAD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-OG0.7

(C-OG0.7) Which part of the oil and gas value chain and other areas does your organization operate in?

Row 1

Oil and gas value chain

Downstream

Other divisions

Carbon capture and storage/utilization

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Other, please specify (CSR Committee of the Board)	Our Board recognizes that climate change is a global issue and the importance of managing climate risk to achieve our long-term strategic priorities and carrying out its responsibilities to our shareholders. The Board has formally tasked The Corporate Social Responsibility Committee (CSRC) of the Board with direct responsibility and governance level oversight of climate change and corporate social responsibility (CSR) matters. The CSRC is comprised of 5 independent directors with the required skills and experience. Per the Charter, the CSRC reviews, approves or makes recommendations to the BOD in respect of CSR matters, including but not limited to climate change and environmental stewardship. The CSRC has oversight over execution of our Corporate Climate Change Policy. The Chief Sustainability Officer (CSO) has a direct reporting relationship to the CSRC to enhance the Board's knowledge and support its ability to exercise due diligence on specific climate risks.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Corporate Social Responsibility Committee (CSRC) of the Board has direct responsibility and oversight for governance level oversight of our guidelines, policies, performance, risk management and practices related to corporate social responsibility (CSR) matters. The CSRC is comprised of 5 independent directors. They review, approve or make recommendations to the BOD in respect of CSR matters, including climate change and environmental stewardship. Governance of climate change extends from the CSR Committee of the Board, to the Executive Leadership Team and into the business units. The Committee has oversight over execution over of the company's Climate Change Policy and lead accountability for oversight on climate strategy and reporting on our overall environmental performance. The CSRC also reviews and provides oversight on the company's reporting on climate change, and the use of appropriate benchmarks, reporting methodologies and performance against goals and commitments. Based on ongoing discussions and guidance from the Board, management sets specific objectives, goals and metrics on key environmental issues that are consistent with the company's business strategies and policies. These are reviewed with our Board. For matters arising between regularly scheduled meetings, the CEO apprises the Board Chair, the appropriate committee chair and the rest of the Board for escalation if required. Enbridge's Chief Legal Officer (CLO) leads the company's Legal, Aviation and Public Affairs and Communications, which includes climate change. The CLO reports directly CEO. The Board is briefed by the Chief Sustainability Officer (CSO) who has a direct reporting relationship to the CSRC to enhance the Board's knowledge and support its ability to exercise due diligence on specific climate risks. The CSO reports on climate and energy transition issues that are evolving and relevant to the business and operations to the CSR Committee at every meeting (four times a year). Periodically our Board has met with noted experts to hear their perspectives on climate change. For example in Sep. 2017, they met with a noted environmental and energy economist to explore opportunities for growth and risk assessment and disclosure in a carbon-constrained world. Our board stays well versed in emerging issues and developments in support of their oversight role.

C1.2

(C1.2) Below board-level, provide the highest-level management position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify (Chief Legal Officer)	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored.

The CSO function lies within the Public Affairs and Communications Department, which is led by the Executive Vice President and Chief Legal Officer. Enbridge's CSO is responsible for meeting overall business and sustainability goals. The CSO has a mandate to increase Enbridge's level of engagement, both internally and externally, on strategies for addressing climate performance and risk, and for improved integration of climate considerations in our decision making and investment processes. The Corporate Social Responsibility and Sustainability team supports the CSO in the execution of her mandate.

The CSO has a direct reporting relationship to the CSR Board Committee to enhance the Board's knowledge and support its ability to exercise due diligence on specific climate risks and challenges. A standing item on all CSR Board Committee agendas is an report from our CSO on climate and energy transition issues relevant to Enbridge's business and operations. Our CSO also supports Board education on climate and energy issues.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.

Who is entitled to benefit from these incentives?

Chief Executive Officer (CEO)

Types of incentives

Monetary reward

Activity incentivized

Other, please specify (See comment)

Comment

Activity incentivized: the CEO has responsibility for all business activities and development and execution of business strategy. This includes meeting corporate climate policy objectives. The President, CEO and a member of the company's Board of Directors (BOD); responsible for meeting overall business strategy, including those related to environment, health and safety (EHS) and diversification of Enbridge's energy businesses.

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized
Other, please specify (See comment)

Comment
Activity incentivized: new business opportunities, including low carbon and energy efficiency projects in response to consumer preferences. Execution of short- and long-term business strategies to respond to new opportunities for business diversification.

Who is entitled to benefit from these incentives?
Other C-Suite Officer

Types of incentives
Monetary reward

Activity incentivized
Other, please specify (See comment)

Comment
Activity incentivized: integration of climate and energy efficiency into the business units and communications of climate related disclosures voluntary or otherwise. Executive Vice President and Chief Legal Officer: meeting overall business goals inclusive of updating the BOD on environment and climate change related risks and opportunities and meeting goals related to climate change policy, regulation and legislative proposals on jurisdictions Enbridge operates; works in concert with the CSO and VP of Public Affairs and Communications.

Who is entitled to benefit from these incentives?
Chief Financial Officer (CFO)

Types of incentives
Monetary reward

Activity incentivized
Other, please specify (See comment)

Comment
Activity incentivized: identify and assess all of our corporate-wide risks, including environmental and climate change. Risk oversight and management is an important role for the Board and Board committees. The Board is responsible for identifying and having an understanding of the principal risks of the company's business and ensuring that appropriate systems are implemented to monitor, manage and mitigate those risks, including climate change. The CFO ensures key risks (financial, strategic, legal, and operational), including climate change, are identified and prioritized through the Corporate Risk Assessment Process and reported to the BOD, at least annually.

Who is entitled to benefit from these incentives?
Other C-Suite Officer

Types of incentives
Monetary reward

Activity incentivized
Other, please specify (See comment)

Comment
Activity incentivized: new business opportunities, including establishment of capital allocation parameters and portfolio mix Executive Vice President and Chief Development Officer: Execution of business strategy to respond to new opportunities for business diversification.

Who is entitled to benefit from these incentives?
Public affairs manager

Types of incentives
Monetary reward

Activity incentivized
Other, please specify (See comment)

Comment
Activity incentivized: This position is at the VP level: integration of climate and energy efficiency into the business units and

communications of climate related disclosures voluntary or otherwise Meeting climate change engagement, communication and disclosure goals and corporate sustainability objectives and disclosure goals.

Who is entitled to benefit from these incentives?
Chief Sustainability Officer (CSO)

Types of incentives
Monetary reward

Activity incentivized
Other, please specify

Comment
Activity incentivized: emissions reduction project; energy reduction project; efficiency project; other: integration of climate and energy efficiency into the business units. The Chief Sustainability Officer (CSO) is responsible for meeting overall business and sustainability goals. Our CSO has a mandate to increase Enbridge's level of engagement, both internally and externally, on strategies for addressing climate performance and risk, and for improved integration of climate considerations in our decision making and investment processes. Our CSO's responsibilities that are tied to performance incentives include: meeting corporate and regulatory policy requirements on climate issues; and disclosure, communication and engagement with key external stakeholders on climate issues.

Who is entitled to benefit from these incentives?
Management group

Types of incentives
Monetary reward

Activity incentivized
Emissions reduction project

Comment
The Management Team in the Green Power and Transmission business unit is incented to secure new renewable energy projects that meet our investment criteria, support business diversification and Enbridge's leadership and contribution to the transition to a lower carbon economy. These projects contribute to the management of climate change risks by helping meet Enbridge’s strategic goal to develop new platforms for growth and diversification to sustain long-term growth.

Who is entitled to benefit from these incentives?
Environment/Sustainability manager

Types of incentives
Monetary reward

Activity incentivized
Other, please specify (See comment)

Comment
Activity incentivized: emissions reduction project; behavior change related indicator. Meeting environment and climate change policy objectives and disclosure and communication goals in the CDP, DJSI and corporate CSR & Sustainability Report and other voluntary disclosures; evaluating climate change risks/opportunities for the company.

Who is entitled to benefit from these incentives?
All employees

Types of incentives
Monetary reward

Activity incentivized
Other, please specify (See comment)

Comment
Activity incentivized: efficiency project; efficiency target Enbridge Gas Distribution (EGD) and Union Gas (UG) have established targets for energy efficiency through Demand Side Management (DSM) and customer outreach and education programs. These initiatives are aimed at educating residential, commercial, institutional and industrial customers on how they can reduce their consumption of natural gas and providing financial incentives to positively influence their decision. Performance contributes to criteria in EGD's and UG’s annual incentive scorecard and affects the annual bonus for all employees.

Who is entitled to benefit from these incentives?
Environmental, health, and safety manager

Types of incentives
Monetary reward

Activity incentivized
Other, please specify (See comment)

Comment
Meeting corporate EHS goals including oversight of GHG emissions data, EHS strategy and compliance.

Who is entitled to benefit from these incentives?
Other, please specify (Union Gas Fleet Manager)

Types of incentives
Monetary reward

Activity incentivized
Behavior change related indicator

Comment
Union Gas - meeting a fuel efficiency target in 2017.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	1	3	
Medium-term	3	5	
Long-term	5	10	

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.
Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Includes ongoing monitoring of climate-related risks and opportunities. A more rigorous climate scenario analysis commenced in 2017 and utilizes IEA scenarios up to 2040.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Through Enbridge's annual Corporate Risk Assessment (CRA) process, the company identifies and addresses corporate-wide risks such that it can prioritize and align its risk management and treatment efforts. Climate considerations are incorporated into the CRA process. These include financial risks (e.g. emissions under regulation, trans-boundary emissions liability, and change in market demand for natural gas from customers), operational and legal risks (e.g. potential regulation of GHGs, measurement and verification of emissions), stakeholder opposition and reputation risks (e.g. public/NGO perception and compliance failure) and physical and adaptation risks (e.g. flooding, extreme weather, increased ambient temperatures and sea level rise). The outcome of the CRA process is a comprehensive report to the Board of Directors. A company-wide business development process is used to evaluate business opportunities including those driven by climate change such as demand growth due to carbon prices and regulatory frameworks.

In addition to the annual CRA process, information on changes in the external environment that could impact the business are communicated to Management and the Board of Directors on a continual basis.

More rigorous climate scenario analysis that utilizes IEA scenarios up to 2040 was commenced in 2017.

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Failure to comply with environmental regulations may result in the imposition of fines, penalties and operational restrictions affecting our operating assets. Enbridge complies with all applicable environmental regulations in jurisdictions in which the company operates. The company also has established internal policies, frameworks and systems to achieve sound environmental management during both the construction and operation of its assets.
Emerging regulation	Relevant, always included	Changes in environmental laws and regulations or the enactment of new environmental laws or regulations could result in a material increase in our cost of compliance with such laws and regulations. If there is a delay in obtaining any required environmental regulatory approvals, if we fail to obtain or comply with them, or if environmental laws or regulations change or are administered in a more stringent manner, the operations of facilities or the development of new facilities could be prevented, delayed or become subject to additional costs. Enbridge monitors the regulatory environment on an ongoing basis to ensure the company complies with all relevant regulations and to understand potential implications of climate-related policies and regulations for the business. In Canada, Enbridge has been engaged in consultations on methane regulations and on the Clean Fuel Standard as a member on the federal government's Technical Working Group and Multi-Stakeholder Working Group. In the U.S., the company has engaged on the EPA's development and technical amendments for the Agency's New Source Performance Standards for methane and supported development of voluntary industry programs.
Technology	Relevant, always included	Factors considered include: Electric vehicle (EV) penetration, renewable and energy storage, energy efficiency, developments related to artificial intelligence, data system optimization and data analytics.
Legal	Relevant, always included	Factors considered include: regulatory, market and contractual conditions, and relevant judicial decisions.
Market	Relevant, always included	Factors considered include: weather, global supply and demand, commodity prices and price volatility, stakeholder opposition to energy infrastructure projects, potentially affecting supply and demand.
Reputation	Relevant, always included	Factors considered include: negative impacts on our business, operations or financial results due to changes in our reputation with stakeholders, third party groups (including non-governmental organizations), political leadership, the media or other entities; exposure to the risk of higher costs, delays or even project cancellations due to increasing pressure on governments and regulators by other groups. Recent judicial decisions have increased the ability of third parties to make claims and oppose projects in regulatory and legal forums. Enbridge engages with a range of stakeholders on climate and energy issues, including communities in which the company operates, governments, NGOs, Indigenous communities, investors, industry associations and media. The company's natural gas utilities engage with our natural gas customers on energy savings and GHG reductions through a range of Demand Side Management programs and services.
Acute physical	Relevant, always included	Factors considered include: adverse weather events or natural disasters such as hurricanes, tornadoes, and major flooding, including in coastal areas and similar events beyond Enbridge's control that could result in significant property damage or impairment of our operations and supply disruptions. Across Enbridge's businesses, risk treatment for adverse weather events and natural disaster incidents include facility siting, design and construction techniques to limit exposure to adverse weather and natural disaster risk, regular inspections of our energy delivery infrastructure and pipeline rights-of-way – including on, and in the vicinity of, pipeline crossings at watercourses – comprehensive emergency preparedness plans, business continuity plans and emergency response exercises.
Chronic physical	Relevant, always included	See "acute physical" risks.
Upstream	Relevant, always included	Factors considered include: environmental regulation and corporate reputation affecting oils sands and natural gas producers, commodity prices, pipeline capacity, stakeholder opposition to energy infrastructure projects.
Downstream	Relevant, always included	Factors considered include: market access, changing consumer preferences on energy sources and costs, and grid system developments.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Each of our business units have internal processes for mitigating climate related risks and assessing opportunities through: ensuring regulatory compliance, long term corporate strategy development, investment review and performance measurement, evaluation and reporting. These are rolled up and prioritized annually into business strategy at an enterprise-wide level.

A case study example would be our acquisition of Spectra Energy in 2017, through which we reduced the energy intensity of the energy we deliver. Along with our investment in offshore wind in Europe, this was the result of our ongoing assessment of growth opportunities arising from the transition to lower carbon sources of energy.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact driver

Other, please specify (Disruption of services and revenue)

Company- specific description

The Intergovernmental Panel on Climate Change's Fifth Assessment Report (2014) and other scientific literature on climate change indicate that the frequency and intensity of certain types of adverse weather events are expected to change. As a result, the physical risks associated with climate change are likely to continue and strengthen. Adverse weather events can affect energy production and delivery facilities, causing supply disruptions of varying lengths and magnitudes and affecting other infrastructure that depends on energy supply. Enbridge has operations and facilities in regions exposed to adverse weather events such as hurricanes, tornadoes and major flooding, including in coastal areas (the Gulf Coast, southeast, mid-Atlantic and northeast U.S. and across Canada). In 2017, severe weather events in jurisdictions in which the company operates included Hurricane Harvey in Texas and Hurricane Irma in Florida—during which we maintained our operations—while Quebec, Ontario and the Canadian Maritime provinces experienced heavy rainfall and severe flooding. Extreme weather events could disrupt Enbridge's operations for a relatively short period, resulting in a short-term decrease in transmission and gas distribution services, or for longer periods in the event of the major destruction of infrastructure facilities owned by the company or its customers. In addition to supply or market disruptions from local or regional extreme weather events, there may be changes in customers' contracting patterns for storage and transportation services and modifications to gas transmission and distribution services in Enbridge's value chain. A service interruption or an environmental incident resulting from an adverse weather event could have a significant impact on our operations, and negatively impact financial results, relationships with stakeholders and our reputation. This risk exists now and into the long term.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium-low

Potential financial impact

10000000

Explanation of financial impact

Adverse weather may impact our facilities and operations for our U.S. gas operations. The impact by hurricanes and sea level rise that could result in flooding or damage to U.S GTM may result in short term outages and disruption of operations in the range of ~ USD $5-$10mm.

