

C0. Introduction

C0.1

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

Emera Inc. is a geographically diverse energy and services company headquartered in Halifax, Nova Scotia, Canada with approximately \$32 billion in assets and 2019 revenues of \$6.1 billion. From our origins as a single electric utility in Nova Scotia, Emera has grown into an energy leader serving 2.5 million customers in Canada, the US, and the Caribbean. Emera’s strategy has been focused on safely delivering cleaner, affordable and reliable energy to customers for more than 15 years. Our company has investments throughout North America, and in four Caribbean countries. A description of the Emera affiliates that report to CDP is as follows: Tampa Electric (TEC) is a vertically integrated regulated electric utility servicing 780,000 customers in West Central Florida. Peoples Gas (PGS) is a natural gas utility serving 406,000 customers in Florida. New Mexico Gas Company (NMGC) is a natural gas utility serving 534,000 customers in New Mexico. Nova Scotia Power Inc. (NSPI) is a vertically integrated electric utility serving 523,000 customers in Nova Scotia. Emera Caribbean includes vertically integrated electric utilities serving 184,000 customers on the islands of Barbados, Grand Bahama, St. Lucia and Dominica. Emera Maine is a transmission and distribution electric utility serving 159,000 customers in northern and eastern Maine. The sale of Emera Maine to ENMAX Corporation closed in March 2020. Emera New Brunswick owns and operates the Brunswick Pipeline, a 145 km pipeline natural gas pipeline in New Brunswick and Emera Newfoundland and Labrador owns and operates the Maritime Link and manages investments in associated projects. Emera also owns Emera Technologies a technology company focused on finding new, innovative ways to deliver renewable and resilient energy to customers and Emera Energy a company focused on energy marketing and trading, asset management and optimization in Canada and the US. Emera Energy completed the sale of its three natural gas-fired electricity generating units in New England to Revere Power, LLC and its Bayside Generating Station to NB Power, in Q1 2019. These generating units will therefore not be reported in this year’s CDP submission. Emera Utility Services (EUS) was sold to PowerTel in 2019 and will also not be included in this year’s submission.

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
Reporting year	January 1 2019	December 31 2019	No	<Not Applicable>

C0.3

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

- Bahamas
- Barbados
- Canada
- Dominica
- 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 chosen approach for consolidating your GHG inventory.

Operational control

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

- Electricity generation
- Transmission
- Distribution

Other divisions

- Gas storage, transmission and distribution
- Smart grids / demand response
- Battery storage
- Micro grids

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) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Director on board	Oversight and guidance on Emera's strategy is one of the primary roles of the Board. Management, led by the President and CEO, collaborates with the Board of Directors each year to develop, review and update Emera's strategic plan. The strategic plan determines the annual and longer-term objectives at Emera. Carbon reduction is one of the strategic initiatives at Emera and Emera is investing in renewable and cleaner generation to reduce the carbon intensity of our operations. The Board of Directors is also responsible for overseeing the development of Emera's risk management framework and allocation of responsibilities for risk management. Global climate change risk, weather risk, changes in environmental legislation, and energy consumption risks are several of the risk areas that the Board reviews.
Chief Executive Officer (CEO)	The President and CEO, in collaboration with executive officers and the Board of Directors, develops Emera's strategic plan. Emera's strategic plan is centred on safely delivering cleaner, affordable, reliable energy to our customers. Carbon reduction is one of Emera's strategic initiatives and Emera is investing in renewable and cleaner generation to reduce the carbon intensity of our operations. The President and Chief Executive Officer is responsible for implementation of Emera's strategy. The CEO makes regular progress updates to the Board of Directors, of which he is a member.
Board Chair	The fundamental responsibility of the Chair of the Emera Board of Directors is to lead the board to fulfil its duties effectively, efficiently, and independently of management. In 2019, the Board continued to focus on carbon reduction as one of the strategic initiatives at Emera with a customer focus on safely delivering cleaner, affordable, reliable energy. The Board of Directors also continued to oversee the development of Emera's risk management framework and allocation of responsibilities for risk management. Global climate change risk, weather risk, changes in environmental legislation and energy consumption risks are several of the risk areas that the Board reviews.

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	Scope of board-level oversight	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	In 2019, the Board dedicated a portion of each scheduled meeting to receiving an update on Emera's strategy for safely delivering cleaner, affordable, reliable energy to our customers. A significant component of every regularly scheduled Board meeting was dedicated to the discussion of strategic matters. Directors used such Board meeting time to evaluate progress made in executing Emera's strategy, including reviewing near- and longer-term risks and opportunities relevant to our strategy. Sustainability is core to Emera's strategy. Emera executes with discipline to deliver for our customers, employees, shareholders, communities and the environment. With respect to current strategic priorities, Emera's emphasis has not changed, and remains focused on: (i) Carbon reduction – Investing in renewable and cleaner generation to reduce the carbon intensity of our operations; (ii) Operational Excellence and Affordability – Investing in, and optimizing our systems for reliability with a focus on and on cost control and "Fuels to Assets" and "Operating and Maintenance (O&M) to Assets" initiatives and (iii) Customer Experience and Innovation – Delivering on our promise to customers with the best experience and solutions for today and the future.

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	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 (do not include the names of individuals).

Directly below the Emera Board of Directors in the company's organizational structure is the President and Chief Executive Officer (CEO). The CEO, along with Emera Executive Leadership Team, is responsible for the implementation of Emera's strategy to safely deliver cleaner, affordable, reliable energy to our customers. The CEO and Executive Leadership Team are also responsible for implementing our current strategic initiatives under this strategy, including: Carbon reduction – Investing in renewable and cleaner generation to reduce the carbon intensity of our operations; (ii) Operational Excellence and Affordability – Investing in, and optimizing our systems for reliability with a focus on cost control and "Fuels to Assets" and "Operating and Maintenance (O&M) to Assets" initiatives and (iii) Customer Experience and Innovation – Delivering on our promise to customers with the best experience and solutions for today and the future. Climate-related issues are monitored by the CEO in the same manner as they are for the Board of Directors. They are considered by the CEO and Executive Leadership Team when reviewing and guiding Emera's risk management policies and major plans of action. Investments such as Tampa Electric's first large investment of \$850 million USD to develop 600 MW solar generation by 2021, its second major solar investment of \$800 million USD to develop 600 MW of solar generation by the end of 2023, and its \$850 million USD Big Bend Power Station Modernization project, which will retire a coal unit and convert another coal unit to cleaner, high efficiency natural gas generation, illustrate Emera's strategic direction. The CEO and Executive Leadership Team also oversees capital expenditures, acquisitions, and divestitures.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Corporate executive team	Monetary reward	Emissions reduction project	Emera has adopted the scorecard approach to translate corporate strategies into measurable incentive plan goals. Senior management also participate in a long-term incentive program. Emera's strategy is focused on safely delivering cleaner, affordable, reliable energy to our customers. Since 2005, Emera has achieved a 35% reduction in greenhouse gas emissions. In 2019, Emera continued to make significant advances in integrating renewables and embracing innovation through emission reduction and energy-efficiency projects. For example, Nova Scotia Power maintained 30% renewable energy generation and is on track for 40% of its energy to be from renewable sources by 2021. At Tampa Electric, 445MW of in-service solar generation was installed in 2019, part of a 600MW, \$850 million USD solar generation project planned to be completed by 2021. In early 2020, Tampa Electric announced a second major solar investment of \$800 million USD to develop 600MW of solar generation by the end of 2023. Tampa Electric also advanced its Big Bend Power Station Modernization project an \$850 million USD investment project, which will retire a coal unit and convert another coal unit to cleaner, high efficiency natural gas generation. And across all of our electric utilities approximately 535,000 smart meters out of a planned 1.4 million meters were installed.
Business unit manager	Monetary reward	Emissions reduction project	Emera has adopted the scorecard approach to translate corporate strategies into measurable incentive plan goals. Emera's strategy is focused on safely delivering cleaner, affordable, reliable energy to our customers. Since 2005, Emera has achieved a 35% reduction in greenhouse gas emissions. In 2019, Emera continued to make significant advances in integrating renewables and embracing innovation through emission reduction and energy-efficiency projects. For example, Nova Scotia Power maintained 30% renewable energy generation and is on track for 40% of its energy to be from renewable sources by 2021. At Tampa Electric, 445MW of in-service solar generation was installed in 2019, part of a 600MW, \$850 million USD solar generation project planned to be completed by 2021. In early 2020, Tampa Electric announced a second major solar investment of \$800 million USD to develop 600MW of solar generation by the end of 2023. Tampa Electric also advanced its Big Bend Power Station Modernization project an \$850 million USD investment project, which will retire a coal unit and convert another coal unit to cleaner, high efficiency natural gas generation. And across all of our electric utilities approximately 535,000 smart meters out of a planned 1.4 million meters were installed.
All employees	Monetary reward	Emissions reduction project	Emera has adopted the scorecard approach to translate corporate strategies into measurable incentive plan goals. Emera's strategy is focused on safely delivering cleaner, affordable, reliable energy to our customers. Since 2005, Emera has achieved a 35% reduction in greenhouse gas emissions. In 2019, Emera continued to make significant advances in integrating renewables and embracing innovation through emission reduction and energy-efficiency projects. For example, Nova Scotia Power maintained 30% renewable energy generation and is on track for 40% of its energy to be from renewable sources by 2021. At Tampa Electric, 445MW of in-service solar generation was installed in 2019, part of a 600MW, \$850 million USD solar generation project planned to be completed by 2021. In early 2020, Tampa Electric announced a second major solar investment of \$800 million USD to develop 600MW of solar generation by the end of 2023. Tampa Electric also advanced its Big Bend Power Station Modernization project an \$850 million USD investment project, which will retire a coal unit and convert another coal unit to cleaner, high efficiency natural gas generation. And across all of our electric utilities approximately 535,000 smart meters out of a planned 1.4 million meters were installed.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	1	3	
Medium-term	3	10	
Long-term	10	30	