Management method

Method: Risk treatment for severe weather events/natural disaster incidents includes facility design and construction techniques to withstand adverse weather conditions, moving onshore assets to higher elevations and installing on-site emergency generators at operational facilities to provide power in the event of extended outages. Enbridge maintains emergency response plans that are tailored to each business unit to cover their operations and associated risks, including geographic-specific information. A cross-business-segment group is trained to respond to large-scale events that require more resources than one of our business segments alone could provide. As our systems are part of a broadly-based logistics network that connects producers to consumers, all parties are aligned in their contingency planning to shut down in advance of severe storms and resume operations and energy supply as a first priority following a severe weather event, thus limiting impacts. Activity: Emergency preparedness/response plans are regularly reviewed, audited, updated and tested. In 2017, more than 3,200 employees received emergency response training and we held 365 drills, exercises and emergency equipment deployments. As part of our program for maintaining the fitness of our systems, we conducted more than 26,700 pipeline inspections on our liquids and natural gas pipelines and distribution network, covering more than 212,080 km of our pipeline system across Canada and the U.S.

Cost of management

Comment
All of the costs associated with planning and execution of emergency response plans in the event of a natural disaster affecting the company's assets are already incorporated into existing operating costs and capital plans. In 2017 Enbridge spent more than $1.9bn on integrity management and damage avoidance programs and leak detection that help maintain system fitness and detect leaks across its operations in Canada and the U.S. In 2017, the company also distributed $1.7mm through its Safe Community Program, which provides grants to law enforcement agencies, firefighters, emergency medical services, and emergency management, 9-1-1 and other related health providers who would respond to emergency situations in or near communities where Enbridge has operations.

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Transition risk

Primary climate-related risk driver
Policy and legal: Mandates on and regulation of existing products and services

Type of financial impact driver
Other, please specify (Uncertainty surrounding new regulations)

Company- specific description
Enbridge's operations are subject various to state, provincial and federal environmental regulations in the jurisdictions in which we operate. These include carbon and climate-related policies and regulations, which continue to evolve and have the potential to result in significant capital and operational expenses to the company. Examples include: (i) The Pan-Canadian Framework on Clean Growth and Climate Change (PCF), which is comprised of the following key components: (a) a federal floor price on carbon. All provinces and territories are expected to have a carbon pricing mechanism in place by 2019, in the absence of which the federal carbon price will apply; (b) continued phase-out of coal-fired electricity; (c) introduction of the "Regulation Respecting the Release of Methane and Certain Volatile Organic Compounds," for the upstream oil and gas sector which, beginning in 2020, will require leak detection and repair (LDAR) to be conducted three times per year and leaks to be repaired within 30 days of detection or before the next planned shutdown and; (d) the development of a Clean Fuel Standard (CFS) for which are expected to take effect in 2023 and will apply to Enbridge's natural gas transmission and distribution businesses. While federal greenhouse gas (GHG) related regulatory design details remain forthcoming, provincial authorities have been actively pursuing related initiatives and equality. (ii) In the U.S., climate change action is evolving primarily at the state and regional levels. In addition, a number of provinces and states have joined regional GHG initiatives, and a number are developing their own programs that would mandate reductions in GHG emissions. Third party groups and regulatory agencies are increasingly focusing on emissions of methane associated with natural gas development and transmission. (iii) Independent regulatory agencies in Canada and the U.S. have begun lifecycle GHG assessments related to upstream, midstream and downstream activities primarily from fossil fuel production and consumption for major liquid and natural gas pipelines. These assessments indicate a trend towards consideration of upstream, downstream and mid-stream GHG emissions in project review. GHG assessments have been done on two Enbridge projects: our Line 3 Replacement Project in Canada; and our Line 67 Expansion Project in the U.S.

Time horizon
Medium-term

Likelihood
More likely than not

Magnitude of impact
Medium-low

Potential financial impact

Explanation of financial impact
Due to uncertainty of Canadian federal and provincial policies, cumulative financial impacts of climate policies and regulations are difficult to estimate. Certain regulations stemming from the PCF such as the federal methane regulation could result in significant additional operating expenses for the company. As a midstream operator, Enbridge can flow through some of the costs associated with new carbon and climate regulations. Due to the speculative outlook regarding any US federal and state policies, we cannot estimate the potential effect of proposed climate policies on our future consolidated results of operations, financial position or cash flows. However, such legislation or regulation could materially increase our operating costs, require material capital expenditures or create additional permitting, which could delay proposed construction projects.

Management method
Method: Enbridge is engaging with federal, state and provincial governments on carbon and climate policies and regulations directly and through participation in industry associations and other stakeholders to ensure that the implementation of these new policies and regulations consider and address competitiveness impacts by ensuring that they reduce emissions in the most cost effective way. A internal working group monitors the regulatory environment to inform response to new climate and energy regulatory requirements, including implications of new provincial, state and federal management policies in the U.S. and Canada on GHG emission reductions. We are also integrating climate considerations into strategic and investment decision making processes. Activity: In Canada, Enbridge has been engaged in consultations on methane regulations and on the Clean Fuel Standard as a member on the federal government's Technical Working Group and Multi-Stakeholder Working Group. In the U.S., the company has engaged on the EPA’s development and technical amendments for the Agency’s New Source Performance Standards for methane and supported development of voluntary industry programs. Other measures include: (i) implementation of integrity management programs for all of our oil and natural gas pipelines and related storage and operational facilities; (ii) focusing on energy efficiency initiatives across our operations and; (iii) improving GHG data quality, completeness and accessibility.

Cost of management

Comment
The cost of management is primarily in staff time. At the corporate level, Enbridge has approximately 100 subject matter expert FTEs at an average annual salary of $80k involved in monitoring and addressing climate and carbon issues through our business functions involved in Stakeholder Engagement, CSR and Sustainability, Law and Regulatory Affairs, Environment, External Affairs, Indirect Tax and Customs, Operations and our natural gas utilities. Additional costs are incurred for third party verification of data emissions.

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Transition risk

Primary climate-related risk driver
Policy and legal: Enhanced emissions-reporting obligations

Type of financial impact driver
Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description
Enbridge’s facilities in Canada and the U.S. emitting GHG emissions over regulatory reporting thresholds are required to report emissions on an annual basis. New reporting and permitting programs taken as a whole, increase the costs and complexity of operating oil and gas operations in compliance with these legal requirements, with resulting potential to adversely affect our cost of doing business. This may require us to incur certain capital expenditures in the future for air pollution control equipment in connection with obtaining and maintaining operating permits and approvals for air emissions and operational expenditures related to emissions reporting. Examples of reporting frameworks include: (i) The Canadian Environmental Protection Act, 1999 (CEPA 1999), which from 2017 requires operators of certain facilities to report facility GHG emissions over 10kt CO2e/year to Environment and Climate Change Canada annually. Enbridge has facilities in BC, Alberta, Quebec and Ontario that are subject to federal reporting obligations. In addition, the federal methane regulation will introduce new administrative requirements associated with the measurement and quantification of methane emissions. (ii) BC Greenhouse Gas Reporting Regulation under the Greenhouse Gas Reduction Act, Cap and Trade Act, requires companies to report on GHG emissions from all facilities producing greater than 10k tCO2e/year. (iii) In Ontario the GHG reporting threshold is 10kt CO2e/year and for natural gas distribution and includes fugitive and vented emission sources, as well as the end-user combustion emissions. Union Gas and Enbridge Gas Distribution will also be

required to have their 2017 customer emissions from use of natural gas verified. (iv) Pursuant to federal regulations in the U.S., Enbridge is currently subject to an obligation to report our GHG emissions at our largest emitting facilities.

Time horizon
Short-term

Likelihood
More likely than not

Magnitude of impact
Medium-low

Potential financial impact

Explanation of financial impact
Given the evolving nature of regulatory reporting requirements, it is difficult to estimate the potential cumulative financial impacts to our business.

Management method
Method: Enbridge is managing risks and costs associated with regulatory GHG reporting requirements by continuing to improve GHG data quality, completeness and accessibility, including by obtaining third party verification of emissions data. Approximately 15 FTEs at an annual average salary of $80k are involved in emissions data reporting at the business unit level. Management of current emissions reporting is supported by Enbridge's emissions data management system, which enables the company to track its emissions and to comply with regulatory reporting requirements in Canada and the U.S. Ongoing monitoring of the regulatory environment surrounding requirements for reporting of GHG emissions data and ensures adequate resources to respond to additional requirements for reporting and data management are provided as required. Voluntary reporting of our GHG emissions and management strategies includes through our annual CSR and Sustainability Report, Annual Report and CDP submission. Activity: In 2017, Enbridge began integrating the emissions data systems and controls across the company's business units. This work continued in 2018 and included a third party led data assurance readiness exercise to enable us to work towards achieving third party limited assurance of our GHG and energy consumption data in 2019. Our natural gas distribution and Canadian transmission and midstream businesses are conducting annual external verification of emissions over reporting thresholds

Cost of management
3900000

Comment
Enbridge's management strategies for monitoring and assessing potential impacts from regulatory policies utilize existing employees at an average annual salary of $80k. At the corporate level, costs associated with data system integration and emissions reporting is in the range of $1.5mm and includes: (i) annual costs associated with licensing and maintenance of the company's emissions data management system, including support of one FTE, are approximately $125k (ii) costs associated with external service providers retained for the third party led data assurance readiness exercise and Scope 2 market based emissions estimate for our liquids pipelines operations in the U.S. totaling approximately $100k and; (iii) the cost for emissions data system integration work in 2018, estimated at approximately $1mm.

Identifier
Risk 4

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Transition risk

Primary climate-related risk driver
Policy and legal: Increased pricing of GHG emissions

Type of financial impact driver
Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description
Enbridge has exposure to carbon pricing in some jurisdictions in which we operate, in the form of a carbon tax or carbon levy: (i) Following a decision by the British Columbia (BC) government to freeze the province’s carbon tax at 2012 levels for five years, in 2018 the carbon tax was raised by $5 per ton of CO2e - from $30/t CO2e to $35/t CO2e. The tax currently applies to all fuel combustion in BC. Enbridge’s western Canadian Gas Transmission and Midstream (GTM) operations are subject to the carbon tax. (i) In Alberta, our pipeline operations are subject to an economy-wide carbon levy at a rate of $30/tCO2e applied to the purchase of fossil fuels (e.g. gasoline, natural gas). In 2018, the provincial Carbon Competitiveness Incentive Regulation (CCIR) replaced the Specified Gas Emitters Regulation. The CCIR is an output-based allocation system for large industrial emitters, and applies performance benchmarks to protect trade exposed industries. In mid-2018, Enbridge converted its 50 percent ownership of the

Alliance Pipeline to an owner-operated model. The Alliance Pipeline is subject to the CCIR.

Time horizon
Current

Likelihood
Very likely

Magnitude of impact
Low

Potential financial impact

Explanation of financial impact
In 2017, Enbridge paid ~$72mm in carbon tax to the BC government; tax is largely passed on to customers. As a a crude oil pipeline operator in Alberta, the carbon levy has not had a significant impact on our operations in the province. Our marketing companies are also not significantly impacted as product purchased in Alberta is for the most part exported from the province. Due to uncertainty around emerging federal and provincial policies, cumulative financial implications are difficult to predict.

Management method
Method: Enbridge continues to engage the federal and provincial governments of Alberta and BC to ensure the economic impacts of climate policy are taken into account when making policy decisions and deepen its understanding of GHG emission abatement opportunities. Cost analyses are conducted to understand potential implications of carbon pricing regulations on the business. Integrity management practices are in place for all of Enbridge's oil and natural gas transmission pipelines and related operational facilities, and assets are systematically maintained through testing, inspections and auditing. Enbridge has acid gas injection well sites in the U.S. (2 sites) and Canada (8 sites). Activity: In early 2017, Enbridge completed a third-party led carbon sensitivity analysis taking the current and a possible future carbon price in BC into account to better understand the implications of the carbon tax on newly acquired BC operations. The results of the report aligned with Enbridge's 2017 carbon tax expenditure in BC. Canadian GTM operations continuously evaluate opportunities to minimize GHG emissions from its facilities. In 2017, GTM reinjected more than 61,910 tCO2e that would otherwise have been emitted into the atmosphere.

Cost of management

Comment
In the context of Enbridge's three-year strategic plan and focus on capital allocation to Enbridge's core natural gas transmission and distribution, liquids pipelines and utilities businesses, in 2018 the company announced the sale of its Canadian Natural Gas Gathering and Processing Businesses for $4.31 Billion. The Gas and Processing business includes 19 natural gas processing plants and liquids handling facilities, with a total operating capacity of 3.3 Bcf/d and 3,550 km of natural gas gathering pipelines. Enbridge continues to maintain the operation of its natural gas transmission facilities in BC.

Identifier
Risk 5

Where in the value chain does the risk driver occur?
Customer

Risk type
Transition risk

Primary climate-related risk driver
Policy and legal: Mandates on and regulation of existing products and services

Type of financial impact driver
Other, please specify (Uncertainty around cap and trade)

Company- specific description
Enbridge has exposure to carbon pricing in some jurisdictions in which we operate, in the form of a cap and trade system: (i) A cap and trade system is currently in place in the province of Quebec, impacting the operations of Gazifere, a subsidiary of Enbridge Inc. Under the province's cap and trade regulation, Gazifere is required to purchase emission allowances on behalf of its customers. On January 1, 2018, the Quebec cap and trade system linked with California's cap and trade system. (ii) Ontario commenced a cap and trade system on January 1, 2017. Under the cap and trade regulation, EGD and UG (together, the utilities) were required to purchase emission allowances or credits for most of our customers' use of natural gas as well as for emissions from our own operations. EGD and Union are operating their Demand Side Management (DSM) programs under multiyear plans (2015 to 2020), which were approved by the Ontario Energy Board (OEB). DSM plans were in response to sections 27.1 and 27.2 of the Ontario Energy Board Act, 1998 which is intended to promote energy conservation through conservation and demand management (CDM) and natural gas DSM. The DSM programs support optimization of the value of energy use by helping customers better manage their energy consumption, including ancillary emission benefits. Beginning in 2017, the OEB initiated a mid-term review of the DSM programs, which the utilities are participating in. As part of their DSM programs, EGD and Union offer Home Energy

Conservation/Home Reno Rebate Programs, part of which has been augmented with funding by the Government of Ontario through the Green Investment Fund (GIF). The existing DSM programs had $100 million of additional funding from the Government over three years to enhance funding for home energy audits and retrofits. As of July 2018, the Ontario Government has cancelled the cap and trade program and is in the process of winding down the program.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium-low

Potential financial impact

Explanation of financial impact
In Quebec, as the auction strategy and implementation of the cap and trade rate are based on costs recouped from customers, Gazifere's financial risk is limited. In Ontario, the majority of costs associated with the purchase of emissions allowances on behalf of our natural gas customers are recouped from customers.

Management method
Method: Enbridge is managing the risk and associated cost by engaging with the provincial and federal Canadian governments on climate change policies and conducting internal due diligence on emissions abatement. Union Gas and EGD are working with the Government of Ontario and the OEB to wind down the cap and trade program, and to understand the implications on the GIF-funded program. Activity: Measures to manage risks and costs associated with cap and trade systems include (i) monitoring of the Quebec carbon market and related climate change and carbon policies, including in other newly linked jurisdictions as at January 1, 2018 - namely California; (ii) careful management of emissions allowance purchasing in order to avoid price increases to consumers that could reduce the competitiveness of the products and services provided by the utility and; (iii) ongoing administration of Demand Side Management programs in all our our natural gas utilities to help our natural gas customers reduce their energy consumption and GHG emissions; and (iii) improving emissions data quality through external verification of emissions.

Cost of management
1200000

Comment
The cost of management is primarily in staff time. Approximately 15 FTEs at an average annual salary of $80k in Enbridge's natural gas utilities are involved in monitoring and responding to carbon and climate issues, administration of DSM programs and GHG emissions reporting.

Identifier
Risk 6

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Transition risk

Primary climate-related risk driver
Policy and legal: Mandates on and regulation of existing products and services

Type of financial impact driver
Other, please specify (Increased regulatory and public scrutiny)

Company- specific description
As a transporter and distributor of energy Enbridge is a significant part of the value chain associated with the oil and gas sector in North America. As awareness of climate risks and impacts increase, there is broadly-based concern about whether or not or how expansion of fossil fuel infrastructure is consistent with action on climate change. Because Enbridge is a major transporter of bitumen from northern Alberta to refineries in both Canada and the US, our projects face increasing scrutiny and opposition that has the potential to negatively impact our public reputation and social license to operate. There could be negative impacts on our business, operations or financial results due to changes in our reputation with stakeholders, special interest groups (including non-governmental organizations), political leadership, the media or other entities. Potential impacts of a negative public opinion may include: loss of business; loss of ability to secure growth opportunities; delays in project execution; legal action; increased regulatory oversight or delays in regulatory approval; and loss of ability to hire and retain top talent.

Time horizon
Medium-term

Likelihood
More likely than not

Magnitude of impact
Medium

Potential financial impact

Explanation of financial impact
Increased regulatory and public scrutiny can result in significant costs in the form of project delays.

Management method
Method: Enbridge's Corporate Risk Assessment (CRA) process addresses key risks for the company. Risks posed by climate change are incorporated into the CRA process. Enbridge conducts extensive Indigenous and stakeholder engagement both through regional- and major project engagement plans. We also engage on environmental risk management, including climate issues, in ongoing engagement with investors, environmental non-governmental organizations and governments. Activity: Enbridge continually engages with Indigenous and stakeholder groups on projects, including on the NEXUS Gas Transmission Pipeline and the Sabal Trail Transmission Project in the U.S., and the Line 3 Replacement in Canada and the U.S.) and ongoing operations. Our engagement activities on our Line 3 replacement alone involves about 26,000 direct and indirect engagements with stakeholders and other groups in Canada (2014-2017) and about 23,000 in the U.S. (2015-2017).

Cost of management

Comment
Project-related Indigenous and stakeholder engagement activities are included in capital budgets.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Ability to diversify business activities

Type of financial impact driver
Other, please specify (Execution of business strategy)

Company- specific description
According to the International Energy Agency, global energy consumption is expected to continue to grow over the long term. The Organization for Economic Co-Operation and Development (OECD) countries, including Canada, the U.S. and western European nations, are expected to experience population growth and place an emphasis on energy efficiency, conservation and a shift to lower carbon fuels, such as natural gas and renewables. In Europe, the future outlook for renewable energy, especially from offshore wind in countries with long coastlines and densely populated areas, is very positive. According to the European Wind Energy Association, by 2030, wind energy capacity in Europe is expected to be 320 GW, including 66 GW of offshore capacity. There is also wide public support for carbon reduction targets and broader adoption of renewable generation across all governmental levels. Furthermore, governments in Europe are seeking to rationalize the contribution of nuclear power to the overall energy mix, which has resulted in an increased focus on alternative sources such as large scale offshore wind. Enbridge has been

one of Canada's largest investors in renewable energy and we've recently begun to grow our portfolio of offshore wind projects in Europe. Since 2002, we have committed $7.8 billion in renewable energy and power transmission projects in North America and Europe, investing in the development of more than 3,800 MW gross (3,300 MW net) of zero-emission energy. Our offshore wind assets are supported by strong fundamentals, including growing customer demand and decreasing costs, as well as significant renewable portfolio standard targets. All of our offshore projects to date are underpinned by long-term power purchase agreements with local offtake partners. Offshore wind is a strong fit for Enbridge, given our history with onshore renewable technology, major projects capability and experience in working off-shore in the Gulf of Mexico. We will continue to evaluate opportunities to position Enbridge for the energy mix of the future, including for expanding our offshore wind power generation business.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Low

Potential financial impact

Explanation of financial impact
It is difficult to estimate the financial impact. Our assessment is that the return on investment in our Green Power business will be realized over the longer term as more energy systems incorporate low and no carbon energy.

Strategy to realize opportunity
In 2017, in the context of our three-year strategic plan and focus on capital allocation to our core natural gas transmission and distribution, liquids pipelines and utilities businesses, we announced the planned monetization of $3 billion in certain natural gas midstream assets and North American onshore renewable assets. In 2018, we completed the sale of a 49% interest in select North American onshore renewable power assets owned by Enbridge to the Canada Pension Plan Investment Board (CPPIB). In addition, CPPIB and Enbridge have entered into a joint venture agreement for the completion of two German offshore wind projects (Hohe See, and related expansion) and the pursuit of future European offshore wind projects. The monetization of $1.75 bn of renewable assets through Enbridge's newly formed joint venture with CPPIB is an important step in achieving the objective the company set when it rolled out its three-year plan and strategic priorities in December 2017. Enbridge and its affiliates will continue to manage, operate and provide administrative services for the renewable power assets. The combination of Enbridge's operating and development capability with CPPIB's resources and experience creates a powerful Canadian champion for developing offshore renewable energy projects jn Europe.

Cost to realize opportunity

Comment
Since 2002, Enbridge has committed $7.8bn to renewable energy projects in Canada, the U.S. and Europe, investing in the development of more than 3,800 MW gross (3,300 MW net) of zero-emission energy.

Identifier
Opp2

Where in the value chain does the opportunity occur?
Customer

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Type of financial impact driver
Increased revenue through demand for lower emissions products and services

Company- specific description
The power generation and transmission network in North America is expected to undergo significant growth over the next 20 years. On the demand side, North American economic growth over the longer term is expected to drive growing electricity demand, although continued efficiency gains are expected to make the economy less energy-intensive and temper demand growth. On the supply side, impending legislation in Canada is expected to accelerate the retirement of aging coal-fired generation plants, resulting in a requirement for significant new generation capacity. While coal and nuclear facilities will continue to be core components of power generation in North America, gas-fired and renewable energy facilities, including biomass, hydro, solar and wind, are expected to be the preferred sources to replace coal-fired generation due to their lower carbon intensities. With about 3.7 million natural gas customers in Ontario, Quebec and New Brunswick and an extensive natural gas storage and distribution network, our natural gas distribution business is well positioned to help advance low-carbon energy solutions that can enable access between

zero emission and low-carbon sources of energy and existing natural gas assets to support continued consumer access to reliable, low-cost energy in the future. This includes developing and deploying next-generation technologies and services that can support district energy and improve integrated energy resource planning and management at the local and regional level. This expansion also includes investing in opportunities for renewable natural gas (RNG), power-to-gas (P2G) systems that can help store surplus renewable energy to support grid stability, and combined heat and power systems that can help create a path to lower emissions from home heating and power requirements.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-low

Potential financial impact

Explanation of financial impact
Due to regulatory and market uncertainty, as well as around the pace of energy system diversification and grid transformation, it is difficult to estimate the potential impact to our business.

Strategy to realize opportunity
Our natural gas utilities are engaging with regulators to enable them to offer expanded services and low carbon and net zero emissions products. They are also investing in new technologies. Examples include: (i) Initiation of a request-for-proposal process in Ontario to kick-start the provincial market for RNG, allowing customers to lower their GHG emissions while utilizing the extensive natural gas assets already in place in the province. RNG is a carbon-neutral fuel that is created from decomposing organic waste. Future applications include replacement of diesel fuel in medium- to heavy-duty vehicle fleets and use in home appliances. EGD has also entered into a contract with the City of Toronto to provide RNG upgrading and injection services. Work is currently underway on the design of the facilities required to provide these services. (ii) Partnership with Hydrogenics Inc., to develop the first large-scale deployment of P2G technology in North America that uses electrolysis technology to convert electricity into hydrogen. The P2G plant in Ontario is now taking surplus off-peak electricity and converting it to hydrogen, which can be stored for future use. The plant is rated at 2.5MW and can be expanded to 5MW of output power. (iii) A geothermal pilot project with residential ground source heat pump systems equipped with monitoring equipment to enable benchmarking of collected operating statistics against conventional natural gas/central air conditioning alternatives.

Cost to realize opportunity

Comment
The approximate cost of investment by our natural gas utilities in emerging low-carbon projects is in the range of $5mm.

Identifier
Opp3

Where in the value chain does the opportunity occur?
Customer

Opportunity type
Products and services

Primary climate-related opportunity driver
Ability to diversify business activities

Type of financial impact driver
Increased revenue through demand for lower emissions products and services

Company- specific description
Global energy demand is expected to increase approximately 30% by 2040, according to the International Energy Agency. Natural gas will play an important role in meeting this energy demand as gas consumption is anticipated to grow by nearly 50% during this period as one of the world's fastest growing energy sources, second only to renewables. Globally, most natural gas demand will stem from the need for greater power generation capacity, as natural gas is a cleaner alternative to coal, which currently has the largest market share for power generation. Within North America, U.S. natural gas demand growth is expected to be driven by the next wave of gas-intensive petrochemical facilities which are now starting to enter service, along with power generation, an increase in the volume of LNG exports and additional pipeline exports to Mexico. Within Canada, natural gas demand growth is expected to be largely tied to oil sands development and growth in gas-fired power generation. Canadian gas demand growth will be accelerated with implementation of proposed government regulations to replace coal fired power, designed to meet emissions targets. Enbridge's natural gas pipelines transport approximately 20% of all natural gas consumed in the U.S. We connect key supply basins to markets in the U.S. East, South and Midwest, and our transmission network extends throughout the Gulf Coast. In

Western Canada, we directly link supply areas to markets in British Columbia, the Pacific Northwest and the U.S. Midwest. Enbridge's extensive natural gas transmission system provides a strategic platform for the company to pursue opportunities to grow the use of natural gas as a key component of the energy solution-one that ensures reliability of energy supply and provides further opportunities for integrated platforms between natural gas and renewables-in support of local, national and global climate goals.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium-high

Potential financial impact

Explanation of financial impact
Enbridge's $37bn acquisition of Spectra Energy in 2017 increased our market cap from ~$57 billion to ~$80 billion.

Strategy to realize opportunity
Enbridge's expanded asset base provides organic growth opportunities in our natural gas business, and further opportunities for integrated platforms between natural gas and renewables in both Canada and the U.S. Our secured capital program through 2020 includes natural gas projects such as the NEXUS and Valley Crossing Pipeline (VCP) projects. Natural gas and renewables are replacing fuel oil. When burned for generation, natural gas produces 30% less carbon dioxide emissions than fuel oil and 50% less than coal. In the U.S., the increased use of natural gas for electric power generation over the last decade has reduced NOx and SO2 emissions by 40% and 44%, respectively. VCP will supply natural gas to Mexico as it transitions from higher carbon fuel oil to natural gas and renewables and help the country to achieve its environmental targets set by the Paris Accord. There is enormous opportunity in the energy sector for Mexico to achieve significant, economy wide emissions reductions (at low cost) to meet the country's climate change mitigation goals and stimulate investment and economic growth. Post-2020 growth potential includes: Texas Eastern and Algonquin Gas Transmission expansions and extensions; new infrastructure serving gas-fired power generation, U.S. Gulf Coast markets and export markets; and Western Canadian Sedimentary Basin egress solutions.

Cost to realize opportunity

Comment
Capital for secured natural gas growth projects in our Canadian and U.S. Gas Transmission and Midstream businesses through 2020 totals ~$7.4bn.

Identifier
Opp4

Where in the value chain does the opportunity occur?
Customer

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Type of financial impact driver
Increased revenue through demand for lower emissions products and services

Company- specific description
Enbridge supports research, development and innovation-related projects that have potential to bring low-carbon energy solutions to scale. The company's Green Power and Transmission group has invested in companies and projects pertaining to renewable energy technologies, composite pipe technologies and bitumen extraction. These investments include: (i) $9.8 million invested since 2011 in Morgan Solar, a Canadian start-up, for development of next-generation solar technology. Our investment is helping Morgan Solar to commercialize a new line of high efficiency concentrating photovoltaic panels. In 2017, we continued to progress the development of a first commercial utility-scale project utilizing Morgan Solar's concentrating photovoltaic panels and two-axis trackers in southeast Alberta. (ii) $8 million invested between 2013 and 2017 in Temporal Power, an Ontario-based start-up. Temporal Power's electrical energy storage technology is based on 4,080-kilogram (9,000-pound) solid-steel flywheels. In southern Ontario, Temporal Power's technology has been incorporated into a 2-MW flywheel energy storage facility near Minto and a 5-MW facility near Clear Creek. In 2016, Temporal Power secured two additional project contracts, which have continued through design and construction in 2017 with startup scheduled for 2018. (iii) Enbridge and ATCO Gas developed a residential alternative energy solutions pilot project in Alberta. The project aims to better understand how new residential clean and energy efficient technologies work and how they can be employed in the retrofit and new build home market. The project went live in January 2018 on seven

homes with newly installed micro combined heat and power technologies and roof-mount solar panels. Over the next 18-24 months these homes will be monitored for consumption and usage patterns, cost savings on utility bills and avoided carbon emissions. The results of this study will be used to help both Enbridge and ATCO better understand how they can provide new services to their utility customers in Alberta, Ontario and Quebec. (iv) Investment in Alberta-based Nsolv, which has developed a solvent-based heavy oil extraction technology that uses no water and could potentially reduce GHG emissions by about 75% compared to existing extraction methods.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Low

Potential financial impact

Explanation of financial impact
Investment in research and development supports Enbridge's strategy for diversification and improved efficiency across all of our business units.