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Emera defines substantive financial or strategic impacts when identifying and assessing climate-related risks, as areas that most significantly impact profitability, quality and consistency of income and cash flow. See response C2.2 for the processes Emera has in place for identifying, assessing, and responding to climate-related risks.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Emera's Board of Directors is responsible for overseeing risk associated with our upstream and downstream value chain and our director operations. It is also responsible for overseeing the implementation by management of appropriate systems to identify, report and manage the principal risks of Emera's business. The Board of Directors is responsible for overseeing the development of Emera's risk management framework and allocation of responsibilities for risk management, which it does with support from the Nominating and Corporate Governance Committee of the Emera Board of Directors. The Board has endorsed a risk statement, which articulates Emera's risk appetite. The risk statement sets out the risk appetite across a number of areas and is intended to provide general guidance for decisions at Emera. The Board considers Emera's risk profile and oversees Emera's risk management by reviewing: (a) the annual identification and assessment of the principal risks of Emera; (b) the process for ongoing monitoring and reporting of the principal risks of Emera; (c) the effectiveness of Emera's mitigation response to its principal risks; and (d) the alignment of risk management with Emera's risk profile, its strategy and its organizational objectives, including capital and resources allocation. On a quarterly basis, the Board, CEO and Executive Leadership Team, receives and reviews a risk dashboard, prepared by the Emera's Enterprise Risk Management Committee. The risk dashboard identifies strategic risks and includes management action plans for the highest risks. Further, a comprehensive and ongoing risk assessment is part of every project Emera undertakes. The Board is also responsible for reviewing Emera's annual insurance program, its uninsured exposure, and its business continuity and disaster recovery plans. The Board also annually evaluates the operation and effectiveness of the Board of Directors, its Committees and the Chair of the Board. In the course of that evaluation, the question of whether the Board has examined the key risks to the Emera's strategy and business plan is assessed. A similar risk management process is conducted by the Board of Directors and C-Suites at all Emera affiliated companies. Climate-related risks and opportunities that are covered as part risk management discussions include transition risks such as greenhouse gas emissions regulations, carbon pricing systems, low-carbon technology advancements, and physical risks such as the increased frequency and intensity of weather events and related impacts including storms, ice storms, hurricanes, cyclones, heavy rainfall, extreme winds, wildfires, flooding and storm surge. Emera defines substantive financial or strategic impacts when identifying and assessing climate-related risks, as areas that most significantly impact profitability, quality and consistency of income and cash flow. As part its clean energy strategy, Emera is converting what are typical risks to the electric utilities sector into opportunities by advancing its clean energy strategy, investing in renewable energy and innovative technologies that will reduce greenhouse gas emissions and make the energy grid smarter in delivering cleaner, affordable and reliable energy to customers.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Emera is subject to regulation by federal, provincial, state, regional and local authorities with regard to environmental matters, primarily related to its utility operations. Emera considers the risks associated with current regulations, such as laws setting greenhouse gas (GHG) emission standards and air emissions standards, as part of our climate-related risk assessments. Changes to these standards could adversely affect Emera's operations and financial performance. For example, in 2019, Nova Scotia Power completed registration under the Nova Scotia Cap-and-Trade Program Regulations. This provincial carbon pricing program meets the benchmark set by the Government of Canada. Changes to these greenhouse gas emission regulations and others could influence decisions regarding early retirement of generation facilities and may result in stranded costs if Emera is not able to fully recover the costs and investment in the affected generation assets. Recovery is not assured and is subject to prudence review.
Emerging regulation	Relevant, always included	Emera recognizes the risk associated with emerging regulations such as emissions guidelines in the United States as part of our climate-related risk assessments. Emerging regulations could adversely affect Emera's operating and financial performance. For example, in June 2019, the Environmental Protection Agency issued the final Affordable Clean Energy ("ACE") rule. The ACE rule establishes GHG emissions guidelines for states to regulate GHG emissions from existing coal-fired electricity generating units. Individual states continue to develop or administer GHG reduction initiatives. Tampa Electric is engaged in the development of a State plan with State regulators, with permitting that could be finalized by the end of 2020 to help mitigate this emerging regulatory risk.
Technology	Relevant, always included	Emera acknowledges the risk associated with the changing energy landscape as part of our climate-related risks assessments. New players and new technologies are changing the way utilities have traditionally done business. Emera is working to maintain its position as a leader in the face of this change. Emera has made significant investments to facilitate the use of renewable and lower-carbon energy including the Maritime Link in Atlantic Canada, the ongoing construction of solar generation at Tampa Electric and the modernization of the Big Bend Power Station at Tampa Electric. At Tampa Electric 445MW of in-service solar generation was installed by the end of 2019 as part of a 600MW, \$850 million USD solar generation project, which is nearly complete. In early 2020, Tampa Electric announced a second major solar investment of \$800 million USD to develop 600MW of solar generation by the end of 2023.
Legal	Relevant, always included	Emera considers the risk associated with legal requirements as part our climate-related risk assessments. Emera could, in the future, face litigation or regulatory action related to environmental harms from carbon emissions or climate change public disclosure issues. Emera addresses these risks through compliance with relevant laws, emission reduction strategies, and public disclosure of climate change risks. For example, Nova Scotia Power and Tampa Electric are both compliant with existing greenhouse gas emission regulations. In 2019, Nova Scotia Power completed registration under the Nova Scotia Cap-and-Trade Program Regulations, a provincial carbon pricing program meets the benchmark set by the Government of Canada. Tampa Electric is engaged in the development of a State plan with State regulators, under the Federal Affordable Clean Energy (ACE) rule, with permitting that could be finalized by the end of 2020.
Market	Relevant, always included	Emera considers the risks associated with failing to meet the market demand for safe delivery of cleaner, affordable and reliable energy as part of our climate-related risk assessments. Emera recognizes that changing carbon-related costs, policy and regulatory changes and shifts in supply and demand factors could lead to more expensive or more scarce products and services that are required by Emera in its operations. Emera seeks to mitigate these risks through close monitoring of such developments and adaptive changes to supply chain procurement strategies. For example, given concerns regarding carbon-emitting generation, our thermal generation assets at Nova Scotia Power, Tampa Electric, and our Emera Caribbean electric utilities, Grand Bahama Power, Barbados Light and Power, and Dominica Electricity Services, may over time, become difficult (or uneconomic) to insure in commercial insurance markets. In the short term, this may be mitigated through increased investment in engineered protection or alternative risk financing (such as funded self-insurance or regulatory structures, including storm reserves). Long-term mitigation may be achieved through infrastructure siting decisions and further engineering protections. This risk is also mitigated through the continued transition away from high-carbon generation sources to sources with low or zero carbon emissions.
Reputation	Relevant, always included	Emera considers its reputation with its stakeholders as part of its climate-related risk assessments. Emera recognizes that failure to address issues related to climate change could affect our reputation with our stakeholders, our ability to operate and grow and Emera's access to, and cost of, capital. Emera seeks to mitigate this in part by moving away from higher-carbon generation in favour of lower-carbon generation and non-emitting renewable generation. Decarbonization and reliability investments represent approximately 60 percent of Emera's \$7.5 billion capital investment profile over the 2020-2022 period.
Acute physical	Relevant, always included	Emera acknowledges the acute physical risk of increased frequency and intensity of weather events, including ice storms, hurricanes, cyclones, heavy rainfall, extreme winds, wildfires and storm surge as part of the company's climate-related risk assessments. The potential impacts of climate change, such as rising sea levels and larger storm surges from more intense hurricanes, can combine to produce even greater damage to coastal generation and other facilities. High winds can impact structures and cause widespread damage to transmission and distribution infrastructure. Increased frequency and severity of weather events increases the likelihood that the duration of power outages and fuel supply disruption could increase. There are increased operating costs associated with restoring services to customers as the result of unplanned outages. Each of Emera's regulated electric utilities have responded to the acute physical risks associated with climate change with programs that focus on storm hardening of transmission and distribution infrastructure to minimize damage, but there can be no assurance that these measures will fully mitigate the risk. This risk to transmissions and distribution facilities is typically not insured, as such the restoration cost is generally recovered through regulatory processes, either in advance through reserves or designated self-insurance funds, or after the fact through the establishment of regulatory assets. Recovery is not assured and is subject to prudence review. One example of Emera's storm hardening efforts is taking place at Tampa Electric. Tampa Electric filed a storm protection plan with the Florida Public Service Commission in Q2 2020 after legislation passed in Florida promoting utility storm-hardening investment. Tampa Electric's 2020-2022 capital forecast includes \$300 million USD in related investments.
Chronic physical	Relevant, always included	Emera considers the chronic physical risks associated with weather and climate change, such as rising global temperatures that may bring increased frequency and severity of wildfires and increased drought conditions within Emera's service territories. These chronic physical risks associated with climate change could lead to seasonal variations impacting energy sales. Fluctuations in the amount of electricity or natural gas used by customers can vary significantly in response to seasonal variations and could impact the operations, results of operations, financial condition, and cash flows of Emera's utilities. For example, Emera's electrical utilities operating Atlantic Canada could see lower demand in winter months if temperatures are warmer than expected. In the absence of a regulatory recovery mechanism for unanticipated costs, such events could have an effect on Emera's results of operations, financial conditions or cash flows.

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 & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms
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Primary potential financial impact

Decreased asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

The Government of Canada introduced the Pan-Canadian Framework on Clean Growth and Climate Change in early 2017. As part of the Framework, in February 2018, the Government introduced proposed changes to the greenhouse gas coal regulations designed to remove coal fired generation by 2030, subject to equivalency agreements. At that time, a regulation was introduced specifying the emission intensities required for new natural gas fired generation and for boiler conversions from coal to natural gas. The Government published final regulations for both coal and natural gas generation in December 2018. Emera affiliate Nova Scotia Power has an equivalency agreement in place that allows our affiliate to achieve compliance with federal GHG emissions regulations by meeting provincial legislative and regulatory requirements as they are deemed to be equivalent. Beginning on January 1, 2019, each province and territory in Canada was required to have a carbon pricing system which met a national benchmark set by the Government of Canada of \$10/tonne of CO₂. This price will rise by \$10 each year to \$50/tonne in 2022. The province of Nova Scotia launched a cap and trade program in response to this national benchmark. In 2019, Nova Scotia Power completed registration under the Nova Scotia Cap-and-Trade Program Regulations. Nova Scotia was granted emissions allowances in 2020 that will be used in 2020 or allocated within the initial four-year compliance period that ends in 2022.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1300000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

In 2019, Nova Scotia Power met the requirements of the Nova Scotia Cap-and-Trade Program Regulations. However, Emera recognizes that future changes to these greenhouse gas emission regulations and others could influence decisions regarding early retirement of generation facilities and may result in stranded costs if Emera is not able to fully recover the costs and investment in the affected generation assets. Early retirement of Nova Scotia Power thermal plants could cost up to \$1.3 billion dollars to Nova Scotia Power ratepayers.

Cost of response to risk

0

Description of response and explanation of cost calculation

Nova Scotia Power manages this risk by communicating and negotiating regularly with the Nova Scotia Department of Energy and the Nova Scotia Department of Environment and federally with the Department of Energy and Environment and Climate Change Canada regarding emissions targets and timelines in Nova Scotia Power's emission reduction equivalency agreement with the Province. The Canada-Nova Scotia Equivalency Agreement, the latest update which came into force January 1, 2020, allows Nova Scotia Power to achieve compliance with federal GHG emissions regulations through 2029 by meeting provincial legislative and regulatory requirements, as these requirements are deemed to be equivalent to the federal regulations. Efforts are now focused on the development of an Equivalency Agreement for 2030 and beyond recognizing equivalent outcomes between federal and provincial environmental laws and regulations. The magnitude of carbon pricing and coal phase-out to Nova Scotia Power is high and the time horizon is short term. Nova Scotia Power continues to be on track in reducing the carbon intensity of our operations. In 2019, Nova Scotia Power maintained 30% renewable energy generation and is on track for 40% of its energy to be from renewable sources by 2021.

Comment

Nova Scotia Power has been implementing programs to reduce greenhouse gas emissions while meeting the demand for cleaner, affordable, reliable energy. As described in Annual Capital Expenditure (ACE) Plans Nova Scotia Power plans to spend approximately \$1.8 billion in capital between 2018 and 2022. With these investments, Nova Scotia Power will optimize its existing clean generation assets and create greater efficiencies that will benefit its customers.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Mandates on and regulation of existing products and services
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Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

The US has established the Affordable Clean Energy (ACE) rule which establishes emissions guidelines for greenhouse gas emissions from existing coal-fired electric utility generating plants such as Tampa Electric's Big Bend Power Station. The EPA has determined that heat rate improvement measures are the best system of emission reduction (BSER) for existing coal-fired EGUs. Tampa Electric is engaged in the development of a State plan with State regulators, based on BSER, with permitting that could be finalized by the end of 2020.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Tampa Electric conducts regular updates to its short-term and long-term operations strategy and is closely following regulatory developments. It is difficult for Tampa Electric to forecast any operational costs associated with the ACE Rule until state plans are finalized. Tampa Electric will continue to make investments to improve the efficiency of its existing assets and invest in renewable energy projects as a way to reduce the potential impacts of this regulatory risk. When making these decisions on efficiency and renewable energy investments, Tampa Electric must make certain any decisions align with the demand for clean, affordable energy to customers and that there is not undue burden placed on rate payers.

Cost of response to risk

0

Description of response and explanation of cost calculation

In 2019, Tampa Electric advanced its Big Bend Power Station Modernization project, an \$850 million USD investment to retire a coal unit and convert another coal unit to cleaner, high efficiency natural gas generation. Tampa Electric's first large investment of \$850 million USD to develop 600MW of solar generation is nearly complete with 445MW installed at the end of 2019. This project when combined with the modernization work at Big Bend will reduce overall emissions at Tampa Electric by 36 percent. In early 2020, Tampa Electric also announced a second major solar investment of \$600 million USD to develop 600MW of solar by the end of 2023. Emera expects solar generation will outweigh the use of coal at Tampa Electric by 2023. As the state plan in response to the ACE rule is expected to be being finalized in 2020 the magnitude of this impact to Tampa Electric is medium and the time horizon is short-term.

Comment

Tampa Electric manages this transition risk by communicating and negotiating regularly with federal and state regulators regarding air and greenhouse gas emissions. The magnitude is medium and the time horizon of the impact to Tampa Electric is short-term as specific state emission reduction plans are being finalized. Costs will be estimated when firm decisions state level are made.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Increased severity and frequency of extreme weather events such as cyclones and floods
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Primary potential financial impact

Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Potential for increased damage to transmission and distribution infrastructure at Barbados Light and Power, Dominica Electricity Services, Grand Bahama Power Company, Emera Maine, Nova Scotia Power, and Tampa Electric from extreme weather events such as windstorms, heavy rain events, winter storms, and hurricanes, leading to power interruptions and impacts to customers.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

64110000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Barbados Light and Power, Dominica Electricity Services, Grand Bahama Power Company, Emera Maine, Nova Scotia Power, and Tampa Electric have incurred significant costs due to increased damage to transmission and distribution infrastructure damaged by storms. For example, in September 2019 Hurricane Dorian significantly impacted our operations on Grand Bahama Island and in Nova Scotia. Hurricane Dorian, a category 5, was the strongest hurricane on record to have hit the Bahamas, devastating the northern Bahamas including east Grand Bahama. A 100% of Grand Bahama Power Company (GBPC) customers lost power. Grand Bahama Power was fortunate that 80 percent of its Freeport grid infrastructure survived Hurricane Dorian, in part due to storm hardening efforts the company undertook after Hurricane Matthew in 2016. Total restoration costs for the T&D system were approximately \$12 million USD and additional \$5 million USD insurance policy deductible for the Peel Street generation plant impacted by flooding. Hurricane Dorian also impacted the province of Nova Scotia making landfill near Halifax as a post-tropical storm. The storm tracked across the middle of the province and had peak wind speeds of 136 km/hr. Nova Scotia Power mobilized its largest storm response in the company's history. Approximately 400,000 of Nova Scotia Power's customers lost power during the hurricane with damage that included an estimated 7,000 instances of lines broken by trees or with trees

leaning on them and 375 broken or leaning poles. The total cost from the storm was \$38.9 million, the highest cost storm restoration costs also in the company's history.

Cost of response to risk

398070000

Description of response and explanation of cost calculation

Emera affiliates manage risk by continuing to invest in storm strengthening upgrades to transmission and distribution systems. For example, legislation was passed in Florida promoting storm hardening investments by State utilities. Tampa Electric filed its storm protection plan with the Florida Public Service Commission in 2020. Tampa Electric's 2020 to 2022 capital forecast includes \$300 million USD of related storm hardening investments.