Strategy to realize opportunity
See above in company-specific description.

Cost to realize opportunity

Comment
In 2017, Enbridge continued to manage a portfolio of investments in renewable energy, bitumen extraction and other emerging low carbon and emission reducing technologies through our Green Power and Transmission (GPT) group worth approximately $80 million.

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted	Costs and opportunities associated with increased demand for natural gas and renewables, and increased opportunities for further efficiencies in oil and gas transportation that reduce exposure to new and emerging regulation.
Supply chain and/or value chain	Not impacted	
Adaptation and mitigation activities	Impacted	Costs and opportunities associated with risk treatment measures for emergency preparedness and response in the event of adverse weather conditions, including supply disruptions, and diversification of portfolio mix.
Investment in R&D	Impacted	See descriptions in opportunities 2 and 4.
Operations	Impacted	Costs and opportunities associated with regulatory reporting requirements, system fitness maintenance, and improved efficiencies.
Other, please specify	Please select	

C2.6

(C2.6) Describe where and how the identified risks and opportunities have factored into your financial planning process.

	Relevance	Description
Revenues	Impacted	
Operating costs	Impacted	
Capital expenditures / capital allocation	Impacted	
Acquisitions and divestments	Impacted	
Access to capital	Not impacted	
Assets	Not impacted	
Liabilities	Not impacted	
Other	Please select	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b)

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

Yes

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

i**. A company-specific explanation of how business objectives and strategy have been influenced by climate-related issues:** In pursuing our vision to be the leading energy delivery company in North America (NA), we play a critical role in enabling the economic well-being and quality of life of North Americans, who depend on access to plentiful energy. Climate change/growing climate action at all levels of society and their potential impacts to our business are considerations in our business strategy. Management of risks and opportunities of climate change/transition to a low carbon economy is essential to ensure the resilience of our business. Our diversification enables us to leverage all of our assets to support the transition. To support the execution of our strategy, we integrate climate considerations into our internal business processes, ie. annual Corporate Risk Assessment and strategic planning, during which key business considerations and external influences are identified and evaluated. Climate considerations that influence our strategy include: energy y supply/demand forecasts, shifting market fundamentals, adverse weather conditions that can impact our energy delivery systems and facilities, new/emerging environmental policies/regulations that can result in new operational costs, changing consumer preferences, investment opportunities that can advance the company's strategic growth platforms and relevant emerging technologies. **ii) Explanation of whether your business strategy is linked to an emissions reductions target or energy reduction target:** Business objectives in 2017 that were influenced by our strategy and reflected in our operating practices included: (i) use of an energy fuel efficiency reduction target, linked to a conservation strategy; (ii) U.S. natural gas pipeline and storage business participated in the EPA Natural Gas Star Program resulting in methane emission reductions; (iii) continuous improvement of our corporate Environmental Performance and Safety System enables us to understand emission trends, mitigate emissions risk, and analyze root causes of events. While enhancing driver safety is the primary reason for implementing telematics, we anticipate improvement in fuel efficiency due to less idling and reduced driving speed as well as a reduction in total miles driven due to better trip planning and routing optimization. **iii. What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy:** From a climate perspective, our business strategy focuses on i) diversifying our business mix; ii) organic growth and investment opportunities that support the transition to a low carbon future. ENB's acquisition of Spectra Energy (SE) was a decision that substantially increased our investment in clean burning natural gas, allowing us to achieve a much stronger and more balanced portfolio of oil and natural gas assets and growth opportunties. Natural gas has and will continue to play a critical role in meeting society's demand for energy and supporting GHG emission reduction goals, including Canada's goal to reduce GHG emissions by 30% by 2030. Natural gas is central to the transition to a low-carbon economy, it is a lower-carbon alternative to coal and other fuels for electricity generation, and can be used to underpin electricity provided by intermittent renewable sources. In 2017 we also opened the Chapman Ridge Wind Project in Texas, producing 249 WM of green energy – providing power for more than 64,000 homes. **iv. What aspects of climate change have influenced the strategy:** Risks and opportunities from climate change regulation at the federal, provincial and state levels and market/customer demand influence the company's business strategy. For example: (i) investment in natural gas infrastructure and diversity in natural gas supply to respond to extreme weather events; (ii) growing demand for LNG exports to reduce the global impacts of climate change; (iii) stakeholder and regulation/ policy development driving interaction with industry, regulators and legislators; (iv) emerging CNG and LNG growth opportunities in transportation sector; and (v) investigating energy efficiency opportunities at company sites. **v. How the short-term strategy has been influenced by climate change:** We expect continued demand for natural gas, driven in part by conversion of coal-fired electric generation, increased utilization of natural-gas fired plants, and growth of natural gas in the industrial sector. We are actively engaged in the national discussions in the U.S. and Canada regarding the growing use for lower-carbon natural gas as a key component of short-and-long term energy solutions as gas is the backup source for more wind and solar power and compensates during intermittent times. **vi. How the long-term strategy has been influenced by climate change:** Risks and opportunities from climate change regulation at the federal, provincial, state levels; market/customer demand; and the abundance versatility, economic and environmental attributes of natural gas all influenced the company's longer-term strategy. ENB is pursuing $22bn in energy investment opportunities driven by: (i) LNG export opportunities that may result in reducing GHG emissions; (ii) increasing reliance on natural gas in the power sector; (iii) increased industrial natural gas demand; (iv) emerging growth opportunities related to CNG and LNG in the transportation sector; (v) continued potential for renewables. **vii. How this is gaining strategic advantage over competitors?** ENB's strategic advantage over competitors is its premium footprint, ability to expand market reach and significant contribution towards reducing GHG emissions. Natural gas supply dynamics continue to rapidly change and strengthen the potential for natural gas to be an effective solution for meeting energy and environmental goals of NA and creates growth opportunities in natural gas-fired generation, growth in industrial markets, and LNG exports. Our advantage of providing access from strong supply regions to growing natural gas and crude oil markets, we expect to continue expanding our assets and operations to meet these needs. viii. How the Paris Agreement has influenced the business strategy: We are committed to contributing to the achievement of local, national and global climate goals. ENB's Valley Crossing Pipeline will supply natural gas to Mexico as it transitions from higher carbon fuel oil to natural gas/renewables and help the country to achieve its environmental targets. There is enormous opportunity in the energy sector for Mexico to achieve significant, economy wide emissions reductions to meet climate change mitigation goals and stimulate investment and economic growth. We are working towards completion of a climate scenario analysis by the end of 2018.

C3.1d

(C3.1d) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios	Details
IEA 450	As part of our annual enterprise wide strategic planning process in 2017 we analyzed our portfolio using the International Energy Agency (IEA) New Policies Scenario, with occasional reference to the 450 Scenario. Our planning horizon extends mid-term (typically 20-50 yrs) for all three of our business – Liquids Pipelines, Natural Gas Transmission and Midstream and Gas Distribution. We also assess impacts to our green power portfolio and opportunities in emerging technologies. The strategic planning process is a collaborative, enterprise-wide annual process that combines a top-down perspective from the corporate functions, with the bottom-up perspectives of the business units. The process evaluates commodity fundamentals, the business and competitive landscape, our internal capabilities, along with a scan of the broader global energy space to evaluate the potential for disruptive change to the businesses in which Enbridge operates. The process includes a mid-year strategy session between Management and the Board of Directors where the proposed strategy is tested and debated, and culminates in the board-approved strategy and financial outlook at year end, which incorporates feedback from the mid-year strategy session and adds key scenarios and sensitivity analysis into the final strategic plan. In addition to the annual process, there is an ongoing feedback loop of relevant information to Management and the Board of Directors through weekly communications that highlight updates in the external environment that could impact our existing strategy. As well, Management and the Board of Directors discuss implications of developments on the strategic plan at each Board meeting to ensure that strategy development and execution are engrained in the business activities throughout the year. To further understand the impacts of a low carbon future on our portfolio over the short and long-term, in 2018 we began the process to evaluate our strategy under various lower-carbon scenarios consistent with the goal of limiting global temperatures to 2 degrees Celsius. We used scenarios presented in the IEA World Energy Outlook (IEA WEO2017). To inform our views, we looked at our business thru the lens of a 2 degree scenario and the assumptions developed by IEA's New Policy Scenario and Sustainable Development Scenarios against our businesses. We choose IEA scenarios to develop our assumptions since it is widely recognized and offers comparability across our sector.

C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e

(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e)
Disclose details of your organization's low-carbon transition plan.

We have identified a number of growth and capital investment opportunities through 2020, with post-2020 growth potential that support our strategy to diversify our business mix. Our strategy is underpinned by a $22 billion capital program for a diversified portfolio of secured infrastructure projects that complement the pathways we are pursuing to support the transition to a low carbon economy. These pathways include:

(i) Leveraging our leading footprint to create organic infrastructure growth opportunities: Enbridge's strategically located assets with direct connections between North America's key supply areas, storage and demand markets provide a strategic platform for us to pursue opportunities to grow the use of natural gas as a key component of the energy solution-one that ensures both reliability of energy supply and supports achievement of local, national and global climate goals.

(ii) Expanding the use of natural gas to make access to lower-carbon and renewable energy more feasible: Our natural gas utility business is well positioned to help advance low carbon and energy system integration solutions that can enable access between zero emission and low-carbon sources of energy and existing natural gas distribution networks to ensure continued consumer access to low-cost, reliable energy in the future.

(iii) Evaluating opportunities to grow our portfolio of offshore wind projects in Europe: Building on the over $7.8 billion we committed to renewable energy projects in North America and Europe since 2002, we will continue to evaluate opportunities to position Enbridge for the energy mix of the future, including expanding our offshore wind power generation business.

(iv) Reducing GHG emissions in our value chain: We are committed to taking actions that produce a tangible reduction to climate impacts. This commitment starts with a focus on energy efficiency initiatives and GHG reductions in our expanded asset base and extends to helping to reduce end-use emissions through continued expansion of Demand Side Management programs and services for our natural gas natural gas customers.

Our focus on improving our own carbon performance includes: implementation of comprehensive integrity management and leak detection programs across all of our pipeline transmission and distribution systems and associated operating facilities; meeting all regulatory requirements for GHG measurement, quantification and reporting in the jurisdictions in which we operate and; improving GHG data quality, completeness and accessibility through data management system integration across all our business units and external third party verification. In addition, we are working towards setting long-term targets for GHG reductions and energy efficiency for our expanded asset base to reduce the carbon intensity of our operations. These measures will provide further opportunities for measuring our performance over the long term.

Annual review by our Board of Directors ensures the company is executing on its business strategy and meeting business objectives.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Both absolute and intensity targets

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Scope
Scope 3: Use of sold products

% emissions in Scope
95

% reduction from base year
1.1

Base year
2016

Start year
2017

Base year emissions covered by target (metric tons CO2e)
4580000000

Target year
2017

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

% achieved (emissions)
0

Target status
Underway

Please explain
Enbridge Gas Distribution (EGD) and Union Gas (UG) have annual targets for their respective Demand Side Management (DSM) programs that aim to influence the adoption of energy efficient equipment and educate consumers to modify their behavior and reduce their energy consumption. These initiatives and programs are offered to residential, commercial, institutional and industrial customers and include financial incentives to help positively influence the customers' decision. While several offerings have direct and measureable savings, other offerings have different goals and metrics. For example, market transformation offerings focus on activities that are meant to influence market behaviour as a whole. Accordingly, not all savings are being captured in target or results reporting. 2017 performance to this target has not yet been evaluated by the Ontario Energy Board, and hence "% achieved (emissions)" is shown as "zero". For this CDP submission, several simplifying assumptions have been made to estimate the current target shown here. The 2017 target has been calculated using the inputs and target setting methodology found in the Ontario Energy Board's (OEB) Decision and Order on 2015-2020 Demand Side Management Plans (EB-2015-0029/EB-2015-0049). It assumes 100% cumulative gas savings target achievement and 100% budget spend in 2016 and represents the 100% target for 2017. Actual 2016 achievement will vary and is subject to audit; as such, 2017 targets will not be finalized until 2016 spending and results have been audited and OEB approved. Since targets are based on cumulative (or lifetime) natural gas savings targets, an average 15 year measure life has been assumed to express it as an annual target and then converted to t CO2e.

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Scope
Scope 1

% emissions in Scope
0.11

% reduction from baseline year
0.01

Metric
Other, please specify (kg CO2e per km)

Base year
2017

Start year
2017

Normalized baseline year emissions covered by target (metric tons CO2e)
0.62

Target year
2017

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

% achieved (emissions)
92

Target status
Expired

Please explain
This target is specific to Enbridge's Union Gas natural gas utility operations in Ontario and applies to vehicle fleet-related Scope 1 GHG emissions for this business unit. Union Gas achieved 92% of its 2017 fuel efficiency target for its vehicle fleet. This 2017 target is part of Union Gas' ongoing efforts to improve the fleet's fuel economy. For 2018, Union Gas has set an idling target for its vehicle fleet to support our ongoing commitment to reducing discretionary idling.

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
0

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

C-OG4.2a

(C-OG4.2a) Explain, for your oil and gas production activities, why you do not have a methane-specific emissions reduction target or do not incorporate methane into your targets reported in C4.2; and forecast how your methane emissions will change over the next five years.

Enbridge does not have a methane-specific target, however, regulators in many of the jurisdictions in which we operate have or are adopting stringent targets. For example, both Canada and and the province of Alberta have adopted targets to reduce methane emissions by 40% to 45% from 2012 levels by 2025. This is a sector-wide target covering oil and gas production, natural gas processing, and natural gas transmission and storage. Under these regulations, which are expected to come into force beginning in 2020 through 2023 (measure dependent), Enbridge's Canadian natural gas processing, transmission and storage operations will be required to implement measures such as increased LDAR frequency to reduce fugitive emissions and equipment upgrades to reduce venting. Enbridge has well established protocols for methane leak detection and repair (LDAR) for all of its natural gas transmission and distribution pipelines and related storage and operational facilities, and continues to review and enhance its measurement and quantification processes.

Enbridge's U.S. Gas Transmission and Midstream (GTM) business's maintenance program also helps reduce methane emissions year after year through voluntary partnership with the U.S. Environmental Protection Agency's (EPA) Natural Gas Star Program. This program provides a framework for partner companies to implement methane emission reducing technologies and practices and document their voluntary emission reduction activities. This collaboration, in conjunction with the oil and natural gas industry, has pioneered some of the most widely–used, innovative technologies and practices that reduce methane emissions.