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Changes in precipitation patterns and extreme variability in weather patterns
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Primary potential financial impact

Decreased asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Climate change impacts could result in changes in the availability of water for hydro generation by Nova Scotia Power and DOMLEC.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Failure to manage the risk will result in stranded asset costs to both Nova Scotia Power and Dominica Electricity Services.

Cost of response to risk

600000000

Description of response and explanation of cost calculation

To manage this risk Nova Scotia Power is planning to overhaul its largest hydro generating stations over the next 10 years (2019-2029). The magnitude of the impact to Nova Scotia Power is medium-low while the time horizon is medium-term.

Comment

To manage this risk Nova Scotia Power is planning to invest more than \$600 million over the next ten years (2019-2029) to overhaul its largest hydro generating stations. In the shorter term, from 2020-2022, this represents \$290 million of Emera's capital plan to invest in cleaner, more reliable energy.

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

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Emera recognizes that trends in decarbonization, decentralization and digitalization are driving unprecedented change in the energy industry. While some see these as disruptive forces, at Emera we see them as opportunities. We have been strategically focused on safely delivering cleaner, affordable, and reliable energy to customers for more than 15 years. These continue to be the primary drivers of our growth today and for the foreseeable future.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

6100000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Energy companies have an important role to play as we all strive toward a cleaner energy future. Decarbonization of our economies and communities depends upon our ability to decarbonize the energy that powers them. As we know, the transition from high-carbon to low-carbon energy requires significant investment. We are making those investments and they are driving our growth. However, the pace and approach to these transition investments must be thoughtful to ensure energy remains both reliable and affordable for customers, today and into the future. Emera has seen strong earnings related to its strategy to meet customer demand for cleaner, affordable energy delivered safely. In 2019, Emera had \$6.1 billion in revenue, achieved a 5% increase in adjusted earnings per share (EPS) over the last six years and at our regulated utilities delivered 11% adjusted EPS growth in the same period.

Cost to realize opportunity

4500000000

Strategy to realize opportunity and explanation of cost calculation

Emera is managing this opportunity by continuing to invest in renewable energy technologies. For example, Nova Scotia Power maintained 30% renewable energy generation and is on track for 40% of its energy to be from renewable sources by 2021. At Tampa Electric, 445MW of in-service solar generation was installed in 2019, part of a 600MW, \$850 million USD solar generation project planned to be completed by 2021. In early 2020, Tampa Electric announced a second major solar investment of \$800 million USD to develop 600MW of solar generation by the end of 2023. Emera expects solar generation will outweigh the use of coal at Tampa Electric by 2023. The opportunity of Emera affiliates investing in renewable energy is high and the time horizon is short term.

Comment

Decarbonization and reliability investments represent approximately 60 percent of Emera's \$7.5 billion capital investment profile over the 2020-2022 period. This includes investments in renewable and clean energy (including capital for two major solar investments at Tampa Electric), the modernization of aging infrastructure, and customer-focused technologies.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

The US has established the Affordable Clean Energy (ACE) rule to replace the Clean Power Plan. The Affordable Clean Energy (ACE) rule establishes emissions guidelines for greenhouse gas emissions from existing coal-fired electric utility generating plants such as Tampa Electric's Big Bend Power Station. The EPA has determined that heat rate improvement measures are the best system of emission reduction (BSER) for existing coal-fired EGUs. Tampa Electric is engaged in the development of a State plan with State regulators, with permitting that could be finalized by the end of 2020. There is continued uncertainty until this state plan is finalized. In light of this uncertainty surrounding state plans, Emera sees the continued opportunity to transition away from coal to lower-emission sources of energy such as natural gas. Natural gas is a cleaner energy source available to us in some markets.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

6100000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Tampa Electric is predicting an increase in demand for generation in the coming years. Tampa Electric is aggressively pursuing opportunities to further increase its solar generating capacity to provide renewable energy options for its residential and commercial customers. At the same time, Tampa Electric has been modernizing and improving the efficiency of its thermal plants such as Big Bend and Polk Power Stations to provide a reliable source of base load energy that can support even more solar development, contributing to a clean energy future. Emera has seen strong earnings related to its strategy to meet customer demand for cleaner, affordable, reliable energy delivered safely. In 2019, Emera had \$6.1 billion in revenue, achieved a 5% increase in adjusted earnings per share (EPS) over the last six years and at our regulated utilities delivered 11% adjusted EPS growth in the same period.

Cost to realize opportunity

4500000000

Strategy to realize opportunity and explanation of cost calculation

Emera is managing this opportunity by investing in low-emission sources of energy. The modernization of the Big Bend Power Station at Tampa Electric is a key part of Emera's efforts to reduce the carbon intensity of its operations. The \$850 million USD dollar Big Bend Modernization Project, announced in 2018, will increase efficiency and reduce emissions by upgrading one coal unit to high efficiency natural gas generation and retiring a second unit early. Greenhouse gas emissions from units 1 and 2 will be reduced by more than 60 percent and the amount of coal used at the site will be reduced by 50 percent. The full combined-cycle technology is expected to be in place in 2023. The opportunity for Emera affiliates investing in lower-emission sources of energy is high and the time horizon is short term.

Comment

Decarbonization and reliability investments represent approximately 60 percent of our \$7.5 billion capital investment profile over the 2020-2022 period. This includes investments in renewable and clean energy, the modernization of aging infrastructure (including capital for the Big Bend Modernization at Tampa Electric), and customer-focused technologies.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Advancements in emerging technologies such as electricity storage, smart grids, heat pumps and solar generation provide opportunities for Emera. Emera is working to make certain it is at the forefront of these changes – anticipating and shaping them for the benefit of Emera's customers and shareholders.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

6100000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

These technological advancements allow Emera affiliates to introduce more efficient energy solutions for their customers. This includes grid modernization and 'smart grid' advances that when combined with in-home products such as heat pumps, electric thermal storage units, and powerwalls have the potential to significantly increase energy efficiency and storage for consumers while allowing Emera affiliates to better manage peak load demand and optimize costs. Emera has seen strong earnings related to its strategy to meet customer demand for cleaner, affordable energy delivered safely. In 2019, Emera had \$6.1 billion in revenue, achieved a 5% increase in adjusted earnings per share (EPS) over the last six years and at our regulated utilities delivered 11% adjusted EPS growth in the same period.

Cost to realize opportunity

4500000000

Strategy to realize opportunity and explanation of cost calculation

Emera manages this opportunity by investing in new technologies. For example, Emera is investing \$450 million to install more than 1.4 million smart meters (residential, commercial, and municipal customers) across Emera's electric utilities over five years (2018-2022). By the end of 2019, Emera's electric utilities had installed approximately 535,000 smart meters. Smart meters enable us to provide better information to our customers about their energy use and about process and cost efficiencies that will help

ensure affordability for customers. The opportunity of Emera affiliates investing low emission goods and services is high and the time horizon is short term.

Comment

Decarbonization and reliability investments represent approximately 60 percent of our \$7.5 billion capital investment profile over the 2020-2022 period. This includes investments in renewable and clean energy, the modernization of aging infrastructure and customer-focused technologies (including capital for its AMI deployment across affiliates).

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

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

Yes, qualitative and quantitative

C3.1b

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

Climate-related scenarios and models applied	Details
Other, please specify (Integrated resource planning)	<p>Across Emera affiliates including Nova Scotia Power, Tampa Electric, Emera Energy, and Emera Caribbean, integrated resource planning is used to establish the direction that these utilities will take to meet customer demands and energy requirements in a cost-effective, safe and reliable manner across a reasonable range of foreseeable futures. Detailed company-specific modelling tools are used to consider a broad range of resource plans. These modelling tools consider short, medium, and long-term time horizons that represent typical planning windows used at Emera. The modelling focuses on key variables such as plant retirement dates, the level of demand-side management, the level of renewable generation, and the potential for power purchase agreements with other utilities and renewable energy providers. Various resource plans across a range of foreseeable futures are compared to a 'reference world' that assumes base loads, current and currently proposed environmental regulations, including GHG considerations and current renewable energy availability at each affiliate. The sensitivity analyses of proposed resource plans are conducted and based on potential future changes including more stringent air regulations including greenhouse gas emissions such as cap and trade and carbon pricing, low and high natural gas and coal prices, low and high costs of renewable energy, and availability of demand response programs. This modelling allows for the selection of a preferred resource plan for each affiliate to support future investment decisions. Modelling used by our Canadian utilities would consider federal and provincial greenhouse gas regulations, which are based on Canada's national determined contributions (NDC) submission under the Paris Agreement. Canada has committed to reduce greenhouse gas emissions by 30 percent below 2005 levels by 2030. Modelling by Tampa Electric will consider emission guidelines for existing fossil-fuel fired electricity generating plants in the state of Florida in response to the Affordable Clean Energy (ACE) rule. The results of resource plan modelling, by Emera affiliates, directly align with Emera's long-term capital investment plan that includes significant investment across the portfolio in renewable and cleaner generation, infrastructure modernization, storm hardening, energy storage and customer-focused technologies. All of these initiatives contribute towards mitigating the potential impacts of climate change. For example, at Tampa Electric 445MW of in-service solar generation was installed in 2019, part of a 600MW, \$850 million USD solar generation project planned to be completed by 2021. In early 2020, Tampa Electric announced a second major solar investment of \$800 million USD to develop 600MW of solar generation by the end of 2023. Tampa Electric also advanced its Big Bend Power Station Modernization project an \$850 million USD investment project, which will retire a coal unit and convert another coal unit to cleaner, high efficiency natural gas generation. And across all of our electric utilities approximately 535,000 smart meters out of a planned 1.4 million meters were installed.</p>

C3.1d

(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	The trends of decarbonization, decentralization and digitalization are driving unprecedented change in the energy industry. While some see this as potentially disruptive forces, at Emera, we see them as opportunities. We have been strategically focused on safely delivering cleaner, affordable, and reliable energy to customers for more than 15 years. And we believe our strategy is more relevant today than it ever has been. We are building a lower carbon future where customers have more choice, control, and confidence in their energy. For example, Emera is investing \$450 million to install more than 1.4 million smart meters (residential, commercial, and municipal customers) across Emera's electric utilities over five years (2018-2022). By the end of 2019, Emera's electric utilities had installed approximately 535,000 smart meters.
Supply chain and/or value chain	Yes	Emera acknowledges the acute physical risk of increased frequency and intensity of weather events. Increased frequency and severity of weather events increases the likelihood of fuel supply disruptions and the duration of power outages, caused by damage to transmission and distribution infrastructure, impacting our service to our customers. These impacts to our supply chain and value chain could result in increased operating costs associated with accessing alternative fuel supplies and restoring services to customers as the result of unplanned outages. Emera's risk management framework considers these physical climate-related risks and ways to mitigate them. To reduce the impact to customers caused by power outages, for example, Tampa Electric filed a storm protection plan with the Florida Public Service Commission in 2020 after legislation passed in Florida promoting utility storm-hardening investment. Tampa Electric's 2020-2022 capital forecast includes \$300 million USD in related investments.
Investment in R&D	Yes	Emera recognizes the opportunity to develop and/or expand low emission goods and services. Our company invests in R&D initiatives to drive advancement in areas such as electricity storage, smart grids, heat pumps and solar generation to anticipate and shape these technologies for the benefit of the company's customers and shareholders. Emera launched several projects in 2019 to continue to prepare for a more decentralized and digital future. For example, in partnership with New Brunswick Power, Nova Scotia Power launched a Collaborative Smart Grid Innovation Project to look at solar generation, battery storage, electric vehicle smart charging and smart thermostat technologies. Through Emera Technologies, we have developed a DC-based microgrid system that combines rooftop and community solar generation, with residential and community battery storage. This technology enables the efficient sharing of energy within neighbourhoods that is safer and more reliable than other solutions. The system has now been successfully piloted with Sandia National Labs at a US Airforce Base. Emera also continues to deploy smart meters across our electric utilities. By the end of 2019, our electric utilities had installed roughly 535,000 smart meters.
Operations	Yes	Emera affiliate Nova Scotia Power recognizes the risk associated with GHG regulations that could impact its existing coal-fired units up to and including the early retirement of these assets. The Government of Canada has laws and regulations that would compel the closure of coal plants before the end of their economic life and at the latest by 2030. The Canada-Nova Scotia Equivalency Agreement allows NSPI to achieve compliance with federal GHG emissions regulations through 2029 by meeting provincial legislative and regulatory requirements, as these requirements are deemed to be equivalent to the federal regulations. Efforts are now focused on the development of an Equivalency Agreement for 2030 and beyond recognizing equivalent outcomes between federal and provincial environmental laws and regulations. The Province's Bill 213, "The Sustainable Development Goals Act", was enacted in October 2019, and includes a goal of net-zero GHG emissions by 2050. NSPI will continue to work with the provincial government on its carbon reduction goals. Nova Scotia Power completed registration under the Nova Scotia Cap-and-Trade Program Regulations in 2019 and was granted emissions allowances in 2020 that will be used in 2020 or allocated within the initial four-year compliance period that ends in 2022. In 2019, Nova Scotia Power maintained 30% renewable energy generation and is on track for 40% of its energy to be from renewable sources by 2021.

C3.1e

(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital Assets Liabilities	In 2019, Emera had approximately \$32 billion in assets and revenues of more than \$6.1 billion. We have been strategically focused on safely delivering cleaner, affordable, and reliable energy to customers for more than 15 years. Our investments in cleaner generation, in transmission to deliver cleaner energy and in reliability improvements have been driving our growth for many years. These continue to be the primary drivers of our growth today and for the foreseeable future. Decarbonization and reliability investments represent approximately 60 per cent of our \$7.5 billion capital investment profile over the 2020–2022 period. Global climate change risk has been identified as a principal risk at Emera that management believes could materially affect our business, revenues, operating income, net income, net assets, liquidity, and capital resources. In response to this risk, Emera has made significant investments to facilitate the use of renewable and lower-carbon energy including wind generation, the Maritime Link, in Atlantic Canada, and solar generation and the modernization of the Big Bend Power Station in Florida.

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

n/a

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

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

Target reference number

Abs 1

Year target was set

2009

Target coverage

Business division

Scope(s) (or Scope 3 category)

Scope 1

Base year

2005

Covered emissions in base year (metric tons CO2e)

10648422

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

43

Target year

2020

Targeted reduction from base year (%)

30

Covered emissions in target year (metric tons CO2e) [auto-calculated]

7453895.4

Covered emissions in reporting year (metric tons CO2e)

6596483

% of target achieved [auto-calculated]

126.840045720702

Target status in reporting year

Underway

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Please explain (including target coverage)

Emera Inc. is a geographically diverse energy and services company that invests in electricity generation, transmission and distribution as well as gas transmission and utility energy services. Emera as whole does not have an absolute GHG target but various affiliates have established targets. This target relates to Nova Scotia Power, one of Emera's affiliates and a regulated electric utility that is the primary electricity supplier in Nova Scotia, Canada. As a regulated utility, Nova Scotia Power has a legislated absolute target to achieve total annual emissions below 7.5Mt of CO2e by 2020. Nova Scotia Power reached this target early in 2014. Nova Scotia Power will continue to maintain our legislated annual emissions at or below 7.5Mt into 2020. We also have a simultaneous renewable energy targets. In 2019, Nova Scotia Power continued to deliver 30% of Nova Scotia's electricity from renewable sources and is on track for 40% of its energy to be from renewable sources by 2021.

Target reference number

Abs 2

Year target was set

2013

Target coverage

Business division

Scope(s) (or Scope 3 category)

Scope 1

Base year

2005

Covered emissions in base year (metric tons CO2e)

10648422

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

43

Target year

2030

Targeted reduction from base year (%)

58

Covered emissions in target year (metric tons CO2e) [auto-calculated]

4472337.24

Covered emissions in reporting year (metric tons CO2e)

6596483

% of target achieved [auto-calculated]

65.6069202003633

Target status in reporting year

Underway

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Please explain (including target coverage)

In 2030, the total annual emissions from Nova Scotia Power must be below 4.5Mt of CO₂e, a reduction of 3.0Mt from 2020 targets.

Target reference number

Abs 3

Year target was set

2018

Target coverage

Business division

Scope(s) (or Scope 3 category)

Scope 1

Base year

1998

Covered emissions in base year (metric tons CO₂e)

18143700

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

53

Target year

2023

Targeted reduction from base year (%)

50

Covered emissions in target year (metric tons CO₂e) [auto-calculated]

9071850

Covered emissions in reporting year (metric tons CO₂e)

8471328

% of target achieved [auto-calculated]

106.6196200334

Target status in reporting year

Underway

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Please explain (including target coverage)

Tampa Electric continues to be committed to providing clean, reliable and affordable power to its customers. In addition to previous emission reduction projects, two new projects will help the utility achieve a 50% reduction in emissions by 2023. Tampa Electric advanced its Big Bend Power Modernization project, which will retire a coal unit and convert another coal unit to cleaner, high efficiency natural gas generation and achieved 445MW of in-service solar in 2019 as part of its first 600MW solar generation project planned for completion in 2021. Note that Tampa Electric publicly reports its emission reduction efforts back to 1998 for this target but Emera is using its official base year as 2005. Therefore, the covered emissions in base year as % of total base year emissions is based on 2005 emissions.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production

Target(s) to reduce methane emissions

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2010

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Please select

Target denominator (intensity targets only)

<Not Applicable>

Base year

2010

Figure or percentage in base year

0

Target year

2021

Figure or percentage in target year

40

Figure or percentage in reporting year

30

% of target achieved [auto-calculated]

75

Target status in reporting year

Underway

Is this target part of an emissions target?

Abs 1

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

In 2019, Nova Scotia Power, in Nova Scotia, Canada, continued to deliver 30% of Nova Scotia's electricity from renewable sources. Nova Scotia Power is on track for 40% of its energy to be from renewable sources by 2021.

Target reference number

Low 2

Year target was set

2018

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Please select

Target denominator (intensity targets only)

<Not Applicable>

Base year

2016

Figure or percentage in base year

0.24

Target year

2023

Figure or percentage in target year

100

Figure or percentage in reporting year

35.6

% of target achieved [auto-calculated]

35.4450681635926

Target status in reporting year

Underway

Is this target part of an emissions target?

Abs 3

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Tampa Electric in Tampa, Florida, US, has committed to installing 1250MW of solar generation by 2023.

Target reference number

Low 3

Year target was set

2016

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Please select

Target denominator (intensity targets only)

<Not Applicable>

Base year

2016

Figure or percentage in base year

3.76

Target year

2030

Figure or percentage in target year

100

Figure or percentage in reporting year

3.76

% of target achieved [auto-calculated]

0

Target status in reporting year

Underway

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

The Government of Barbados has committed to 100% renewable energy by 2030 and Barbados Light and Power is continuing to invest in cleaner energy in support of this commitment.

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2011

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Methane reduction target	Other, please specify (Replacement of all cast iron and bare steel mains with plastic piping)
--------------------------	---

Target denominator (intensity targets only)

<Not Applicable>

Base year

2011

Figure or percentage in base year

0

Target year

2021

Figure or percentage in target year

100

Figure or percentage in reporting year

82

% of target achieved [auto-calculated]

82

Target status in reporting year

Underway

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

Other, please specify (Environmental Protection Agency's Methane Challenge and Natural Gas STAR, voluntary programs to reduce and report methane emissions)

Please explain (including target coverage)

In 2019, Peoples Gas, in Florida, US, continued to advance its commitment to replace all cast iron and bare steel mains with plastic piping by 2021 to reduce fugitive emissions. Since 2011, 82 percent of these pipes have been replaced, resulting in a 38% reduction in associated emissions.

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 initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	4	
To be implemented*	1	450000
Implementation commenced*	10	3464783
Implemented*	1	22912
Not to be implemented	0	

C4.3b

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

Initiative category & Initiative type

Fugitive emissions reductions	Other, please specify (Reduction in SF6 releases)
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Estimated annual CO2e savings (metric tonnes CO2e)

22912

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

14250000

Payback period

No payback

Estimated lifetime of the initiative

16-20 years

Comment

Nova Scotia Power initiated a multi-year capital project to replace obsolete Westinghouse Gas Insulated Switchgear (GIS) and bus equipment located at its Lingan Generating Station substation. The Westinghouse GIS switchgear had become a maintenance issue as the equipment was experiencing leaks of SF6 insulating gas and corrosion issues. Nova Scotia Power is required to track and report SF6 leaks across its operations to provincial environmental regulators. SF6 is a potent greenhouse gas having a global warming potential of 22,800. A full year of SF6 emission reductions were achieved in 2019. The replacement of GIS equipment at the Lingan substation resulted in a 99% reduction in fugitive SF6 releases.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Emera's strategy is focused on meeting customer demand for cleaner, affordable, reliable energy delivered safely. Across Emera jurisdictions there are established or emerging requirements for GHG emissions. For example, Emera affiliate Nova Scotia Power has a provincially legislated absolute target to achieve total annual emissions below 7.5Mt of CO2e by 2020. Nova Scotia Power reached this target early in 2014 and will continue to maintain our legislated annual emissions at or below 7.5Mt into 2020. By 2030, Nova Scotia Power's provincially legislated absolute target is 4.5Mt. In the US, the Affordable Clean Energy (ACE) establishes GHG emissions guidelines for states to regulate GHG emissions from existing coal-fired electricity generating units. Individual states continue to develop or administer GHG reduction initiatives. Tampa Electric is engaged in the development of a state plan with State regulators with permitting that could be finalized by the end of 2020. Tampa Electric is also advancing its Big Bend Power Station Modernization project an \$850 million USD investment project, which will retire a coal unit and convert another coal unit to cleaner, high efficiency natural gas generation.
Dedicated budget for energy efficiency	Emera affiliates, Nova Scotia Power, Emera Maine, Tampa Electric, Peoples Gas, and New Mexico Gas all support energy efficiency programs and have dedicated budgets for these programs. For example, Peoples Gas encourages their customers to use natural gas efficiently using their Energy Jumpstart campaign which allows customers to get energy-saving products installed in their homes for free. They also offer HVAC, water heater, and weatherization rebates for customers.
Dedicated budget for low-carbon product R&D	Emera recognizes the opportunity to develop and/or expand low emission goods and services. Our company invests in R&D initiatives to drive advancement in areas such as electricity storage, smart grids, heat pumps and solar generation to anticipate and shape these technologies for the benefit of the company's customers and shareholders. Decarbonization and reliability investments represent approximately 60 per cent of our \$7.5 billion capital investment profile over the 2020-2022 period. This includes \$340 million budgeted for smart meters and LED streetlights and \$600 million for other projects such as distributed generation and storage.

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

Product

Description of product/Group of products

Heat Pumps - Heat pumps use less energy to operate than other heating and cooling equipment. For every dollar a homeowner spends on heating using a heat pump, they can get up to three dollars' worth of heat when compared to traditional heating equipment. And when it comes to cooling, heat pumps are also twice as efficient as traditional air conditioning units.

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

Low-carbon product and avoided emissions

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

Other, please specify (As Emera affiliates transition from higher carbon methods of electricity generation to lower carbon alternatives, heat pumps can be powered by locally produced cleaner energy, avoiding emissions.)

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

0

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Emera's electric companies in Nova Scotia and Florida, have been providing customers with information about heat pumps for their heating and/or cooling needs. For example, Nova Scotia Power offers access to rebates and financing. Nova Scotia Power's customers can save up to 50 percent on average on their home heating bills by switching to a heat pump. Approximately, 100,000 heat pumps have been installed in homes since the program started. Tampa Electric's Heating and Cooling program allows its residential customer to earn a rebate when replacing an inefficient air conditioning system with a new, energy-efficient system e.g., heat pump systems for cooling, that meets energy-saving standards. Emera affiliates do not sell heat pumps and therefore did not report any revenue from this service in 2019.

Level of aggregation

Product

Description of product/Group of products

Electric vehicle charging stations - Electric vehicles deliver an emissions-free ride and requires less maintenance than internal combustion engines.

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 (As Emera affiliates transition from higher carbon methods of electricity generation to lower carbon alternatives, electric vehicles can be powered by locally produced cleaner energy, avoiding emissions.)

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

0

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Emera's electric utilities are partnering with governments to help install electric vehicle infrastructure. For example, with funding support from Natural Resources Canada (NRCan), Emera affiliate Nova Scotia Power installed a network of 12 Level 3 fast chargers from Yarmouth to Sydney in the province of Nova Scotia. These charging stations help make it a more viable option to drive an electric vehicle in Nova Scotia and allow Nova Scotia Power customers to avoid greenhouse gas emissions associated with the use of traditional gasoline and diesel run vehicles. Each charging station can charge an electric vehicle in 15-30 minutes. This network addresses the lack of high-speed charging stations, which is a primary inhibitor to Nova Scotians adopting electric vehicles. Further contributing to the solution, the Government of Nova Scotia installed an additional 12 Level 2 chargers at the same locations. These chargers provide a charging solution for plug-in hybrid vehicles that are unable to charge using the Level 3 chargers. Total revenue generated from the charging stations in 2019 was approximately \$17,000 and there were over 2,200 unique charging sessions.

Level of aggregation

Product

Description of product/Group of products

Advanced Metering Infrastructure (AMI or smart meter) - Smart meters allow electricity customers to access more information about energy use, provide more accurate billing and can enable more efficient power restoration during outages.

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 (The use of smart meters allows customers to identify possible behavioural changes to reduce their electricity consumption, and therefore avoid greenhouse gas emissions.)

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

0

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Emera is investing \$450 million to install more than 1.4 million smart meters (residential, commercial and municipal customers) across Emera's electric utilities over five years (2018-2022). By the end of 2019, Emera's electric utilities had installed approximately 535,000 smart meters. Smart meters enable us to provide better information to our customers about their energy use and about process and cost efficiencies that will help ensure affordability for customers. The ability to identify possible behavioural changes to reduce their electricity consumption also allows our customers to avoid greenhouse gas emissions associated with energy consumption. Please note that Emera affiliates are providing smart meters to their customers by switching out existing infrastructure. Emera affiliates do not sell smart meters to customers and therefore did not report any revenue from this service in 2019.