Enbridge is currently in the process of setting second-generation, long-term targets for GHG emission reductions and energy efficiency for each of the our major business segments. That approach includes a focus on reducing the carbon intensity of the company's operations through enhanced energy efficiency and a commitment to continuously improve the way we manage methane emissions from our facilities.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	5	1924731
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Activity type

Fugitive emissions reductions

Description of activity
Oil/natural gas methane leak capture/prevention

Estimated annual CO2e savings (metric tonnes CO2e)
1596521

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
14719000

Investment required (unit currency – as specified in CC0.4)
26884000

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Enbridge's U.S. GTM business participates in the EPA Natural Gas STAR Program, which is focused on technologies and practices that improve operational efficiency and reduce methane emissions. Two examples of methane reduction measures implemented by Enbridge in 2017 included using a portable compressor to reduce the amount of gas that would otherwise be released when performing pipeline maintenance and replacing wet with dry seal compressors. Estimated annual emission savings reflect the 2017 measures implemented and reported to the GasSTAR program. The annual monetary savings is based on a natural gas cost of $CAN 0.14 per cubic metre and implementation costs are based on industry technical input and EPA's GasSTAR technical reports.

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
31300

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
4533000

Investment required (unit currency – as specified in CC0.4)
150000

Payback period
<1 year

Estimated lifetime of the initiative
3-5 years

Comment
A variety of techniques were employed in 2017 to optimize the operation of Enbridge's liquids pipelines network relative to historical levels. These included optimizing line splits, smoothing out flow rates and optimizing power contracts. The estimated GHG emissions are based on the average (system-wide) GHG intensity of grid supplied electricity, using AR4 GWPs. The estimated investment cost is approximate and is for extra staff resources to implement and monitor these additional optimization efforts. Savings from introducing these practices are expected to persist in future years and the 3-5 year estimated lifetime of this initiative may be conservative.

Activity type
Energy efficiency: Processes

Description of activity
Other, please specify (Demand Side Management programs)

Estimated annual CO2e savings (metric tonnes CO2e)
122000

Scope
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
14642000

Investment required (unit currency – as specified in CC0.4)
55600000

Payback period
4 - 10 years

Estimated lifetime of the initiative
Ongoing

Comment
EGD works with its customers through its Demand-Side Management (DSM) programs to increase the efficient use of natural gas to reduce utility bills and overall environmental impact. EGD's DSM programs consist of such energy-savings equipment and operating practices as energy-efficiency audits of residential homes, as well as of commercial and industrial facilities; financial rebates and the sharing of technical expertise to encourage customers to adopt energy-saving equipment and practices; work with industry and trade associations in various sectors—such as schools, hotels and motels, construction, automotive, food and beverage, and pulp and paper—to promote DSM programs and enhance industry standards and best practices; design charrettes (planning sessions) that support and educate builders on higher efficiency building options before construction begins, and partnerships with governments, suppliers and equipment manufacturers on investments in new energy-efficient technologies that benefit ratepayers. Cumulatively, between 1995 and 2016, EGD's energy efficiency programs have resulted in a reduction of 20.8 million tonnes CO2e. The information provided here is for 2016 program expenditures and results, which are unaudited and subject to change. 2017 DSM results are pending review by the utility regulator and are not available at this time. The estimated GHG savings are calculated based on 1.875 kg CO2e.

Activity type
Energy efficiency: Processes

Description of activity
Other, please specify (Demand Side Management programs)

Estimated annual CO2e savings (metric tonnes CO2e)
113000

Scope
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
10679000

Investment required (unit currency – as specified in CC0.4)
47900000

Payback period
4 - 10 years

Estimated lifetime of the initiative
Ongoing

Comment
Union Gas offers a mix of DSM offerings to promote broad participation in energy conservation activities, helping customers to realize energy savings, reduce their energy bills and adopt lasting conservation behaviors. These offerings fall under different program types, including programs to promote energy efficiency upgrades, accelerate market adoption of new energy efficient

products, energy education and monitoring to promote commercial and industrial customer system improvements, low-income programs, and funding for large industrial customer efficiency improvements. Cumulatively, between 1997 and 2016, Union Gas' energy efficiency programs have resulted in a reduction of approximately 22 million tonnes CO2e. 2016 spending and results are unaudited and subject to change. 2017 DSM results are pending review by the utility regulator and are not available at this time. The estimated CO2e savings are calculated using a conversion factor of 1.875 kg of C02e per 1 m3 natural gas. Monetary savings represent the annual gas, electricity, and water reductions from a societal perspective. The investment required represents Union Gas' DSM program budget, the cost of which Union Gas recovers through rates. Annual savings shown are based specific measure lifespans, which range from one to 25 years.

Activity type
Fugitive emissions reductions

Description of activity
Other, please specify (Carbon capture of acid gas CO2)

Estimated annual CO2e savings (metric tonnes CO2e)
61910

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
0

Investment required (unit currency – as specified in CC0.4)
0

Payback period
Please select

Estimated lifetime of the initiative
>30 years

Comment
In 2017, Enbridge had acid gas injection well sites in the U.S. (2 sites) and Canada (8 sites). In 2017, GTM re-injected more than 61,910 tCO2e that would otherwise have been emitted into the atmosphere.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Internal price on carbon	In 2017, EGD Asset Management group began applying an internal price on carbon during the review of its asset decisions, using an estimated floor price of a carbon allowance from January 2017 in the province of Ontario. The application of a price on carbon was an initial step to help identify future emissions reduction opportunities and inform the development of abatement projects for EGD's operations.
Dedicated budget for low-carbon product R&D	In 2017, Enbridge continued to manage a portfolio of investments in renewable energy, bitumen extraction and other emerging low carbon and emission reducing technologies through our Green Power and Transmission (GPT) group worth approximately $80 million. We continue to look for opportunities to utilize these technologies on our existing assets.
Partnering with governments on technology development	Enbridge's natural gas utilities are exploring potential new low-carbon business opportunities, including renewable natural gas (RNG), a carbon-neutral fuel that is created from decomposing organic waste. In February 2018, EGD and Union Gas initiated a request-for-proposal process in Ontario to kick-start the provincial market for RNG, allowing customers to lower their GHG emissions while utilizing the extensive natural-gas assets already in place in the province. EGD has also entered into a contract with the City of Toronto to provide RNG upgrading and injection services and with one other entity to provide RNG injection services. Work is currently underway on the design of the facilities required to provide these services.
Compliance with regulatory requirements/standards	Enbridge has engaged in an extensive compliance program, including working with third parties to ensure accuracy in GHG regulatory reporting. Our top priority is the safe and reliable operation of our energy delivery systems as evidenced in our annual commitment of capital to programs that help us maintain the fitness of our systems and detect leaks across our operations in Canada and the U.S., which in 2017 totaled $1.9 billion. Over the last three years, our investment has totaled more than $2.68 billion (including Canadian and U.S. dollar amounts). Enbridge's Operational Risk Management (ORM) initiative involves process and integrity improvements and a dedicated budget for those activities which may result in GHG reductions; ORM-related activities are on-going across Enbridge to support reduction of risk associated with the delivery of liquid hydrocarbons and natural gas.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

Demand Side Management (DSM) Program: EGD earns an incentive each year from the regulator, the Ontario Energy Board (OEB), to deliver DSM energy and resource saving programs and services for its residential, low-income, commercial and industrial natural gas customers. Services include energy-savings equipment and operating practices such as energy-efficiency audits of residential homes, as well as of commercial and industrial facilities; financial rebates and the sharing of technical expertise to encourage customers to adopt energy-saving equipment and practices.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

% revenue from low carbon product(s) in the reporting year

0

Comment

Level of aggregation

Group of products

Description of product/Group of products

Demand Side Management (DSM) Program: Union Gas earns an incentive each year from the regulator, the OEB, to deliver DSM energy and resource saving programs and services for its residential, low-income, commercial and industrial natural gas customers. promote energy efficiency upgrades, accelerate market adoption of new energy efficient products, energy education and monitoring to promote commercial and industrial customer system improvements, low-income programs, and funding for large industrial customer efficiency improvements.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Please select

% revenue from low carbon product(s) in the reporting year

0

Comment

C-OG4.6

(C-OG4.6) Describe your organization’s efforts to reduce methane emissions from oil and gas production activities.

Comprehensive integrity management practices are in place for all of the company's natural gas transmission and distribution pipelines and related storage and operational facilities. Enbridge is obligated to comply with regulations in Canada and the U.S. that include increasingly stringent requirements for methane emission measurement and reporting, and LDAR. These new and emerging regulations provide additional direction for the company to act on methane reduction and leak prevention measures.

Enbridge believes there are benefits to voluntary methane reduction programs, such as participation in the EPA's Natural Gas Star Program. The company's U.S. gas transmission and midstream business is also a charter member of the Interstate Natural Gas Association of America’s commitment to reduce methane emissions from the transmission and storage sector. These programs allow participating members to identify and share cost effective actions taken to reduce transmission and storage methane emissions. Through safe, reliable, and efficient operations we continue to reduce methane emissions because it makes good business sense to conserve marketable methane and reduce our environmental footprint.

The company's integrity management practices, protocols governing LDAR and other leak detection methods are outlined in detail in question C-OG4.7a.

COG4.7

(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?

Yes

C-OG4.7a

(C-OG4.7a) Describe the protocol through which methane leak detection and repair or other leak detection methods, are conducted for oil and gas production activities, including predominant frequency of inspections, estimates of assets covered, and methodologies employed.

The protocols governing methane LDAR and other leak detection methods vary by business unit and jurisdiction. Protocols are determined by:

-Company and industry-based operating practices;

-Mandatory GHG reporting, regulation or permit requirements, which may dictate methane measurement and minimum operating and LDAR requirements, including:

(i) AER Directive 60 in Alberta and the BCOGC Flaring and Venting Reduction Guideline in British Columbia (BC), which require the management of fugitive emissions at upstream oil and gas facilities.

(ii) BC and Ontario GHG reporting regulations, which require leak surveys to be conducted at compressor stations as part of leak quantification methods;

(iii) U.S EPA’s New Source Performance Standards, “Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources,” which include requirements for LDAR to be conductedtwice a year and leak repair to be completed within 30 days of detection. The new Canadian federal methane regulation for the upstream oil and gas sector released in April 2018 will have similar requirements beginning in 2020.

-New, emerging leak detection technologies that may prove effective.

Enbridge’s natural gas transmission and processing and natural gas utility business divisions account for the majority-over 99%-of the company’s total methane emissions. Integrity management practices are in place for all of Enbridge’s natural gas transmission and distribution pipelines and related storage and operational facilities, and assets are systematically maintained through testing, inspections and auditing. In 2017, Enbridge spent more than $1.9 billion on integrity management and damage avoidance programs and leak detection that help the company maintain system fitness and detect leaks across its operations. Processes to detect

methane leaks include the use of OGI cameras, handheld “sniffer” gas detectors, FLIR cameras, AVO inspections, right-of-way surveillance and air patrols on transmission pipelines. Leak detection surveys are conducted monthly, quarterly and annually depending on the facility type.

One example of Enbridge’s LDAR protocol can be seen in EGD and UG, both of which have established protocols for surveying distribution system buried mains and service lines, above grade distribution stations and storage compressor stations (the latter with FLIR OGI cameras). EGD and UG are updating their LDAR programs for Gas Storage to meet all provincial (Ontario) and federal methane regulatory requirements for leak reporting, control and emissions reduction. In 2017, leak surveys were conducted on more than 25,000 kilometers of distribution mains in our Ontario franchise area and in the Gazifère system in Quebec. Leak surveys were conducted on more than 690,000 services (the lines used to carry gas from the mains to customers’ residences), which represent about 19% of our total gas services. The utilities spent $3.1 million on leak inspection and survey programs. Leak surveys were also performed at UG and EGD compressor stations for the first time in 2017 in response to new provincial emissions reporting and quantification requirements. The survey results were applied to emissions calculation for compressor sites to increase accuracy.

The Direct Inspection and Maintenance (DI&M) program was developed by the Storage and Transmission Operations (STO) group at UG in 2017. This comprehensive leak management program uses new technology, including OGI and Hi-Flow Samplers, for improved tracking and management of leaks at STO sites. To date, all of the UG compressor stations have been surveyed. This program will feed into both provincial and federal regulatory requirements.As a result, leak survey frequency will be increasing to 3 times annually by 2020. In 2017, Union Gas spent $100,000 on the DI&M program; this figure is anticipated to triple in the future.

GTM has a comprehensive protocol set of standard operating procedures that address methane leakage and venting within its pipeline transmission and gas processing systems. Specific to GTM’s compressor stations and metering and regulator stations, the protocols are designed to locate and prioritize repairs of natural gas leaks. These facility gas leakage surveys are conducted inside and outside buildings on all piping and components within the station fence lines that contain natural gas. AVO inspections are routinely performed as part of operator rounds and technician inspections to identify any leaks or other issues. This operating practice provides timely detection of fugitive emissions, and ensures appropriate action is taken.

Enbridge's U.S. transmission operation also participates in EPA’s Natural Gas STAR program where the company has reported methane savings of 63,861 tonnes of methane (1,596,521 t CO2e) for 2017 under the partner reported opportunities best management practices, including measures that reduce vented and fugitive methane emissions.

C-OG4.8

(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization’s efforts to reduce flaring, including any flaring reduction targets.

Enbridge does not have operations that produce natural gas and/or oil from wells where efforts to reduce flaring is relevant. The flaring that Enbridge undertakes within its operations is intended to reduce air and GHG emissions impacts including:

(i) For VOC vapour destruction, that is, where vapours are flared or incinerated for VOC emissions control from dehydrators, liquids storage tanks, and petroleum products loading activity, and

(ii) In natural gas processing, transmission and/or distribution operations, where natural gas releases may be flared instead of vented to reduce the GHG impact of methane emissions by converting the methane to carbon dioxide through combustion.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start
January 1 2017

Base year end
December 31 2017

Base year emissions (metric tons CO2e)
10211858

Comment

Scope 2 (location-based)

Base year start
January 1 2017

Base year end
December 31 2017

Base year emissions (metric tons CO2e)
6436170

Comment

Scope 2 (market-based)

Base year start
January 31 2017

Base year end
December 31 2017

Base year emissions (metric tons CO2e)
6456685

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Climate Registry: General Reporting Protocol
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
US EPA Climate Leaders: Direct Emissions from Mobile Combustion Sources
US EPA Mandatory Greenhouse Gas Reporting Rule

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Row 1

Gross global Scope 1 emissions (metric tons CO2e)
10211858

End-year of reporting period
<Not Applicable>

Comment
Scope 1 emissions have been compiled on an operational control basis.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Row 1

Scope 2, location-based
6436170

Scope 2, market-based (if applicable)
6456685

End-year of reporting period
<Not Applicable>

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source
Fleet vehicle GHG emissions from some business units

Relevance of Scope 1 emissions from this source
Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source
No emissions excluded

Relevance of market-based Scope 2 emissions from this source (if applicable)
No emissions excluded

Explain why the source is excluded
2017 data not collected for all business units.

Source
Electricity and fuel use at some smaller facilities.

Relevance of Scope 1 emissions from this source
Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)
Emissions are not relevant

Explain why the source is excluded
Minor emissions sources from a small number of facilities where data acquisition has not yet been implemented.