Level of aggregation

Product

Description of product/Group of products

LED streetlights – LED streetlights are more efficient than traditional streetlights, reducing the amount greenhouse gas emissions generated from their use. They also have reduced maintenance costs as they need to be changed out less infrequently.

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 (As Emera affiliates transition from higher carbon methods of electricity generation to lower carbon alternatives, LED can be powered by locally produced cleaner energy, avoiding emissions.)

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

0

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Streetlight replacement programs have been initiated across Emera affiliates. Emera is investing \$340 million over the 2020-2022 period in smart meters and LED Streetlights. For example, in 2019, Tampa Electric converted 32,366 street and outdoor lighting luminaries to LED technology within its Street and Outdoor Lighting Program. This resulted in annual energy savings of approximately 20 GWh in 2019. Please note that Emera affiliates are providing LED streetlights to their customers by switching out existing infrastructure. Emera affiliates did not sell LED streetlights to customers and therefore did not report any revenue from this service in 2019.

C-EU4.6**(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.**

Emera has programs in place across all its generation facilities that use natural gas to detect and repair leaks from natural gas infrastructure. Proactive detection and repair of these leaks helps Emera affiliates reduce methane emissions company-wide. For example, Tampa Electric's Polk Power Station completes a monthly leak survey of its natural gas duct burner piping on the station's four combined-cycle combustion turbine units to identify and repair natural gas leaks. Our teams at New Mexico Gas and Peoples Gas both worked with a third-party consultant in 2019 to refine their GHG inventories and to identify the most effective ways to reduce GHG emissions such as further opportunities to reducing leakage, exploring the use of Compressed Natural Gas fleet vehicles, increasing energy efficiency and renewable energy at facilities, and continuing to promote customer energy efficiency programs. In 2019, Peoples Gas continued to advance its commitment to replace all cast iron and bare steel mains with plastic piping by 2021 to reduce fugitive emissions. Since 2011, 82 per cent of these pipes have been replaced, resulting in a 38% reduction in associated emissions.

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 2005

Base year end

December 31 2005

Base year emissions (metric tons CO2e)

25017167

Comment

Please note that we have adjusted our Scope 1 base year emissions from 27,770,819 metric tons CO2e in our 2019 submission to 25,017,167 metric tons CO2e in our 2020 submission to account our divestment in Emera Energy assets including three natural gas-fired plants Bridgeport Energy, Tiverton Power and Rumford Power, in New England and Bayside Generating Station in New Brunswick.

Scope 2 (location-based)**Base year start**

January 1 2005

Base year end

December 31 2005

Base year emissions (metric tons CO2e)

0

Comment

Please note that we have adjusted our Scope 2 base year emissions from 4,683 metric tons CO2e in our 2019 submission to 0 metric tons CO2e in our 2020 submission to account our divestment in Emera Energy assets including three natural gas-fired plants Bridgeport Energy, Tiverton Power and Rumford Power, in New England and Bayside Generating Station in New Brunswick.

Scope 2 (market-based)**Base year start****Base year end****Base year emissions (metric tons CO2e)**

0

Comment

Emera does not report any Scope 2 market-based emissions

C5.2

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

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

Other, please specify (See C5.2a)

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Scope 1 emissions, including CO₂ and CO₂e, from facilities at Emera are calculated using mass balance approaches, continuous emission monitoring systems (CEMS), guidelines from emissions trading systems, and/or calculations based on fuel use/fuel leaks and publicly available emission factors from the US Environmental Protection Agency, Environment and Climate Change Canada and/or the Intergovernmental Panel on Climate Change (IPCC). Emera New Brunswick, Emera Newfoundland and Labrador and Emera Caribbean affiliates currently do not currently track fuel use from company vehicles as part of their Scope 1 emissions. Emera New Brunswick and Emera Newfoundland and Labrador have only a small number of company vehicles, and emissions from these are not considered material. Our Emera Caribbean affiliates are working to collect this data in the future. CO₂eq Scope 2 emissions from electricity purchased and consumed internally by Emera affiliates are calculated using annual electricity purchases and publicly available regional emissions factors from the US Environmental Protection Agency. Electricity purchases for internal use only apply to New Mexico Gas. Purchased electricity for leased offices at other affiliates are included as part of rental agreements and are not currently tracked.

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO₂e)

16224673

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

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 have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report 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?

Reporting year

Scope 2, location-based

524

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

Emera's Scope 2 emissions are from purchased electricity by New Mexico Gas. Emera Energy's US Gas Plants and Bayside Power, and Emera Maine were sold recently and are therefore not included in Emera's Scope 2 emissions. The 2019 scope 2 emissions are for New Mexico Gas only.

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

Scope 1 emissions from the fugitive releases from Brunswick Pipeline are not included in our disclosure.

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 this source is excluded

Emera New Brunswick operates the Brunswick Pipeline, a 145-km natural gas transmission pipeline. Fugitive emissions from the pipeline are tracked but are not considered material to Emera Inc. when placed in the context of Scope 1 process/generation station emissions. Fugitive emissions from Peoples Gas and New Mexico Gas are included in our Scope 1 emissions as the size of these natural gas transmission and distribution systems is much larger and their emissions are considered material. There are no location-based Scope 2 emissions from this source. Market-based Scope 2 emissions are not applicable from this source.

Source

Scope 2 location-based emissions from purchased electricity for leased office spaces at Emera New Brunswick (Brunswick Pipeline) and Peoples Gas are not included in our disclosure.

Relevance of Scope 1 emissions from this source

No emissions excluded

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)

No emissions excluded

Explain why this source is excluded

There are not Scope 1 emissions from this source. Scope 2 location-based emissions from purchased electricity for leased office spaces at Emera New Brunswick (Brunswick Pipeline), and People Gas are not included in our disclosure. Emera New Brunswick (Brunswick Pipeline) had a small leased office in Saint John and Peoples Gas offices do not track usage as they are in leased offices. Electricity is included as part of rental agreements for office spaces. The annual kWh used at these locations is not known. Scope 2 location-based emissions from these leased spaces are not considered material to Emera Inc. when placed in the context of Scope 1 process/generation station emissions. Market-based Scope 2 emissions are not applicable from this source.

Source

Scope 1 emissions from company vehicles from Emera New Brunswick, Emera Newfoundland and Labrador and Emera Caribbean are not included in our disclosure.

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

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 this source is excluded

Scope 1 emissions from company vehicles emissions from our largest distribution fleets including Nova Scotia Power, Emera Maine, Tampa Electric, Peoples Gas and New Mexico Gas are included. We also included company vehicle emissions from Emera Energy's Brooklyn Power. Emera New Brunswick and Emera Newfoundland and Labrador have very few company vehicles and therefore these emissions are not considered material. Our Emera Caribbean affiliates do not currently track fuel usage from company vehicles but will track this data in the future. In 2019, our fleet emissions were approximately 38,000 tonnes CO₂ representing only 0.2% of our overall scope 1 emissions. These emissions are not considered material when placed in the context of our Scope 1 process/generation station emissions.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Capital goods**Evaluation status**

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain**Fuel-and-energy-related activities (not included in Scope 1 or 2)****Evaluation status**

Relevant, calculated

Metric tonnes CO2e

1429282

Emissions calculation methodology

The carbon dioxide equivalent (CO2e) Scope 3 emissions from generated electricity that is purchased by Nova Scotia Power, Tampa Electric, and Emera Maine and sold to end users is calculated annually. Purchased electricity for Nova Scotia Power in 2019 was provided by utilities in New Brunswick, New England, Newfoundland and Quebec. The emissions factors were sourced from Nova Scotia Qualification, Reporting and Verification Regulations. Purchased electricity for Tampa Electric was provided by multiple generators in the Florida Region. Therefore, Tampa Electric Company used the regional CO2e emission factor listed in EPA's Emissions Generation Resource Integrated Database (eGRID) to calculate these Scope 3 emissions. Purchased electricity for Emera Maine was provided by multiple generators in New England. Therefore, Emera Maine used 2018 New England system emissions factor listed in the latest ISO New England Electric Generator Air Emissions Report released in 2018.

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

0

Please explain

Nova Scotia Power, Tampa Electric, and Emera Maine purchase electricity from other utilities and sell it to their customers.

Upstream transportation and distribution**Evaluation status**

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain**Waste generated in operations****Evaluation status**

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain**Business travel****Evaluation status**

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Employee commuting

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

We anticipate that the results would not be material to Emera when placed in the context of process/generating station emissions. As an electric utility employee commuting would be less than one percent of our global emissions.

Upstream leased assets

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Emera is an energy company and does not technically have a product that would require vehicle transportation. Energy is transmitted through transmission and distribution lines. Line loss has been accounted for in our Scope 1 emissions and therefore there would be zero scope 3 emissions from this source.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Emera is an energy company, mainly electricity, and although the product would be used by customers as a process input it would not be processed according to the definition. There would be zero scope 3 emissions from this source.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

8118268

Emissions calculation methodology

The Scope 3 emissions for Peoples Gas and New Mexico Gas are calculated using methodology from the Code of Federal Regulations 98.403 Calculating GHG Emissions part (b). This methodology is part of the federal Greenhouse Gas Reporting Program (GHGRP).

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

0

Please explain

Peoples Gas and New Mexico Gas are affiliates that offer local distribution of natural gas. These affiliates track Scope 3 end-user combustion of natural gas in Florida and New Mexico, respectively. The data used for this calculation is the amount of natural gas sold annually by Peoples Gas and New Mexico Gas. The data does not come from suppliers or value chain partners. Please note that Emera's Brunswick Pipeline is a natural gas transmission pipeline. Emera New Brunswick, the owner of Brunswick Pipeline, is not a local distributor of natural gas in New Brunswick and therefore does not calculate Scope 3 emissions.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As an energy company, Emera does not sell a product that would fall within these parameters and customers impacts associated with the use of the product would be captured under fuel/energy related activities. There would be zero scope 3 emissions from this source.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

There are no downstream leased assets at Emera affiliates. There would be zero scope 3 emissions from this source.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Emera does not have franchises. There would be zero scope 3 emissions from this source.

Investments

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Other (upstream)

Evaluation status

Not evaluated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Not evaluated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	362769	

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

0.0027

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

16225197

Metric denominator

unit total revenue

Metric denominator: Unit total

6111000000

Scope 2 figure used

Location-based

% change from previous year

15.63

Direction of change

Decreased

Reason for change

Emera is continuing to advance its strategic plan on meeting customer demand for cleaner, affordable energy delivered safety, which includes identifying opportunities to invest in the transition from high-carbon to low-carbon energy.

Intensity figure

0.48

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

16061438

Metric denominator

Other, please specify (MWh total electrical energy sold)

Metric denominator: Unit total

33671000

Scope 2 figure used

Location-based

% change from previous year

9.43

Direction of change

Decreased

Reason for change

Emera is continuing to advance its strategic plan on meeting customer demand for cleaner, affordable energy delivered safety, which includes identifying opportunities to invest in the transition from high-carbon to low-carbon energy.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

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
CO2	16029325	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	137714	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	45597	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	12037	IPCC Fourth Assessment Report (AR4 - 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	0	0	0	CO2 and CH4 fugitive emissions from Emera's natural two gas distribution companies from New Mexico Gas and Peoples Gas are not included because they are not part of Scope 1 emissions from electric utilities owed by Emera. Emera's natural gas delivery, distribution and transmission affiliates are working to reduce fugitive methane emissions associated with their operations. For example, Emera's Brunswick Pipeline, a pipeline delivering natural gas from an LNG import terminal near Saint John, New Brunswick, to markets in the northeastern United States, makes upgrades to the pipeline where needed to reduce fugitive methane leaks such as replacing door gaskets to a pig receivers or tubing at valve stations to prevent leaks. The teams at Peoples Gas and New Mexico have programs in place to detect and repair pipeline leaks which is helping to reduce fugitive methane emissions. Peoples Gas is making progress by upgrading their distribution systems, replacing old pipes and equipment at compressor stations. In 2019, Peoples Gas, continued to advance its commitment to replace all cast iron and bare steel mains with plastic piping by 2021 to reduce fugitive emissions. Since 2011, 82 per cent of these pipes have been replaced, resulting in a 38% reduction in associated emissions.
Combustion (Electric utilities)	15986318	17486	12037	16015841	
Combustion (Gas utilities)	0	0	0	0	This row does not apply to our operations
Combustion (Other)	0	0	0	0	This row does not apply to our operations
Emissions not elsewhere classified	0	0	0	0	This row does not apply to our operations

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	6600196
United States of America	8634564
Barbados	726044
Bahamas	197917
Dominica	62062

C7.3

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

- By business division
- By facility

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Tampa Electric	8471328
Peoples Gas	68129
New Mexico Gas	95107
Nova Scotia Power	6596483
Emera Energy	3714
Emera Maine	3890
Barbados Light and Power	726044
Grand Bahama Power Company	197917
Dominica Electricity Services (DOMLEC)	62062

C7.3b

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

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Bayside Power Station	2999620	27.9064	-82.41906
Big Bend Power Station	2872448	27.795192	-82.401337
Polk Power Station	2584953	27.726501	-81.989594
Tampa Electric T and D	4466	0	0
Tampa Electric Fleet	9841	0	0
New Mexico Gas	90349	35.59182	-106.05359
New Mexico Gas Fleet	4758	0	0
Peoples Gas	63048	27.950308	-82.459516
Peoples Gas Fleet	5081	0	0
Lingan Generation Station	2472196	46.239397	-60.038074
Point Aconi Generation Station	1022462	46.320997	-60.33054
Point Tupper Generation Station	803829	45.587723	-61.348706
Trenton Generation Station	1473225	45.686052	-62.66154
Tuft's Cove Generation Station	530840	44.676787	-63.59594
Combustion Turbines	250895	44.676787	-63.59594
Port Hawkesbury Biomass Plant	26878	45.59993	-61.356738
Nova Scotia Power T and D	5726	0	0
Nova Scotia Power Fleet	10120	0	0
Nova Scotia Power Facility	312	0	0
Brooklyn Power	3463	44.057007	-64.692328
Brooklyn Fleet	251	45.275	-66.033
Emera Maine T and D	1006	0	0
Emera Maine Fleet	2733	0	0
Emera Maine Facility	151	0	0
Spring Garden Generating Plant	469212	13.126015	-59.632314
Garrison Generating Plant	7875	13.081519	-59.607765
Seawall Generating Plant	248958	13.07654	-59.487993
Font Cole Generating Facility	41110	15.315234	-61.388194
Sugar Loaf Generating Facility	20952	15.575865	-61.44029
Peel Street Plant	80759	26.517964	-78.752569
West Sunrise Plant	117158	26.515969	-78.750147

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 activities	15986318	<Not Applicable>	Emera's natural gas distribution companies from New Mexico Gas and Peoples Gas are not included because they are not part of Scope 1 emissions from electric utilities owned by Emera. This figure includes emissions from Nova Scotia Power and Emera Maine owned facilities. This figure also includes transmission and distribution (T&D) fleet vehicle emissions for Nova Scotia Power, Emera Maine, and Tampa Electric.
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<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>

C7.9

(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?
Decreased

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	2354595	Decreased	11.2	In Florida, over the four years since Emera acquired TECO, Tampa Electric's generation mix has increased from virtually no solar generation, to 445-MW at the end of 2019. Tampa Electric's first large investment of \$850 million USD to develop 600MW of solar generation is planned to be completed by 2021. In early 2020, Tampa Electric also announced a second major solar investment of \$600 million USD to develop 600MW of solar by the end of 2023. Emera expects solar generation will outweigh the use of coal at Tampa Electric by 2023. Tampa Electric is also retiring coal plants and converting coal units to cleaner, higher efficiency natural gas generation, which are also contributing to our emissions reductions. The calculation is as follows: (Change in Scope 1+2 emissions attributed to the reason described in column 1/Previous year Scope 1+2 emissions) x 100 = $\frac{(8,471,328-10,825,923)}{21,089,911} \times 100 = -11.2\%$. Please note our 2018 Scope 1+2 emissions were updated from 21,062,193 to 21,089,911 metric tonnes CO2e after an error was noted following Emera's 2019 submission.
Other emissions reduction activities	288692	Decreased	1.37	Nova Scotia Power achieved a decrease in emissions from 2018 and 2019 as part of its ongoing transition from high carbon to low carbon energy sources. By 2030, the total annual emissions from Nova Scotia Power must be below 4.5Mt of CO2e, a reduction of 3.0Mt from 2020 targets. Peoples Gas and New Mexico Gas Company also achieved a decrease in emissions from 2018 to 2019. Peoples Gas has a multi-year program in place to upgrade its distribution systems, replacing old pipes and equipment at compressor stations. This is helping to reduce the emissions associated with methane releases. New Mexico Gas Company recorded fewer methane releases in 2019 as well. The calculation is as follows: (Change in Scope 1+2 emissions attributed to the reason described in column 1/Previous year Scope 1+2 emissions) x 100 = $\frac{(6,759,719-7,048,411)}{21,089,911} \times 100 = -1.37\%$. Please note our 2018 Scope 1+2 emissions were updated from 21,062,193 to 21,089,911 metric tonnes CO2e after an error was noted following Emera's 2019 submission.
Divestment	2174806	Decreased	10.31	Emera Energy completed the sale of its three natural gas-fired electricity generating units in New England to Revere Power, LLC and its Bayside Generating Station to NB Power, in Q1 2019. The calculation is as follows: (Change in Scope 1+2 emissions attributed to the reason described in column 1/Previous year Scope 1+2 emissions) x 100 = $\frac{(3,714-2,178,520)}{21,089,911} \times 100 = -10.31\%$. Please note our 2018 Scope 1+2 emissions were updated from 21,062,193 to 21,089,911 metric tonnes CO2e after an error was noted following Emera's 2019 submission.
Acquisitions		<Not Applicable >		
Mergers		<Not Applicable >		
Change in output	14884	Increased	0.1	Grand Bahama Power Company had a slight decrease in output from 2018 to 2019 and DOMLEC had an increase in output resulting in a slight overall increase in across these two affiliates. Grand Bahama Power's slight decrease in output from 2018 to 2019 was the result of Hurricane Dorian at the end of Q3 2019 resulting in a decrease in emissions. DOMLEC's output increased from 2018 to 2019 as the island of Dominica continued to recover from Hurricane Maria in 2018. The calculation is as follows: (Change in Scope 1+2 emissions attributed to the reason described in column 1/Previous year Scope 1+2 emissions) x 100 = $\frac{(259,979-245,095)}{21,089,911} \times 100 = 0.1\%$. Please note our 2018 Scope 1+2 emissions were updated from 21,062,193 to 21,089,911 metric tonnes CO2e after an error was noted following Emera's 2019 submission.
Change in methodology		<Not Applicable >		
Change in boundary		<Not Applicable >		
Change in physical operating conditions		<Not Applicable >		
Unidentified		<Not Applicable >		
Other	58259	Decreased	0.28	Emera Maine was recently sold but did report emissions associated with SF6, fleet and facility use in 2019. There was not a material change in Emera Maine's emissions from 2018 to 2019. Barbados Light and Power used more diesel and avian jet fuel and less heavy fuel oil in 2019 compared to 2018 resulting in a decrease in emissions. There was an issue with the quality of HFO fuel supply on the island in Q3 and Q4 2019 impacting the units and fuel type used. The calculation is as follows: (Change in Scope 1+2 emissions attributed to the reason described in column 1/Previous year Scope 1+2 emissions) x 100 = $\frac{(729,934-788,193)}{21,089,911} \times 100 = 0.28\%$. Please note our 2018 Scope 1+2 emissions were updated from 21,062,193 to 21,089,911 metric tonnes CO2e after an error was noted following Emera's 2019 submission.

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 50% but less than or equal to 55%

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
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 (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	2255470	28583270	30838740
Consumption of purchased or acquired electricity	<Not Applicable>	0	1029	1029
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>	2255470	28584299	30839769

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 heat	No
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

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

Fuels (excluding feedstocks)

Bituminous Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

7700760

MWh fuel consumed for self-generation of electricity

625433

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Emission factor

0.01

Unit

kg CO2e per million Btu

Emissions factor source

US EPA Emission Factors for GHG Inventories (March, 2018), US EPA AP-42 Compilation of Air Emission Factors (2001) IPCC Stationary Combustion Chapter 2, Volume 2 (2006)

Comment

Emera Canadian affiliates use emission factors from the Intergovernmental Panel on Climate Change (IPCC) Stationary Combustion (Chapter 2, Volume 2) (2006) and US affiliates use either emissions factors from the US EPA Emissions Factors for GHG Inventories (March, 2018) or US EPA AP-42 Compilation of Air Emission Factors (2001). The Global Warming Potentials (GWP) used for CH4 and N2O are 25 and 298, respectively, from the IPCC 4th Assessment Report.

Fuels (excluding feedstocks)

Fuel Oil Number 6

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

1423411

MWh fuel consumed for self-generation of electricity

131392

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Emission factor

76.22

Unit

kg CO2e per million Btu

Emissions factor source

US EPA Emission Factors for GHG Inventories (March, 2018), US EPA AP-42 Compilation of Air Emission Factors (2001) IPCC Stationary Combustion Chapter 2, Volume 2 (2006)

Comment

Emera Canadian affiliates use emission factors from the Intergovernmental Panel on Climate Change (IPCC) Stationary Combustion (Chapter 2, Volume 2) (2006) and US affiliates use either emissions factors from the US EPA Emissions Factors for GHG Inventories (March, 2018) or US EPA AP-42 Compilation of Air Emission Factors (2001). The Global Warming Potentials (GWP) used for CH4 and N2O are 25 and 298, respectively, from the IPCC 4th Assessment Report.

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

19459099

MWh fuel consumed for self-generation of electricity

575108

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Emission factor

56.13

Unit

kg CO2e per million Btu

Emissions factor source

US EPA Emission Factors for GHG Inventories (March, 2018), US EPA AP-42 Compilation of Air Emission Factors (2001) IPCC Stationary Combustion Chapter 2, Volume 2 (2006)

Comment

Emera Canadian affiliates use emission factors from the Intergovernmental Panel on Climate Change (IPCC) Stationary Combustion (Chapter 2, Volume 2) (2006) and US affiliates use either emissions factors from the US EPA Emissions Factors for GHG Inventories (March, 2018) or US EPA AP-42 Compilation of Air Emission Factors (2001). The Global Warming Potentials (GWP) used for CH4 and N2O are 25 and 298, respectively, from the IPCC 4th Assessment Report.

Fuels (excluding feedstocks)

Wood Chips

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

158085

MWh fuel consumed for self-generation of electricity

35431

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Emission factor

54.1

Unit

kg CO2e per million Btu

Emissions factor source

US EPA Emission Factors for GHG Inventories (March, 2018), US EPA AP-42 Compilation of Air Emission Factors (2001) IPCC Stationary Combustion Chapter 2, Volume 2 (2006)

Comment

Emera Canadian affiliates use emission factors from the Intergovernmental Panel on Climate Change (IPCC) Stationary Combustion (Chapter 2, Volume 2) (2006) and US affiliates use either emissions factors from the US EPA Emissions Factors for GHG Inventories (March, 2018) or US EPA AP-42 Compilation of Air Emission Factors (2001). The Global Warming Potentials (GWP) used for CH4 and N2O are 25 and 298, respectively, from the IPCC 4th Assessment Report.

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

2157

Gross electricity generation (GWh)

7701

Net electricity generation (GWh)

7075

Absolute scope 1 emissions (metric tons CO2e)

8644160

Scope 1 emissions intensity (metric tons CO2e per GWh)

1222

Comment

Emissions intensity is based on net generation

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

n/a

Oil

Nameplate capacity (MW)

934

Gross electricity generation (GWh)

1423

Net electricity generation (GWh)

1377

Absolute scope 1 emissions (metric tons CO2e)

1032506

Scope 1 emissions intensity (metric tons CO2e per GWh)

750

Comment

Emissions intensity is based on net generation

Gas

Nameplate capacity (MW)

4956

Gross electricity generation (GWh)

19459

Net electricity generation (GWh)

18884

Absolute scope 1 emissions (metric tons CO2e)

6319846

Scope 1 emissions intensity (metric tons CO2e per GWh)

335

Comment

Emissions intensity is based on net generation

Biomass

Nameplate capacity (MW)

93

Gross electricity generation (GWh)

158

Net electricity generation (GWh)

123

Absolute scope 1 emissions (metric tons CO2e)

30341

Scope 1 emissions intensity (metric tons CO2e per GWh)

247

Comment

Emissions intensity is based on net generation

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

n/a

Nuclear

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

n/a

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

n/a

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

n/a

Hydropower

Nameplate capacity (MW)

414

Gross electricity generation (GWh)

1060

Net electricity generation (GWh)

1053

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Emissions intensity is based on net generation

Wind**Nameplate capacity (MW)**

147

Gross electricity generation (GWh)

256

Net electricity generation (GWh)

256

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Emissions intensity is based on net generation

Solar**Nameplate capacity (MW)**

455

Gross electricity generation (GWh)

782

Net electricity generation (GWh)

775

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Emissions intensity is based on net generation

Marine**Nameplate capacity (MW)**

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

n/a

Other renewable**Nameplate capacity (MW)**

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

n/a

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

n/a

Total

Nameplate capacity (MW)

9156

Gross electricity generation (GWh)

30839

Net electricity generation (GWh)

29543

Absolute scope 1 emissions (metric tons CO2e)

16026853

Scope 1 emissions intensity (metric tons CO2e per GWh)

543

Comment

Emissions intensity is based on net generation

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region

United States of America

Voltage level

Transmission (high voltage)

Annual load (GWh)

23549

Annual energy losses (% of annual load)

2

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO2e)

0

Length of network (km)

4164

Number of connections

Area covered (km2)

32115

Comment

Area covered represents both transmission and distribution. Emera does not currently calculate emissions from energy losses.

Country/Region

United States of America

Voltage level

Distribution (low voltage)

Annual load (GWh)

22890

Annual energy losses (% of annual load)

7

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO2e)

0

Length of network (km)

28991

Number of connections

939000

Area covered (km2)

32115

Comment

Number of connections is represented by number of metered customers. Area covered represents both transmission and distribution. Emera does not currently calculate emissions from energy losses.