C6.5

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation

Capital goods

Evaluation status
Relevant, calculated

Metric tonnes CO2e
90000

Emissions calculation methodology
For capital goods, Enbridge evaluated the steel pipe produced and purchased for pipeline projects in 2017. In 2017, Enbridge purchased approximately 133,000 tonnes of steel pipe, about 87% of which was made from recycled steel. An industry average of 1.9 tonnes of CO2 for every ton of steel produced (World Steel Organization) was used as the basis to determine baseline GHG emissions, and the portion of recycled steel was assumed to be 74% below this level (Energy Information Administration citing Environmental Protection Agency). The 87% purchase of recycled steel pipe (compared to primary production) is also estimated to have avoided approximately 130,000 t CO2e in Scope 3 emissions.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, calculated

Metric tonnes CO2e
362000

Emissions calculation methodology
For this category, energy losses and associated GHG emissions pertaining to the transmission and distribution of purchased electricity is evaluated. U.S. level EPA eGRID grid loss factor (4.48%) [2016 data, published 2018] and national level Environment and Climate Change Canada grid loss emission factors (7.1%) [2016 data, published 2018] are applied to Enbridge's country-level (U.S. and Canada) Scope 2 GHG emissions to estimate electricity transmission and distribution losses.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation
This Scope 3 estimate covers the transmission and distribution losses associated with the delivery of electricity purchased by the company. The Scope 2 consumption data used for this estimate is based on primary data (purchased electricity data).

Upstream transportation and distribution

Evaluation status
Not evaluated

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation

Waste generated in operations

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge is committed to waste minimization, source reduction and recycling—approaches that offer both environmental and economic benefits. For example, on our construction projects we look for opportunities to reuse or recycle construction materials; and property managers at our corporate and other office locations have implemented waste recycling programs. Enbridge recycles metal (e.g., pipe and fittings), plastic (e.g., polyethylene pipe) and electronic waste. Enbridge currently tracks and reports waste volumes for some, but not all, regulatory jurisdictions. Based on this data, about 50% of the waste generated was recycled.

Business travel

Evaluation status
Not relevant, calculated

Metric tonnes CO2e
7100

Emissions calculation methodology
Enbridge uses a third party service provider to track and calculate GHG emissions associated with employee air travel. U.K. Department for Environment, Food and Rural Affairs (Defra) emission factors are applied by category of flight (short-, medium-, or long-haul) to distances travelled.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation
Covers Scope 3 emissions associated with business travel by air in 2017, including travel booked for the operations acquired as part of the Spectra Energy acquisition.

Employee commuting

Evaluation status
Relevant, calculated

Metric tonnes CO2e
21000

Emissions calculation methodology
Employee commuting estimates are based on the very conservative assumption that all employees commute in single-occupancy passenger cars. Vehicle fuel economy is assumed to be 10.3 km/litre (Transport Canada) and gasoline emissions at 2.45 kg CO2e/litre (Environment Canada 2018 NIR). The assumed average round trip distance per commute is 25 km.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
This estimate is believed to be conservative because it does not adjust for the number of employees that commute by public transit, car pool, or use fleet vehicles, where fuel use is tracked under Scope 1. This Scope 3 emission source is selected as "relevant" based on the GHG Protocol criteria that the company can influence this Scope 3 emission source through a range of incentives such as employee van pools, telecommuting, etc.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge has leased office spaces but these are tracked and included in the company's Scope 1 and Scope 2 data.

Downstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge operates transportation and distribution pipelines as part of its operations and the GHG emissions relating to the delivery of sold or intermediate products are predominantly reported under Scope 1 and 2 emissions. Enbridge does have one business operation (Tidal Energy), where the company contracts and pays for third-party transportation and petroleum product storage services; however, as per the GHG Protocol Scope 3 Guidance, these would be considered as "category 4" scope 3 emissions and not included in this Scope 3 source category.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge’s products are natural gas and fractionated natural gas liquids. These products are either combusted as a source of energy or used as a feedstock with limited to no further processing subsequent to sale.

Use of sold products

Evaluation status
Relevant, calculated

Metric tonnes CO2e
44831000

Emissions calculation methodology
Emissions from this category were calculated based on volumes of natural gas delivered to Enbridge's natural gas utility customers. Enbridge's natural gas utility operations include Enbridge Gas Distribution (Ontario), Union Gas, Gazifere, St. Lawrence Gas, and Enbridge Gas New Brunswick. Combustion (for heating and power generation) is the primary use for the natural gas delivered in these franchise areas. The natural gas combustion emission factors and methodologies required under the GHG reporting regulations in each respective jurisdiction were applied. The activity data (customer natural gas sales volumes) for this category are determined from customer billing meters. The quality of this data has a high level of confidence. It was assumed that all use of natural gas was for combustion. Other uses for natural gas such as petrochemical feed stock were not considered for this determination. This category only includes natural gas sales by Enbridge's natural gas utility operations.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation
In Ontario and Quebec, our natural gas customers are billed for emissions from their natural gas use and in 2017 the revenue was used as part of the provincial cap and trade systems in these provinces.

End of life treatment of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge primarily engages in transmission and distribution of natural gas and liquid petroleum products. No waste disposal or end of life treatment occurs.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge does not lease out any owned facilities or assets. Emissions from owned and operated facilities/assets are reported in Scope 1 or Scope 2 emissions.

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge does not operate franchises as defined in the GHG Scope 3 Accounting and Reporting Standard.

Investments

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge is not an investment company and does not provide financial services.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge does not have other upstream Scope 3 emissions to report.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Enbridge does not have other downstream Scope 3 emissions to report.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.00038

Metric numerator (Gross global combined Scope 1 and 2 emissions)
16648028

Metric denominator
unit total revenue

Metric denominator: Unit total
44378000000

Scope 2 figure used
Location-based

% change from previous year
69

Direction of change
Increased

Reason for change
In 2017, Enbridge closed on a large acquisition which incorporated the natural gas transmission, distribution and processing assets of Spectra Energy. The company's emissions profile increased 116% and "total revenue" profile increased by 28%, resulting in an overall increase in this metric.

C-OG6.12

(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO2e) per unit of hydrocarbon category.

Unit of hydrocarbon category (denominator)
Million cubic feet of natural gas

Metric tons CO2e from hydrocarbon category per unit specified
4.45

% change from previous year
8

Direction of change
Increased

Reason for change
Due to a major acquisition of additional natural gas processing facilities in 2017, Scope 1 emissions for these operations increased 133% and natural gas processing volumes increased 116%, for an overall increase in this metric of 8%.

Comment
This metric only applies to the company's natural gas processing operations. Other business units of the company are involved in transporting hydrocarbons (crude oil and natural gas), natural gas storage, natural gas distribution and renewable and alternative energy production. Enbridge does not have any hydrocarbon production assets.

C-OG6.13

(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.

Oil and gas business division
Downstream

Estimated total methane emitted expressed as % of natural gas production or throughput at given division
0.08

Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division
0.02

Comment
Methane emissions are converted to BOE and taken as a % of the BOE natural gas processing and throughput (also converted to BOE) to calculate the "Downstream" division's methane as % natural gas "production or throughput". The calculation involving "hydrocarbon production or throughput" also includes the liquids pipelines throughput in BOE as well as the methane emissions from liquid pipeline operation, which are less than 100 tonnes.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
PFCs	0	IPCC Fourth Assessment Report (AR4 - 100 year)
NF3	0	IPCC Fourth Assessment Report (AR4 - 100 year)
CO2	8120203	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	82484.73	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	99.12	IPCC Fourth Assessment Report (AR4 - 100 year)

C-OG7.1b

(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives (Oil:Total)	0	0	0	
Fugitives (Oil: Venting)	0	0	0	
Fugitives (Oil: Flaring)	11	0	11	
Fugitives (Oil: E&P, excluding venting and flaring)	0	0	0	
Fugitives (Oil: All Other)	142	75.6	2033	
Fugitives (Gas: Total)	105	3034.6	75970	
Fugitives (Gas: Venting)	981	56888.6	1423195	
Fugitives (Gas: Flaring)	158717	938.2	182866	
Fugitives (Gas: E&P, excluding venting and flaring)	0	0	0	
Fugitives (Gas: Midstream)	485	17794.7	445352	
Fugitives (Gas: All other)	0	0	0	
Combustion (Oil: Upstream, excluding flaring)	0	0	0	
Combustion (Gas: Upstream, excluding flaring)	0	0	0	
Combustion (Refining)	0	0	0	
Combustion (Chemicals production)	0	0	0	
Combustion (Electricity generation)	0	0	0	
Combustion (Other)	6704931	3752.9	6827548	
Process emissions	1250238	0	6827548	
Emission not elsewhere classified	4592	0.1	4645	

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Canada	4998102
United States of America	5213756

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Liquids Pipelines	19991
Gas Transmission and Midstream	9391678
Gas Distribution and Green Power and Transmission	795786
Corporate Services	4403

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	0	<Not Applicable>	Enbridge does not have upstream oil and gas production activities.
Oil and gas production activities (downstream)	10211858	<Not Applicable>	
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Canada	2762035	2762035	0	0
United States of America	3674135	3694650	0	106351

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Liquids Pipelines	5394978	5415493
Gas Transmission and Midstream	1031948	1031948
Gas Distribution and Green Power and Transmission	3111	3111
Corporate Services	6133	6133

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	0	0	Enbridge does not have upstream oil and gas production activities.
Oil and gas production activities (downstream)	6436170	6456685	
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable>		
Other emissions reduction activities		<Not Applicable>		
Divestment		<Not Applicable>		
Acquisitions	8394000	Increased	109	In 2017, Enbridge acquired Spectra Energy, a major acquisition which included Spectra Energy's natural gas processing, transmission, storage and distribution assets in Canada and the U.S., leading to an expanded asset base and GHG emissions. Calculation: Increase in 2017 Scope 1 & Scope 2 emissions due to acquisition (8,394,000 t CO2e) divided by 2016 Scope 1 and 2 reported in 2017 CDP (7,675,000 t CO2e) = 109% increase.
Mergers		<Not Applicable>		
Change in output	939000	Increased	12.2	The estimated change in Scope 1 and Scope 2 emissions due to "change in output" is approximate and estimated to be 222,000 t CO2e in Scope 1 GHGs as a result of increased natural gas processing and throughput volumes on Enbridge's gas processing and transmission operations, and 717,000 t CO2e in Scope 2 emissions from increased electricity use in the liquids pipeline business unit as a result of increased throughput. To arrive at this calculation, the Scope 2 emissions for liquids pipelines have been calculated on a basis comparable to 2016 using the same emission factor basis for both years (i.e., applying the higher average grid electricity factors used for the 2017 CDP submission). Calculation: Increase in Scope 1 and 2 due to increased output (222,000 t CO2e + 717,000 t CO2e) divided by 2016 Scope 1 and 2 reported in 2017 CDP (7,675,000 t CO2e) = 12.2% increase.
Change in methodology	360000	Decreased	5	The majority of the regional emission factors used to calculate 2017 Scope 2 emissions from purchased electricity used in the liquids pipeline business unit were updated (as compared to the grid electricity emission factors applied to estimate 2016 Scope 2 emissions) as EPA eGRID and Environment and Climate Change Canada (ECCC) periodically publish more current factors. On average, the electricity emission factors applied to 2017 Scope 2 estimates were lower than those applied to estimate 2016 Scope 2 emissions. The estimated reduction from these emission factor updates is 311,000 t CO2e. At Enbridge's EGD natural gas distribution business unit, net updates to emission factors and activity factors resulted in approximately a 49,000 t CO2e reduction in Scope 1 GHGs. The introduction of a new emission factor for residential meter sets was one of these updates. Calculation: (Decrease in Scope 1 and 2 due to updated emission factors (310,000 t CO2e + 49,000 t CO2e) divided by 2016 Scope 1 and 2 reported in 2017 CDP (7,675,000 t CO2e) = 5 % decrease.
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 15% but less than or equal to 20%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	35535815	35535815
Consumption of purchased or acquired electricity	<Not Applicable>	0	11616548	11616548
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	0	47152363	47152363

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)
Propane Gas

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
996

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
996

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Fuels (excluding feedstocks)
Fuel Oil Number 2

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
42221

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
42221

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Fuels (excluding feedstocks)
Motor Gasoline

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
139864

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
139864

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Fuels (excluding feedstocks)
Jet Kerosene

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
15800

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
15800

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Fuels (excluding feedstocks)
Other, please specify (Natural Gas in Vehicles)

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
9962

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
9962

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Fuels (excluding feedstocks)
Natural Gas

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
35326998

MWh fuel consumed for the self-generation of electricity
856213

MWh fuel consumed for self-generation of heat

30638765

MWh fuel consumed for self-generation of steam
1097426

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
2734594

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Fuel Oil Number 2

Emission factor
0.00274

Unit
metric tons CO2e per liter

Emission factor source
Environment and Climate Change Canada National Inventory Report (2018)

Comment
CO2e calculated using AR4 100-yr GWP's.

Jet Kerosene

Emission factor
0.00256

Unit
metric tons CO2e per liter

Emission factor source
Environment and Climate Change Canada National Inventory Report (2018)

Comment
CO2e calculated using AR4 100-yr GWP's.

Motor Gasoline

Emission factor
0.00237

Unit
metric tons CO2e per liter

Emission factor source
Environment and Climate Change Canada National Inventory Report (2018)

Comment
CO2e calculated using AR4 100-yr GWP's.

Natural Gas

Emission factor
0.05311

Unit
metric tons CO2e per million Btu

Emission factor source
EPA Part 98, Sub-part C Tables C1-1 and C-2

Comment
The emission factors for natural gas can vary based on reporting regulations. CO2e calculated using AR4 100-yr GWP's.

Propane Gas

Emission factor
0.06093

Unit
metric tons CO2e per GJ

Emission factor source
Environment and Climate Change Canada National Inventory Report (2018)

Comment
CO2e calculated using AR4 100-yr GWP's.

Other

Emission factor
0.00214

Unit
metric tons CO2 per m3

Emission factor source
Environment and Climate Change Canada National Inventory Report (2018)

Comment
CO2e calculated using AR4 100-yr GWP's.

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	6605720	435564	5364096	0
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor
Power Purchase Agreement (PPA) with energy attribute certificates

Low-carbon technology type
Nuclear

MWh consumed associated with low-carbon electricity, heat, steam or cooling
253738.8

Emission factor (in units of metric tons CO2e per MWh)
0

Comment

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-OG9.3a

(C-OG9.3a) Disclose your total refinery throughput capacity in the reporting year in thousand barrels per year.

	Total refinery throughput capacity (Thousand barrels per day)
Capacity	0

C-OG9.3b

(C-OG9.3b) Disclose feedstocks processed in the reporting year in million barrels per year.

	Throughput (Million barrels)	Comment
Oil	0	Enbridge has no refinery operations.
Other feedstocks	0	Enbridge has no refinery operations.
Total	0	Enbridge has no refinery operations.

C-OG9.3c

(C-OG9.3c) Are you able to break down your refinery products and net production?
Yes

C-OG9.3d

(C-OG9.3d) Disclose your refinery products and net production in the reporting year in million barrels per year.

Product produced	Refinery net production (Million barrels) *not including products used/consumed on site
Other, please specify (Enbridge has no refinery operations.)	0

C-CO9.6/C-EU9.6/C-OG9.6

(C-CO9.6/C-EU9.6/C-OG9.6) Disclose your investments in low-carbon research and development (R&D), equipment, products, and services.

Investment start date
January 1 2017

Investment end date
December 31 2017

Investment area
Equipment

Technology area
Renewable energy

Investment maturity
Large scale commercial deployment

Investment figure
1482000000

Low-carbon investment percentage
100

Please explain
This line provides the 2017 investment figure for Enbridge's investments in renewable energy production. Since 2002 Enbridge has invested in the development of more than 3,800 MW gross (3,300 MW net) of renewable and alternative energy. In total, Enbridge has committed $7.8 billion in renewable energy and power transmission projects in North America and Europe. These investments include onshore and offshore wind, solar, small-scale hydro-electric, geothermal and waste heat recovery. As of the date of this submission, Enbridge has entered into an agreement with the Canada Pension Plan Investment Board for the sale of a 49% interest in select North American onshore renewable power assets owned by Enbridge.

Investment start date
January 1 2016

Investment end date
December 31 2016

Investment area
Equipment

Technology area
Renewable energy

Investment maturity
Large scale commercial deployment

Investment figure
503000000

Low-carbon investment percentage
100

Please explain
This line provides the 2016 investment figure for Enbridge's investments in renewable energy production. Since 2002 Enbridge has invested in the development of more than 3,800 MW gross (3,300 MW net) of alternative energy. In total, Enbridge has committed $7.8 billion in renewable energy and power transmission projects in North America and Europe. These investments include onshore and offshore wind, solar, small-scale hydro-electric, geothermal and waste heat recovery. As of the date of this

submission, Enbridge has entered into an agreement with the Canada Pension Plan Investment Board for the sale of a 49% interest in select North American onshore renewable power assets owned by Enbridge. Enbridge will continue to evaluate opportunities to expand its offshore wind power generation business.

Investment start date
January 1 2015

Investment end date
December 31 2015

Investment area
Equipment

Technology area
Renewable energy

Investment maturity
Large scale commercial deployment

Investment figure
310000000

Low-carbon investment percentage
100

Please explain
This line provides the 2015 investment figure for Enbridge's investments in renewable energy production. Since 2002 Enbridge has invested in the development of more than 3,800 MW gross (3,300 MW net) of renewable and alternative energy. In total, Enbridge has committed $7.8 billion in renewable energy and power transmission projects in North America and Europe. These investments include onshore and offshore wind, solar, small-scale hydro-electric, geothermal and waste heat recovery. As of the date of this submission, Enbridge has entered into an agreement with the Canada Pension Plan Investment Board for the sale of a 49% interest in select North American onshore renewable power assets owned by Enbridge. Enbridge will continue to evaluate opportunities to expand its offshore wind power generation business.

C-OG9.7

(C-OG9.7) Disclose the breakeven price (US$/BOE) required for cash neutrality during the reporting year, i.e. where cash flow from operations covers CAPEX and dividends paid/ share buybacks.
0

C-OG9.8

(C-OG9.8) Is your organization involved in the sequestration of CO2?
Yes

C-OG9.8a

(C-OG9.8a) Provide, in metric tons CO2, gross masses of CO2 transferred in and out of the reporting organization (as defined by the consolidation basis).

	CO2 transferred – reporting year (metric tons CO2)
CO2 transferred in	0
CO2 transferred out	0

C-OG9.8b

(C-OG9.8b) Provide gross masses of CO2 injected and stored for the purposes of CCS during the reporting year according to the injection and storage pathway.

Injection and storage pathway	Injected CO2 (metric tons CO2)	Percentage of injected CO2 intended for long-term (>100 year) storage	Year in which injection began	Cumulative CO2 injected and stored (metric tons CO2)
Acid gas injection (CO2 and H2S co-injected into a production reservoir)	61910	100	January 1 2013	212601

C-OG9.8c

(C-OG9.8c) Provide clarification on any other relevant information pertaining to your activities related to transfer and sequestration of CO2.

Enbridge's gas processing operations have proven experience in small-scale CCS technology. Several of our facilities use this technology to separate acid

gas, which contains both H2S and CO2 from raw gas production, injecting and permanently storing it safely underground. Enbridge has acid gas injection well sites in the U.S. (2 sites) and Canada (8 sites). No CO2 is transferred in or out as part of this CCS process.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for reporting year-previous statement of process attached

Type of verification or assurance
Reasonable assurance

Attach the statement
Enbridge Gas Distribution_2016 Assurance Statement.pdf

Page/ section reference
Page 5, section B

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
1

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Union Gas_2016_Assurance Statement.pdf
Enbridge Gas Distribution_2016 Assurance Statement.pdf

Page/ section reference
Page 2, section B

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
2

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Enb-McM-VS-Stn-2017-V1.pdf

Page/ section reference
Page 5, section 3

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
5

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Enb-Mid-LFO-VS-Stn-2017-V1.pdf

Page/ section reference

Relevant standard
Other, please specify (ISO 14064-4)

Proportion of reported emissions verified (%)
2

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Enb-PLFS-LFO-VS-Stn-2017-V1.pdf

Page/ section reference
Page 6, section 3

Relevant standard
Please select

Proportion of reported emissions verified (%)
31

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Enb-G&P-LFO-VS-Stn-2017-V1.pdf

Page/ section reference
Page 5, section 3

Relevant standard
Other, please specify (ISO 14064-5)

Proportion of reported emissions verified (%)
2

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope
Scope 3- at least one applicable category

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year - first year it has taken place

Attach the statement
Enb-Gazifere_2017_Final.pdf

Page/section reference
Underway for Ontario-based utilities, Enbridge Gas Distribution and Union Gas

Relevant standard
ISO14064-3

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.
Alberta carbon tax
BC carbon tax
Ontario CaT
Québec CaT

C11.1b

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

Ontario CaT

% of Scope 1 emissions covered by the ETS
37

Period start date
January 1 2017

Period end date
December 31 2017

Allowances allocated
0

Allowances purchased
0

Verified emissions in metric tons CO2e

Details of ownership
Other, please specify (Customer-owned facilities)

Comment
In 2017, the province of Ontario implemented a cap and trade program, under which Enbridge's natural gas utilities in Ontario- Enbridge Gas Distribution and Union Gas- were required to purchase emission allowances on behalf of their customers. The utilities' emission allowance purchasing strategies include information that is confidential and strategic in nature. Public disclosure of such information would also be contrary to the requirements of the regulations governing the province's cap and trade systems for GHG emission allowances. In 2017, 37% of Union Gas and EGD's Scope 1 emissions, which are the emissions from stationary combustion, were directly subject to Cap and Trade; in addition the companies' Cap and Trade compliance obligations as natural gas distributors incorporate vented and fugitive Scope 1 emission sources. Verification of 2017 emissions has not been completed at this time.

Québec CaT

% of Scope 1 emissions covered by the ETS

Period start date
January 1 2017

Period end date
December 31 2017

Allowances allocated

Allowances purchased
0

Verified emissions in metric tons CO2e
0

Details of ownership
Other, please specify (Customer-owned facilities)

Comment
Gazifere is not a capped participant on scope 1 emissions.

C11.1c

(C11.1c) Complete the following table for each of the tax systems in which you participate.

Alberta carbon tax

Period start date
January 1 2017

Period end date
December 31 2017

% of emissions covered by tax

Total cost of tax paid

Comment
As a crude oil pipeline operator in Alberta, the carbon levy has not had a significant impact on Enbridge's operations in the province. The company's marketing companies are also not significantly impacted as product purchased in Alberta is for the most part exported from the province.

BC carbon tax

Period start date
January 1 2017

Period end date
December 31 2017

% of emissions covered by tax

Total cost of tax paid
72000000

Comment
Our facilities in British Columbia are subject to the carbon tax; the tax is largely passed on to customers. In 2017 Enbridge paid ~$72mm in carbon tax to the BC government.

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

On January 1, 2015, the Quebec government implemented a cap-and-trade system that requires Gazifère, an affiliate of Enbridge's Gas Distribution business unit and a subsidiary of Enbridge Inc., to purchase emission allowances on behalf of its customers. Gazifère's emission allowance purchasing strategy also includes information that is confidential and strategic in nature. Public disclosure of such information would be contrary to the requirements of section 51 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances. Gazifère recoups its costs for carbon emission allowances through the rate base. For Gazifère's customers, emission allowances are billable monthly, and are determined by the volume of natural gas consumed. The costs billed to customers match the amounts spent by Gazifère in order to purchase them. Since the costs associated with the purchase of emission allowances are directly reflected in the rates paid by its customers, it is wholly in Gazifère's interests to keep such costs under control in order to maintain its competitive advantage. Gazifère also offers its customers practical tips and financial assistance programs that will enable them to reduce their natural gas consumption, thereby reducing their GHG emissions.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Stakeholder expectations
Drive energy efficiency
Drive low-carbon investment

GHG Scope

Scope 1

Application

In 2017, Enbridge Gas Distribution's (EGD) Asset Management group began applying an internal price on carbon during the review of its asset decisions, using an estimated floor price of a carbon allowance from January 2017 in the province of Ontario. The application of a price on carbon was an initial step to help identify future emissions reduction opportunities and inform the development of abatement projects for EGD's operations. As of July 2018, the Ontario Government has cancelled the cap and trade program.

Actual price(s) used (Currency /metric ton)

18

Variance of price(s) used

Type of internal carbon price

Shadow price

Impact & implication

The application of a price on carbon was an initial step to help identify future emissions reduction opportunities and inform the development of abatement projects for EGD's operations. As of July 2018, the Ontario Government has cancelled the cap and trade program.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, our customers
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Engagement & incentivization (changing supplier behavior)

Details of engagement
Other, please specify (Supplier contract award/recycled goods)

% of suppliers by number
90

% total procurement spend (direct and indirect)
90

% Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement
To reduce impacts and create additional benefits, we incorporate environmental considerations into our Supply Chain Management (SCM) system through our procurement processes. This includes the purchase of recycled steel pipe and the disposal and recycling of materials such as unused pipe and scrap metal, and obsolete electronics. he size of engagement for this supplier engagement activity (% of suppliers of steel pipe by number) is estimated to be approximately 90% of all Enbridge's suppliers of steel pipe and equipment; and similarly the % of associated total procurement spend and associated Scope 3 emissions currently estimated and reported in C6.5 for "Capital Goods" is estimated to be approximately 90% of the Scope 3 activity (manufacture of steel pipe).

Impact of engagement, including measures of success
Measures of Success: In 2017, Enbridge purchased about 133,000 tonnes of steel pipe, about 87% of which was made from recycled steel. SCM's disposal of scrap and unused pipe included: • recycling of 3,000 tonnes of scrap metal by Union Gas; • recycling of 700 tonnes of scrap metal by LP's U.S. operations; • recycling of 1,471 tonnes of scrap metal by GTM's Canadian operations; and • the sale of 966 kilometers of pipe (24-inch and 30-inch diameter) following the cancellation of a pipeline project. Enbridge also works with a third party service provider to dispose of obsolete electronics and equipment used at its offices . In 2017, technology waste diverted from landfill totaled around 49 metric tons.

Comment

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Other, please specify (NGV fleet conversion)

% of suppliers by number

% total procurement spend (direct and indirect)

% Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement
EGD has the largest natural gas vehicle (NGV) fleet in Canada. Every Request for Proposal (RFP) that our Supply Chain Management (SCM) function issues on behalf of our natural gas utilities to vehicle manufacturers requires that the supplier provide vehicles that are either NGV ready or that can be easily converted. They are also converting medium-duty trucks, which normally operate on diesel fuel, to run on natural gas. Moreover, hybrid systems are routinely installed that enable work trucks to operate alternating current (AC) and direct current (DC) power tools and equipment from an alternative power source, eliminating the need to have the vehicle engine running.

Impact of engagement, including measures of success
Measures of Success: EGD has a total fleet of 804 vehicles. Of these, 600 vehicles, including 13 medium-duty trucks, have been converted to operate on Compressed Natural Gas (CNG). When appropriate, Union Gas purchases trucks that are equipped with CNG-ready engines and are then modified to run on either CNG or gasoline when the utility body is installed. Union Gas currently has a total of 26 CNG vehicles, with an additional 13 vehicles to be delivered in 2018. This will result in five percent of Union Gas's fleet vehicles running on CNG.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement
Education/information sharing

Details of engagement
Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

Size of engagement
95

% Scope 3 emissions as reported in C6.5
95

Please explain the rationale for selecting this group of customers and scope of engagement
With about 3.7 million natural gas customers in Ontario, Quebec and New Brunswick, a key element in Enbridge's strategy for engaging with partners in our value chain on climate and energy issues are our natural gas utilities' Demand Side Management (DSM) programs that help our natural gas customers identify and reduce their energy use and GHG emissions, and save on their energy bills. he size of engagement for this DSM activity is estimated to be approximately 95% of all Enbridge's natural gas utility customers and similarly the percentage of Scope 3 emissions reported in C6.5 for "Use of sold products" potentially impacted by these DSM programs is estimated to be approximately 95%. Through a wide range of DSM program offerings, we encourage our natural gas customers—from homeowners to industrial facilities—to adopt energy-saving equipment and operating practices to reduce their natural gas consumption. DSM program offerings consist of such energy-savings equipment and operating practices as: energy-efficiency audits of residential homes, commercial and industrial facilities; financial rebates; sharing of technical expertise; support to industry and trade associations in various sectors—schools, hotels and motels, construction, automotive, food and beverage, pulp and paper, etc.—to promote DSM programs and enhance industry standards and best practices; design charrettes (planning sessions) that support and educate builders on higher efficiency building options before construction begins; and partnerships with governments, suppliers and equipment manufacturers on investments in new energy-efficient technologies that benefit ratepayers. In addition, EGD's Savings by Design and Union Gas's Commercial Savings by Design green-building program help builders construct energy efficient, healthy and sustainable homes that exceed the 2017 Ontario Building Code requirements by at least 15%. The programs bring together a range of subject-matter experts and financial incentives during the design, construction and commissioning stages of building and housing projects.

Impact of engagement, including measures of success
Measures of Success: Cumulatively, between 1995 and 2016, EGD's energy efficiency programs reduced customer consumption by 11.1 billion cubic meters of natural gas, which is enough natural gas to serve nearly 4.6 million homes for one year. These gas savings have resulted in a reduction of 20.8 million tonnes of greenhouse gas emissions, which is roughly equal to removing 4 million cars from the road for one year. The total economic benefit of the programs since 1999 is $2.67 billion. From 1997 through 2016, Union Gas' DSM programs have saved an estimated $3.1 billion in total resource costs and 11.3 billion cubic meters of natural gas, which is enough natural gas savings to serve nearly 4.9 million homes for one year. These gas savings translate to a reduction of 22 million tonnes of CO2 emissions or the equivalent of removing 4.3 million cars from Ontario's roads for a year. (Note: 2016 DSM spending and results are unaudited and subject to change). EGD and Union Gas have annual targets for their respective DSM programs that aim to influence the adoption of energy efficient equipment and educate consumers to modify their behavior and reduce their energy consumption. These initiatives and programs are offered to all residential, commercial, institutional and industrial customers and include financial incentives to help positively influence customers decisions. The utilities are awarded an incentive, as determined by the Regulator, based on their performance towards meeting annual targets. In 2017, EGD's Savings by Design program and Union Gas's Commercial Savings by Design green-building program were recognized with awards from the Ontario Energy Association, the Ontario Sustainable Energy Association, and EnerQuality, which recognizes energy-efficient home building.