Country/Region

Canada

Voltage level

Transmission (high voltage)

Annual load (GWh)

16962

Annual energy losses (% of annual load)

2

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO2e)

0

Length of network (km)

5669

Number of connections

29500

Area covered (km2)

52942

Comment

Number of connections is the number of transmission towers. Area covered represents both transmission and distribution. Emera does not currently calculate emissions from energy losses across its affiliates.

Country/Region

Canada

Voltage level

Distribution (low voltage)

Annual load (GWh)

11261

Annual energy losses (% of annual load)

4

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO2e)

0

Length of network (km)

27389

Number of connections

523000

Area covered (km2)

52942

Comment

Number of connections is represented by number of metered customers. Area covered represents both transmission and distribution. Emera does not currently calculate emissions from energy losses across its affiliates.

Country/Region

Barbados

Voltage level

Transmission (high voltage)

Annual load (GWh)

1011

Annual energy losses (% of annual load)

2.2

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO2e)

0

Length of network (km)

184

Number of connections**Area covered (km2)**

439

Comment

No scope 2 emissions as Emera affiliate Barbados Light and Power generates all the electricity on the island. Area covered represents both transmission and distribution. Emera does not currently calculate emissions from energy losses across its affiliates.

Country/Region

Barbados

Voltage level

Distribution (low voltage)

Annual load (GWh)

980

Annual energy losses (% of annual load)

4.6

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO2e)

0

Length of network (km)

465

Number of connections

131000

Area covered (km2)

439

Comment

No scope 2 emissions as Emera affiliate Barbados Light and Power generates all the electricity on the island. Number of connections is represented by number of metered customers. Area covered represents both transmission and distribution. Barbados distribution lengths were updated in 2019 to only include 11kV main lines. Emera does not currently calculate emissions from energy losses across its affiliates.

Country/Region

Bahamas

Voltage level

Transmission (high voltage)

Annual load (GWh)

303

Annual energy losses (% of annual load)

0.13

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO2e)

0

Length of network (km)

90

Number of connections**Area covered (km2)**

1373

Comment

No scope 2 emissions as Emera affiliate Grand Bahama Power Company generates all the electricity on the island. Area covered represents both transmission and distribution. Emera does not currently calculate emissions from energy losses across its affiliates.

Country/Region

Bahamas

Voltage level

Distribution (low voltage)

Annual load (GWh)

295

Annual energy losses (% of annual load)

5.43

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO2e)

0

Length of network (km)

896

Number of connections

17800

Area covered (km2)

1373

Comment

No scope 2 emissions as Emera affiliate Grand Bahama Power Company generates all the electricity on the island. Number of connections is represented by number of metered customers. Area covered represents both transmission and distribution. Emera does not currently calculate emissions from energy losses across its affiliates.

Country/Region

Dominica

Voltage level

Distribution (low voltage)

Annual load (GWh)

90

Annual energy losses (% of annual load)

6

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO2e)

0

Length of network (km)

1172

Number of connections

31000

Area covered (km2)

750

Comment

No scope 2 emissions as Emera affiliate DOMLEC generates all the electricity on the island. Number of connections is represented by number of metered customers. Updated in 2019 to only use the distribution voltage classification as voltages of all lines on the island are considered too low for any to be classified as transmission using CDP guidance. Emera does not currently calculate emissions from energy losses across its affiliates.

C9. Additional metrics

C9.1

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

C-EU9.5a

(C-EU9.5a) Break down, by source, your total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Gas	570000000	7.6	2023	Emera affiliate Tampa Electric is on track with its Big Bend modernization project. The project is a key part of Emera's efforts to reduce the carbon intensity of its operations. The \$850 million USD project will increase efficiency and reduce emissions by upgrading one coal unit to high efficiency natural gas generation and retiring a second unit early. The planned CAPEX planned for this project from 2020-2022 is \$570 million CAD. The percentage of total CAPEX planned for power generation is based on Emera's \$7.5 billion capital expenditure plan from 2020-2022. See Emera's February 2020 Investor Presentation for more details: http://investors.emera.com/Cache/IRCache/92cc59d8-a0f7-4a53-8e72-f57c3585279f.PDF?O=PDF&T=Y=&D=&FID=92cc59d8-a0f7-4a53-8e72-f57c3585279f&iid=4072693
Solar	110000000	1.5	2021	Emera affiliate Tampa Electric is establishing itself as a solar leader with two large investments in solar generation. In 2019, 445MW of in-service solar generation was installed part of a 600MW, \$850 million USD solar generation project planned to be completed by 2021. The CAPEX planned for this project from 2020-2022 is \$110 million CAD. The percentage of total CAPEX planned for power generation is based on Emera's \$7.5 billion capital expenditure plan from 2020-2022. See Emera's February 2020 Investor Presentation for more details: http://investors.emera.com/Cache/IRCache/92cc59d8-a0f7-4a53-8e72-f57c3585279f.PDF?O=PDF&T=Y=&D=&FID=92cc59d8-a0f7-4a53-8e72-f57c3585279f&iid=4072693
Solar	780000000	10	2023	In early 2020, Tampa Electric announced a second major solar investment of \$800 million USD to develop 600MW of solar generation by the end of 2023. The CAPEX planned for this project from 2020-2022 is \$780 million CAD. The percentage of total CAPEX planned for power generation is based on Emera's \$7.5 billion capital expenditure plan from 2020-2022. See Emera's February 2020 Investor Presentation for more details: http://investors.emera.com/Cache/IRCache/92cc59d8-a0f7-4a53-8e72-f57c3585279f.PDF?O=PDF&T=Y=&D=&FID=92cc59d8-a0f7-4a53-8e72-f57c3585279f&iid=4072693
Hydropower	280000000	3.7	2020	Emera Newfoundland and Labrador owns 100% of NSP Maritime Link Inc. (NSPML), which constructed and operates the Maritime Link Project, a subsea interconnection between the island of Newfoundland and Nova Scotia. Emera Newfoundland and Labrador also has a minority investment in Nalcor Energy's Labrador-Link (LIL) interconnection between Muskrat Falls, Labrador and Soldiers Pond on the island of Newfoundland. The CAPEX planned for these projects from 2020-2022 is \$280 million CAD. The percentage of total CAPEX planned for power generation is based on Emera's \$7.5 billion capital expenditure plan from 2020-2022. See Emera's February 2020 Investor Presentation for more details: http://investors.emera.com/Cache/IRCache/92cc59d8-a0f7-4a53-8e72-f57c3585279f.PDF?O=PDF&T=Y=&D=&FID=92cc59d8-a0f7-4a53-8e72-f57c3585279f&iid=4072693
Hydropower	600000000	3.9	2029	Nova Scotia Power is investing \$600 million CAD in hydroelectric system renewal over the next 10 years (2019-2029) as part of its relicensing process for all of its hydroelectric facilities. The CAPEX planned for this project from 2020-2022 is \$290 million CAD. The percentage of total CAPEX planned for power generation is based on Emera's \$7.5 billion capital expenditure plan from 2020-2022. See Emera's February 2020 Investor Presentation for more details: http://investors.emera.com/Cache/IRCache/92cc59d8-a0f7-4a53-8e72-f57c3585279f.PDF?O=PDF&T=Y=&D=&FID=92cc59d8-a0f7-4a53-8e72-f57c3585279f&iid=4072693

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End year CAPEX plan
Other, please specify (Smart grid and LED lighting)	Emera is investing \$450 million to install more than 1.4 million smart meters (residential, commercial and municipal customers) across Emera's electric utilities over five years (2018-2022) giving our customers greater access to real-time energy use data and providing even more customer control and choice. By the end of 2019, Emera's electric utilities had installed approximately 535,000 smart meters. Streetlight replacement programs have been also been initiated across Emera affiliates. For example, in 2019, Tampa Electric converted 32,366 street and outdoor lighting luminaries to LED technology within its Street and Outdoor Lighting Program. This resulted in annual energy savings of approximately 20 GWh in 2019. The CAPEX planned for smart meters and LED streetlights from 2020-2022 is \$340 million CAD. The percentage of total CAPEX planned for products and services is based on Emera's \$7.5 billion capital expenditure plan from 2020-2022. See Emera's February 2020 Investor Presentation for more details: http://investors.emera.com/Cache/IRCache/92cc59d8-a0f7-4a53-8e72-f57c3585279f.PDF?O=PDF&T=Y=&D=&FID=92cc59d8-a0f7-4a53-8e72-f57c3585279f&iid=4072693	340000000	4.5	2023
Other, please specify (Reliability, resiliency and storm hardening investment)	Each of Emera's regulated electric utilities have programs focused on reliability, resiliency and storm hardening of transmission and distribution facilities. These investments will benefit residential, commercial and municipal customers across all of Emera's electric utilities. For example, Tampa Electric filed a storm protection plan with the Florida Public Service Commission in Q2 2020 after legislation passed in Florida promoting utility storm-hardening investment. Tampa Electric's 2020-2022 capital forecast includes \$300 million USD in related investments. The CAPEX planned for improved reliability, resiliency and storm hardening across Emera electric utilities from 2020-2022 is \$1,280 million CAD. The percentage of total CAPEX planned for products and services is based on Emera's \$7.5 billion capital expenditure plan from 2020-2022. See Emera's February 2020 Investor Presentation for more details: http://investors.emera.com/Cache/IRCache/92cc59d8-a0f7-4a53-8e72-f57c3585279f.PDF?O=PDF&T=Y=&D=&FID=92cc59d8-a0f7-4a53-8e72-f57c3585279f&iid=4072693	1280000000	17	2022

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

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

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Energy storage	Pilot demonstration	21-40%	850000	This is a pilot project to test battery storage technology at Nova Scotia Power using technology from industry leaders Tesla and OpusOne Solutions. The project includes the installation of 10 Tesla Powerwalls in customers' homes and a grid-size Tesla Powerpack at a substation tied in with a local 6 MW capacity wind farm.
Other, please specify (Future focused incubator program)	Applied research and development	21-40%	1000000	Emera is a founding partner of the IdeaHUB at Dalhousie University, in Halifax, Nova Scotia. IdeaHUB is a state-of-the-art Incubator space that will provide students and start-ups with mentorship and support to bring ideas for their technology-based products to the market. In 2016, Emera announced its investment of \$10 million over 10 years to support this new centre for engineering innovation at Dalhousie University. IdeaHUB opened in 2018.
Smart grids	Applied research and development	21-40%	1033333	Emera invested in the Research Centre for Smart Grid Technologies at the University of New Brunswick, a state-of-the-art research facility that enables research and development, as well as industry partnerships for smart grid research.
Smart grids	Pilot demonstration	≤20%	1763406	In partnership with New Brunswick Power, Nova Scotia Power launched a Collaborative Smart Grid Innovation Project to look at solar generation, battery storage, electric vehicle smart charging and smart thermostat technologies. The goal of the project is to deploy and test new digital energy technologies in residential, commercial and industrial sectors on the two provincial grids.

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	No third-party verification or assurance

C10.1a

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

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

2019 NSPI GHG Verification Statements.pdf

Page/ section reference

p. 1-25

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

41

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.

Nova Scotia CaT - ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

Nova Scotia CaT - ETS

% of Scope 1 emissions covered by the ETS

41

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1 2019

Period end date

December 31 2019

Allowances allocated

0

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO₂e

6574414

Verified Scope 2 emissions in metric tons CO₂e

0

Details of ownership

Facilities we own and operate

Comment

The only trading scheme Emera is currently involved in is the Nova Scotia Cap-and-Trade Emission Trading Scheme. Beginning on January 1, 2019, each province and territory in Canada was required to have a carbon pricing system which met a national benchmark set by the Government of Canada of \$10/tonne of CO₂. This price will rise by \$10 each year to \$50/tonne in 2022. The province of Nova Scotia launched a cap and trade program in response to this national benchmark. In 2019, Nova Scotia Power completed registration under the Nova Scotia Cap-and-Trade Program Regulations. Nova Scotia was granted emissions allowances in 2020 that will be used in 2020 or allocated within the initial four-year compliance period that ends in 2022.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

In 2019, Nova Scotia Power was the only company in Emera Inc participating in an emissions trading system. Beginning January 1, 2019, every Canadian province was required by the federal government to set a price on carbon. The goal of this carbon pricing initiative across the country is to help Canada achieve its target of a 30 per cent reduction of GHG emissions from 2005 levels by 2030 under the Paris Agreement. Carbon pricing in Nova Scotia, which impacts Nova Scotia Power, is implemented under a cap-and-trade system and is inherent in the hard carbon cap on the electricity sector. The Nova Scotia Cap-and-Trade Program Regulations and framework document outline details on the program such as the greenhouse emission caps and rules for distributing, buying and selling greenhouse gas allowances. The first auctions for allowances under the program are scheduled for the Spring and Fall of 2020. The emission allowances will be auctioned in lots of 1,000 emission allowances. The minimum price will be \$20 per emission allowance for auctions held in 2020. For each year after 2020, the minimum price will increase by 5% plus inflation. Nova Scotia Power completed registration under the Nova Scotia Cap-and-Trade Program Regulations in 2019 and was granted 22 million metric tonnes of carbon dioxide allowances for the four-year compliance period of 2019 through 2022. Nova Scotia Power is communicating and negotiating regularly with the Nova Scotia Department of Energy and the Nova Scotia Department of Environment and federally with the Department of Energy and Environment and Climate Change Canada regarding emissions targets and timelines in Nova Scotia Power's emission reduction equivalency agreement with the Province. The Canada-Nova Scotia Equivalency Agreement, the latest update which came into force January 1, 2020, allows Nova Scotia Power to achieve compliance with federal GHG emissions regulations through 2029 by meeting provincial legislative and regulatory requirements, as these requirements are deemed to be equivalent to the federal regulations. Nova Scotia Power will comply by meeting emission limits set for our generating units, continuing its investments in renewable energy, and importing renewable electricity from other jurisdictions. In 2019, Nova Scotia Power maintained 30% renewable energy generation and is on track for 40% of its energy to be from renewable sources by 2021.

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?

No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

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

Yes, our customers

C12.1b

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

Type of engagement

Collaboration & innovation

Details of engagement

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

100

Portfolio coverage (total or outstanding)

<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement

Emera recognizes the continued customer demand for cleaner, affordable and reliable energy and wants its customers to be informed about the solutions that Emera is building that make sense for where they live. The Scope 3 emissions that Emera considers to be material are fuel and energy related activities and use of sold products. Nova Scotia Power, Tampa Electric and Emera Maine purchase electricity from other providers and pass this electricity on to their customers. Each of these affiliates offer campaigns for all residential and business customers, in their geographical regions, to encourage efficient use of electricity purchased and to reduce GHG emissions associated with their electricity consumption. These campaigns include free energy audits, energy rebate and incentive programs, tips for saving energy, and promotion of smart electricity options for customers such as heat pumps, water heaters, electric thermal storage, smart meters, and electric vehicles. For example, over the past five years Nova Scotia Power has offered a program focused on educating customers and raising awareness about the benefits of heat pumps and other electric-based energy solutions. Tampa Electric continued to offer its customers a comprehensive array of residential and commercial programs that enabled it to meet its required Demand Side Management (DSM) goals, reducing weather-sensitive peak demand and conserving energy which reduces overall GHG emissions. Emera affiliates Peoples Gas and New Mexico Gas offer local distribution of natural gas to customers in Florida and New Mexico. Peoples Gas and New Mexico Gas encourage all the end-users of their sold product, in their geographical regions, to use natural gas efficiently and reduce the climate change impacts associated with their natural gas consumption. For example, Peoples Gas offers an Energy Jumpstart campaign for customers to get energy-saving products installed in their homes for free. New Mexico Gas also has an energy efficiency campaign for residential and business customers. For residential customers, this includes rebate programs on low flow showerheads, insulation, water heaters, space heaters and smart thermostats.

Impact of engagement, including measures of success

Emera affiliates' climate-related engagement campaigns not only help Emera's customers use energy and natural gas more efficiently and reduce Scope 3 emissions, they also allow affiliates to promote smart electricity options that support Emera's strategy to safely deliver cleaner, affordable and reliable energy. Emera recognizes that in order to achieve a sustainable energy future, the company needs to think bigger and work towards making certain other kinds of energy use are becoming cleaner too – which is why Emera is focused on the electrification of vehicles and heating, bringing the benefits of renewable energy to Emera's customers in more ways. Emera measures the success of its engagement campaigns by tracking the number of customers that apply for free energy audits, the number of energy rebate and incentives used by our customers, and the rebates and financing accessed by our customers for smart electricity options offered by our affiliates. For example, Emera's electric companies in Nova Scotia, Florida, and Maine are all working hard to help customers embrace heat pumps, by delivering information about the potential for customer savings and accredited local installers. Nova Scotia Power's contractor network has successfully installed approximately 90,000 heat pumps in homes since the program started in 2012, which is estimated at close to 80 per cent of the total heat pump market. Nova Scotia Power also offers access to rebates and financing. In 2019, Tampa Electric's conservation programs reduced the use of energy by 91.4 GWh and the company incurred DSM costs of approximately \$44 million USD. The NMGC 2019 energy efficiency programs saved approximately 1.5 million therms and cost approximately \$6.4 million USD recovered through an Energy Efficiency rider on customer bills. The annual program runs from April 1 to March 31. Similarly, Peoples Gas' programs saved approximately 768,000 therms and cost approximately \$15 million USD.

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

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
Clean energy generation	Support with minor exceptions	Canada and 195 other countries have signed the Paris Climate Agreement which calls for significant reductions in GHG emissions to limits to global warming to less than 2°C, and to pursue efforts to limit it to 1.5°C above preindustrial levels. Canada has also submitted a target under the Paris Climate Agreement to reduce its GHG emissions by 30% below 2005 levels by 2030.	Emera is supportive of Canada's commitment to the Paris Agreement and its target to reduce GHG emissions with minor exceptions. Emera believes that flexible cost-effective solutions need to be considered to meet Canada's GHG target and that emission reduction targets must be shared fairly and equitably across provinces and territories. The Government of Nova Scotia tabled the Sustainable Development Goals Act in the fall of 2019, which includes a goal to reduce greenhouse gas emissions by at least 53% below 2005 levels. It also includes a net zero emissions goal by 2050 which includes balancing greenhouse gas emissions with greenhouse gas removals and other offsetting measures. Nova Scotia has a cap and trade system in place for reducing greenhouse gas emissions in the province.
Clean energy generation	Support	Canada's Federal Reduction of Coal Fired Generation of Electricity Regulations note that all coal-fired plants reaching a specific anniversary date should be shut down or meet a specified emission limit target. The Province of Nova Scotia had already set hard CO2 emission caps and Nova Scotia Power had an implementation plan to meet these caps. There was engagement between the federal government and the province to establish a new equivalency agreement that would allow Nova Scotia Power to meet these regulations.	Emera is supportive the legislative equivalency agreement that has been established between the Federal Government and the Province of Nova Scotia to recognize Nova Scotia's greenhouse gas regulations for the electricity sector as equivalent to meeting the requirements of the federal regulation. The equivalency agreement enables the Province of Nova Scotia to meet the goals of the legislation to move directly from fossil fuels to clean energy sources. It allows NSPI to achieve compliance with federal GHG emissions regulations by meeting provincial legislative and regulatory requirements as they are deemed to be equivalent.
Clean energy generation	Support	In 2007, the Province of Nova Scotia created the Renewable Electricity Regulations to help guide the transformation in how Nova Scotia Power generates electricity today, and the mandate targets for the future. Regulations require that each year beginning with the calendar year 2015 until 2020, Nova Scotia Power must supply its customers with renewable electricity in an amount equal to or greater than 25% of the total amount of electricity supplied to its customers as measured at the customers' meters for that year.	Emera is supportive of this legislation. Nova Scotia Power is working together with governments, independent power producers, and others, to meet these requirements and putting in place new sources of electricity that reduce our reliance on coal. In 2019, Nova Scotia Power continued to deliver 30% of Nova Scotia's electricity from renewable sources and is on track for 40% of its energy to be from renewable sources by 2021. Nova Scotia Power's 18 percent integration of wind generation is among the highest in North America.
Cap and trade	Support with minor exceptions	Beginning January 1, 2019, each province and territory in Canada was required to have a carbon pricing system which meets a national benchmark of \$10/tonne of CO2. This benchmark will rise \$10 each year to \$50/tonne in 2022.	Emera is supportive of Canada's commitment to implementing a national benchmark price on carbon with minor exceptions. Emera believes that there must be a balance between carbon reduction targets and cost to customers. The province of Nova Scotia launched a cap and trade program in response to Canada's national benchmark. In 2019, Nova Scotia Power completed registration under the Nova Scotia Cap-and-Trade Program Regulations. Nova Scotia was granted emissions allowances in 2020 that will be used in 2020 or allocated within the initial four-year compliance period that ends in 2022. In 2019, Nova Scotia Power continued to deliver 30% of Nova Scotia's electricity from renewable sources and is on track for 40% of its energy to be from renewable sources by 2021.
Other, please specify (Emissions guidelines)	Support with minor exceptions	The US has established the Affordable Clean Energy (ACE) rule to replace the Clean Power Plan. The Affordable Clean Energy (ACE) rule establishes emissions guidelines for greenhouse gas emissions from existing coal-fired electric utility generating plants. The EPA has determined that heat rate improvement measures are the best system of emission reduction (BSER) for existing coal-fired EGUs.	Emera is supportive of emission guidelines for existing fossil-fuel fired electricity generating plants with minor exceptions. Emera believes that there must be a balance between carbon reduction targets and cost to customers. In response to the ACE Rule, Tampa Electric is engaged in the development of a state plan with state regulators, based on BSER, with permitting that could be finalized by the end of 2020. Tampa Electric continues to be committed to providing clean, reliable and affordable power to its customers. Tampa Electric's has invested \$850 million USD to develop 600 MW solar generation by 2021, a project which is nearly complete. In early 2020, announced a second major solar investment of \$800 million USD to develop 600 MW of solar generation by the end of 2023. In 2019, work was also on track with its Big Bend Modernization project, an \$850 million USD investment to convert generating units from coal to natural gas.

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

Canadian Electricity Association (CEA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Founded in 1891, the Canadian Electricity Association (CEA) is the national forum and voice of the evolving electricity business in Canada. The CEA emphasizes that the long-term climate change trend is clear. Global greenhouse gas emission levels are expected to rise, and climate impacts are expected to become more frequent and intense. The CEA believes we must prepare for climate change and plan adaptive measures now, because the costs of inaction will exceed the costs of adaptation. The CEA acknowledges that while all Canadians have a role to play in meeting this challenge, Canadian electricity companies must initiate the development of systematic approaches to climate change adaptation. Climate change adaptation consideration must be considered as part of the infrastructure renewable process taking place across Canada's electricity sector.

How have you influenced, or are you attempting to influence their position?

Nova Scotia Power is a member of the CEA and is supportive of the CEA's position. Nova Scotia Power participates in various CEA committees and subcommittees dealing with climate change issues including air emissions, asset management, biodiversity, climate change adaptation, and sustainability. Working groups are tasked with various annual work plans that they must achieve. Positions will be negotiated with working group members. These positions are then communicated to CEA senior leadership. The President and CEO of Nova Scotia Power sits on the CEA Board of Directors.

Trade association

Edison Electric Institute (EEI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Founded in 1993, the Edison Electric Institute (EEI) is an association that represents all US investor-owned electric companies. EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums. The EEI acknowledges that global climate change presents one of the biggest energy and environmental policy challenges in the United States. EEI member companies are committed to addressing this challenge through a wide range of initiatives to reduce, avoid, or sequester GHG emissions. The EEI also emphasizes that policies to address climate change should seek to minimize impacts on consumers and avoid harm to US industry and the economy.

How have you influenced, or are you attempting to influence their position?

Emera is a member of EEI and is supportive of the EEI's position. Emera Inc. participates on the Environmental Executive Advisory Committee, a subcommittee that meets on climate change issues. Multiple senior level employees sit on this committee.

Trade association

The Caribbean Electric Utility Services Corporation (CARILEC)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Caribbean Electric Utility Services Corporation (CARILEC) is an association of electric energy solutions providers and other stakeholders operating in the electricity industry in the Caribbean region, Central and South Americas and globally. The mission of CARILEC is to enhance the effectiveness of its members by providing industry related services, creating regular networking, training and knowledge sharing opportunities, supporting mutual assistance programs and accelerating the Caribbean Region's energy sector transition, through innovation and advocacy. CARILEC hosts training, meetings and events for its members on topics such as renewable energy and smart grids.

How have you influenced, or are you attempting to influence their position?

Barbados Light and Power and Emera Caribbean have memberships with CARILEC and are supportive of CARILEC and the positions it takes. Affiliates participate in training, meetings, and events offered by the organization.

C12.3d

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

Yes

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?

Emera has been strategically focused on safely delivering cleaner, affordable and reliable energy to customers for more than 15 years. Our investments in cleaner energy generation, in transmission to deliver that cleaner energy and in reliability improvements have been driving our growth for many years. These continue to be the primary drivers of our growth today and for the foreseeable future. Senior Leaders at each affiliate make certain that interactions are consistent with the overall strategy. Our strategy is discussed regularly by the Emera Executive and Board of Directors. The strategy is also currently discussed within the management teams of each affiliate and is part of future strategic business planning sessions. To make certain that the strategy is consistently communicated across all affiliates members of the Emera executive sit on all of the individual affiliate Board of Directors.

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 mainstream reports

Status

Complete

Attach the document

Emera 2019 Annual Report.pdf

Page/Section reference

p. 1-10, 15, 24, 55-63

Content elements

Governance
Strategy
Risks & opportunities
Other metrics

Comment

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

Emera 2018 Sustainability Report.pdf

Page/Section reference

p. 1-108

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Emera's 2019 Sustainability report is currently being prepared and will be released this Fall. Emera's current alignment with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations will be included in this report.

Publication

In voluntary communications

Status

Complete

Attach the document

NSPI Today's Power.pdf

Page/Section reference

p. 1

Content elements

Strategy
Other metrics

Comment

C15. 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.

n/a

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Director, Environmental Governance	Environment/Sustainability manager

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please state the main reason why you are declining to respond to your Customers

Prefer to work directly with customer, not through a third party

Please confirm below

I have read and accept the applicable Terms