C12.1c

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

Indigenous Communities:

Many of the Indigenous communities that Enbridge's natural gas distribution utilities in Ontario engage with have a strong interest in advancing their own energy security and sustainability. We are currently working with some of these communities to identify opportunities to collaborate on locally-based projects that can reduce utility costs and GHG emissions.

One of Enbridge's gas distribution businesses in Ontario, Union Gas, has been approved for grant funding from the Ontario government which will enablethe expansion of its natural gas system to supply three Indigenous communities that currently rely on propane and higher-cost electricity to heat their homes. Once those communities are on residential gas supply from Union Gas, they will be eligible to access our Home Weatherization Program (HWP),which provides qualified customers with initial and final energy audits, basic water saving measures, a programmable thermostat, a carbon monoxide alarm, smoke alarm and insulation installation at no cost to the customer.

In the U.S., Enbridge has also partnered with two Indigenous-owned businesses in Minnesota to develop a new solar panel installation project that is expected to produce 20,000 kilowatts of power annually for the company's Bemidji office. Enbridge purchased the solar tracking stands that were invented,designed and built by Wells Technology and contracted with the second company, EW&C, for the construction of the project. The panels are expected to be fully installed by the end of summer 2018.

Employees (Business Travel):

Enbridge has implemented initiatives that provide alternatives to business travel for the company's employees. Our network of more than 100 TelePresence videoconferencing meeting rooms provides an alternative to business travel. In 2017, our employees held 8,621 meetings via TelePresence.

Some of our office locations also operate vanpools for employees who commute to work. In 2017, EGD's operation of five natural gas vanpools in the Greater Toronto Area for its employees to commute to work at its Victoria Park offices, with each van holding eight passengers and a driver. Total annual program savings are about 195 t CO2e. Our Houston office operates twenty three active 12-passenger vans in its fleet for employee commuting. Membership in a local mass transit company that provides a monthly ridership subsidy reduces vanpool operating costs for both the company and riders.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers
Trade associations
Funding research organizations
Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support	EGD and Union report operational GHG emissions federally and provincially. As well, EGD and Union report customer emissions provincially to the Ontario Ministry of Environment, Conservation and Parks (MOECP). We regularly correspond with the MOECC for clarification and feedback on new and proposed changes to the reporting regulation and guideline, specifically where it pertains to the natural gas distribution industry. This has been done through CEPEI and CGA. And, is done with input/knowledge of GR.	EGD and Union Gas have asked MOECP for additional clarification on reporting requirements related to use of renewable natural gas. Federally, we have provided recommendations to the effective and accurate reporting of emissions while allowing for flexibility in the quantification methodology and reduced reporting burden.
Cap and trade	Support	Ontario's cap and trade system required EGD and UG to acquire GHG emission permits, called "allowances," for its customers' emissions. We have publicly supported the new carbon pricing policies being adopted by federal and provincial governments in Canada and are actively engaged in ensuring that the implementation of new carbon and climate policies consider and address competitiveness impacts. EGD and Union submitted one-year Compliance Plans to the Ontario Energy Board (OEB) in November 2017, outlining the strategies for meeting the Cap and Trade obligations for 2018. EGD and Union met bi-weekly with the MOECP in 2017 in order to ensure operational details were smooth. This was done in the presence of GR. Gazifiere works in the province of Quebec to implement Cap and Trade and work with the regulator there.	Enbridge is supportive of carbon pricing mechanisms that are relevant to the needs and opportunities of the jurisdiction involved; encourage transparency, equity and cost-effective and competitive approaches to emissions reduction and sustainable energy development and trade; recognize the interdependence between energy systems; encourage investment in technological innovation that will reduce carbon intensity and improve energy efficiency and diversification.
Energy efficiency	Support	EGD and Union are operating their Demand Side Management ("DSM") programs under multiyear plans (2015 to 2020), which were approved by the Ontario Energy Board ("OEB"). DSM plans were in response to sections 27.1 and 27.2 of the Ontario Energy Board Act, 1998 which is intended to promote energy conservation through conservation and demand management ("CDM") and natural gas DSM. The DSM programs support optimization of the value of energy use by helping customers better manage their energy consumption, including ancillary emission benefits. Beginning in 2017, the OEB initiated a mid-term review of the DSM programs, which the utilities are participating in. As part of their DSM programs, EGD and Union offer Home Energy Conservation/ Home Reno Rebate Programs, part of which has been augmented with funding by the Government of Ontario through the Green Investment Fund (GIF). The existing DSM programs had $100 million of additional funding from the Government over three years to enhance funding for home energy audits and retrofits.	Enbridge believes that improving energy efficiency (wasting less energy) represents an important opportunity to save money, cut GHG emissions and create jobs.
Clean energy generation	Support	Enbridge supports the adoption of policies that promote the development of renewable energy and cleaner oil and gas.	Policies and targets that support development of clean energy generation align with Enbridge's business strategy to diversify our business mix.
Regulation of methane emissions	Support with minor exceptions	In 2016, the federal government in Canada announced forthcoming regulations on methane emission reductions as part of its Pan-Canadian Framework for Clean Growth and Climate Change. In the U.S., the Environmental Protection Agency finalized New Source Performance Standards for methane emissions. Enbridge's engagement on emerging methane regulations at both the federal and provincial levels includes working with industry peers to better understand the scope and assess potential impacts of the proposed legislation.	In Canada, Enbridge is supportive of the federal government's efforts to address climate change through the cost effective reduction of GHG emissions, including methane. In the U.S. Enbridge will continue to monitor the development of the federal and state methane regulations, and will work with industry peers and provide comments to relevant regulatory and government bodies where opportunities exist.
Carbon tax	Support	Enbridge has publicly supported the new carbon pricing policies being adopted by federal and provincial governments in Canada, provided these mechanisms drive economically efficient environmental solutions by providing incentives to businesses to invest in conservation and technology that reduce GHG emissions, and to consumers to use energy more efficiently. We are actively engaged with industry peers and other stakeholders in ensuring that the implementation of new carbon policies at the federal and provincial levels consider and address competitiveness impacts.	Enbridge is supportive of carbon pricing mechanisms that are relevant to the needs and opportunities of the jurisdiction involved; encourage transparency, equity and cost-effective and competitive approaches to emissions reduction and sustainable energy development and trade; recognize the interdependence between energy systems; encourage investment in technological innovation that will reduce carbon intensity and improve energy efficiency and diversification.
Other, please specify (Clean Fuel Standard)	Undecided	In 2016, the Canadian federal government announced forthcoming Clean Fuel Standard (CFS) regulations as part of its Pan-Canadian Framework for Clean Growth and Climate Change. The proposed legislation is still in development. Enbridge has been engaged in CFS consultations as a member on the government's Technical Working Group and Multi-Stakeholder Working Group. We are actively engaged with industry peers and other stakeholders in ensuring that the implementation of new carbon policies at the federal level considers and addresses competitiveness impacts.	Enbridge emphasizes the need for inter-jurisdictional coordination and the need to avoid overlapping layers of regulation that could reduce efficiency and competitiveness.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Interstate Natural Gas Association of America (INGAA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

INGAA is a U.S.-based industry association that supports a mandatory federal climate change program that would preempt redundant and potentially conflicting state or regional initiatives

How have you, or are you attempting to, influence the position?

Enbridge's EVP and President of GTM serves on the board of directors. Other company representatives serve in leadership roles on various committees, including the EHS Committee which addresses GHGs (methane). The Committee has been actively engaged with the U.S Environmental Protection Agency's development and technical amendments for the Agency's New Source Performance Standards Quad Oa for methane.

Trade association

Canadian Gas Association (CGA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

CGA and Canadian Energy Partnership for Environmental Innovation (CEPEI) are working to provide annual updates and publish an Emissions Estimation Manual for the calculation of greenhouse gas inventory. The manual is recognized by Canadian federal and provincial governments for GHG reporting and verification. The CGA also actively advocates at the federal level for low-carbon initiatives on behalf of gas utilities, such as renewable natural gas and natural gas conservation.

How have you, or are you attempting to, influence the position?

A senior Union Gas staff member participates and is engaged in CGA/Canadian Energy Partnership for Environmental Innovation Group.

Trade association

Ontario Energy Association (OEA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The OEA states that any carbon pricing mechanism will also have to be reconciled with Ontario's Feed-in-Tariff, one of the primary objectives of which is to reduce GHG emissions. The OEA does not have a position on carbon pricing, but does advocate for low-carbon initiatives on behalf of Ontario's natural gas and electricity utilities.

How have you, or are you attempting to, influence the position?

Enbridge Inc. and Union Gas have representation on the OEA Board of Directors. EGD and Union Gas have representation on its ad hoc Environment Task Force and the Energy Conservation (CDM/DSM) Task Force to ensure that its views are reflected in any policy statements or position papers released to regulators and the public.

Trade association

American Gas Association (AGA)

Is your position on climate change consistent with theirs?
Mixed

Please explain the trade association's position
The AGA believes that natural gas should be part of clean energy standards —and that energy efficiency and reduced environmental impacts be considered primary criteria for the nation's climate and energy policies.

How have you, or are you attempting to, influence the position?
EGD, Enbridge Inc. and Enbridge St. Lawrence Gas are limited members of the AGA and are not attempting to influence the position.

Trade association
American Petroleum Institute (API)

Is your position on climate change consistent with theirs?
Mixed

Please explain the trade association's position
While API publicly supports emissions reductions, it does not officially support or oppose carbon pricing. We actively engage in API internal processes on development of the organization's positions on climate issues.

How have you, or are you attempting to, influence the position?
Enbridge's President and CEO is a member of API's Board of Directors and the Executive Finance Committee and our Vice President of GTM Regulatory Affairs chairs the Natural Gas Midstream Committee. We also have representation on the Clean Air Issues Workgroup which addresses climate change issues affecting the U.S. oil and natural gas industry.

Trade association
Canadian Energy Pipelines Association (CEPA)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
CEPA member companies are committed to reducing GHG emissions from their operations. Beyond operations, many CEPA members have climate-change and environmental sustainability programs to track, address and manage their GHG emissions. Many also have significant investments in green energy such as wind power. CEPA members will continue to adopt practices, programs and new technologies to limit and reduce their GHG emissions.

How have you, or are you attempting to, influence the position?
Enbridge has representation on CEPA's Board of Directors and participates in CEPA's Climate Change Working Group to ensure that its views are reflected in any policy statements or position papers released to regulators and the public.

Trade association
Canadian Chamber of Commerce (the Chamber)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
The Chamber supports evidence-based policy-making that appropriately accounts for environmental externalities as well as efforts by the government of Canada to cooperate with provinces and territories to address environmental issues that are of shared jurisdiction. The Canadian Chamber believes that a market signal on carbon (i.e. a price) is imperative to foster technological innovation and ensure efficient regulatory processes.

How have you, or are you attempting to, influence the position?
Enbridge's Vice President Public Affairs and Communications serves on the Chamber's Board.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?
Yes

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

Enbridge is a member of and participates in the activities of the following organizations related to carbon and climate issues:

(i) The Carbon Pricing Leadership Coalition (CPLC). The CPLC brings together leaders from government, private sector, academia, and civil society to expand the use of carbon pricing policies. Enbridge participates in CPLC working groups and, in 2017, was among a group of Canadian companies involved with the coalition that developed a joint report with The World Bank Group entitled, "The Role of Carbon Pricing in a Low Carbon Transition." The report examines the business case for emissions reduction and the business implications of carbon pricing. The publication has been uploaded in question C12.4 of this CDP submission.

(ii) International Emissions Trading Association (IETA). IETA is a nonprofit business organization that serves businesses engaged in the field of carbon markets. IETA's objective is to build international policy and market frameworks for reducing greenhouse gases at lowest cost. Enbridge Inc. and EGD participate in IETA's Canadian and U.S. working groups.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Our direct and indirect activities that influence policy are guided by our Corporate Climate Policy, Statement on Business Conduct and our Political Contributions Policy that outlines our political engagement philosophy. Enbridge's ethics and compliance program provides assurance of adherence with our company policies through ongoing communication, training, monitoring and enforcement. Enbridge participates in the democratic process while adhering to all applicable laws in Canada and the United States. We track and analyze proposed legislation so that we may advocate the company's position when necessary. In doing so, we engage with governments at the state, provincial and federal levels in Canada and the U.S.

Enbridge participates in various trade associations through membership, leadership positions and participation on committees. We advocate for energy infrastructure by lending our collective voice, resources, knowledge and influence to encourage an efficient and supportive regulatory and business environment.

We also are keenly focused on communicating the benefits that our industry brings to the economy and to the community through job creation, contributions to the tax base, and by connecting new supplies of reliable, affordable and low carbon energy sources to markets.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In voluntary communications

Status
Complete

Attach the document
The Role of Carbon Pricing in a Low Carbon Transition_2018.pdf

Content elements
Strategy
Risks & opportunities

Publication
In voluntary sustainability report

Status
Underway – previous year attached

Attach the document
2016_CSR_Report_Spectra Energy.pdf
2016 CSR Sustainability Report - April 12 2017 - with March 29 2018 revisions.pdf

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Other metrics

Publication
In voluntary communications

Status
Complete

Attach the document
2017_ENB_AnnualReport_Full_optimized.pdf

Content elements
Strategy
Risks & opportunities
Emissions figures
Other, please specify (renewable energy generationo)

Publication
In other regulatory filings

Status
Complete

Attach the document
2018_ENB_ProxyStmt_ENG.pdf

Content elements
Please select

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

This Investor CDP 2018 Information Request includes "forward looking statements" within the meaning of federal securities laws. Actual results may materially differ from those discussed in these forward-looking statements, and you should refer to information contained in Enbridge's Form 10-K and in other filings made with the SEC concerning factors that could cause those results to be different than the forward-looking statements contained in this request.

2017 was a defining year for our company, with the combination of Enbridge and Spectra Energy, a leading natural gas franchise. We re-balanced our business mix and rolled out our first post-acquisition strategic plan in late 2017, to reflect a combined company. We spent 2017 assessing alignment in corporate policies and opportunities for simplification and synergies in our management systems and operations. This includes integration across all of our safety, environmental and supply chain management systems and platforms, critical to reporting this data. We anticipate many of these integration(s) to be complete for the 2018 CDP submission and allow for a more complete submission.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	CSO: advises ENB sr. mgmt. & Board on the integration of CSR and sustainable development principles and practices into corporate policies, management systems and business strategies.	Chief Sustainability Officer (CSO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors

Please confirm below

I have read and accept the applicable Terms