

Welcome to your CDP Climate Change Questionnaire 2019

C0. Introduction

C0.1

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

Established in 1817, BMO Financial Group is a highly diversified financial services provider based in North America. We are the eighth largest bank in North America by assets, with total assets of \$774 billion, and an engaged and diverse base of employees. BMO provides a broad range of personal and commercial banking, wealth management and investment banking products and services, conducting business through three operating groups: Personal and Commercial Banking, BMO Wealth Management and BMO Capital Markets. We serve eight million customers across Canada through our Canadian personal and commercial arm, BMO Bank of Montreal. In the United States, we serve customers through BMO Harris Bank, based in the U.S. Midwest, with more than two million personal, business banking and commercial customers. We also serve customers through our wealth management businesses – BMO Global Asset Management, BMO Nesbitt Burns, BMO Private Banking, BMO Insurance and BMO InvestorLine. BMO Capital Markets, our investment and corporate banking and trading products division, provides a full suite of financial products and services to North American and international clients.

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
Row 1	November 1, 2017	October 31, 2018	No

C0.3

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

- Australia
- Barbados
- Brazil
- Canada
- China
- France
- Germany
- Gibraltar

- Ireland
- Luxembourg
- Mexico
- Netherlands
- Portugal
- Singapore
- Sweden
- Switzerland
- United Arab Emirates
- United Kingdom of Great Britain and Northern Ireland
- United States of America

C0.4

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

- CAD

C0.5

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

- Operational control

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
Board-level committee	Board-level oversight of sustainability is embedded in the charter of our Board's Audit and Conduct Review Committee. This committee meets annually with the Chief Sustainability Officer and the General Counsel to review and discuss the findings of the BMO Environmental, Social and Governance Report (ESG Report)

	<p>and to consider matters related to sustainability. Commencing in fiscal 2018, the ESG Report and climate related disclosure was reviewed by the full Board of Directors.</p> <p>Beginning in fiscal 2019, the Board’s Risk Review Committee will also be engaged on climate-related issues as BMO continues to implement its climate risk strategy and the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Results of climate-related scenario analysis to evaluate our exposure to climate-related risk will be presented to the Risk Review Committee.</p>
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C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>The Audit Conduct and Risk Committee (ACRC) meets annually with the Chief Sustainability Officer to review and discuss the findings of the ESG Report and to dialogue on sustainability topics. This includes reviewing and guiding strategy, plans of action and performance objectives/goals and targets related to BMO’s sustainable finance commitment and operational footprint to ensure management is adequately capturing opportunities associated with the transition to a lower carbon economy, and managing risk associated with our operations. The Board also reviews our climate risk management policies to ensure climate-related risk is integrated into our enterprise-wide risk management.</p> <p>The ACRC reviews and approves the ESG Report annually, which includes climate related data and performance. Beginning in fiscal 2018, the ESG Report and climate-related disclosure was reviewed by the full Board of Directors. BMO’s directors are evaluated based on a skills matrix that specifically includes experience related to sustainability. The Board also receives training on sustainability topics. Climate change risk and disclosure training was developed and delivered to our directors in 2018 as part of BMO’s implementation of the recommendations of the TCFD.</p>

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)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	Annually
Other C-Suite Officer, please specify General Counsel	Managing climate-related risks and opportunities	Annually
Sustainability committee	Assessing climate-related risks and opportunities	Annually
Chief Risks Officer (CRO)	Both assessing and managing climate-related risks and opportunities	As important matters arise

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).

The Chief Executive Officer (CEO) has delegated responsibility for sustainability, including climate change, to BMO's General Counsel, who is a member of BMO's Executive Committee and reports directly to the CEO. BMO's General Counsel also has accountability for areas such as legal and regulatory risk, reputational risk, and business conduct. This organizational structure ensures alignment between sustainability and these related areas. BMO has appointed a Chief Sustainability Officer (CSO), who reports to the Corporate Secretary and Deputy General Counsel.

The CSO is responsible for the development and execution of sustainability strategy, including internal advisory, stakeholder engagement and disclosure. This mandate includes producing and publishing BMO's annual ESG Report and other related public disclosures, as well as monitoring climate-related issues and developing strategies to manage the risks and opportunities associated with climate change across the organization.

BMO's Sustainability Council, established in 2008, is chaired by BMO's General Counsel and comprises senior leaders from business and corporate support areas across the organization. The Sustainability Council meets quarterly and acts as a support and advisory body to oversee the implementation of BMO's sustainability strategy and discuss topics including climate change risks, opportunities and disclosure.

The Chief Risk Officer is responsible for providing independent review and oversight of enterprise-wide risks and developing and maintaining the bank's risk management framework. The enterprise-wide risk management framework provides for the robust management of individual risk types that could have a material impact on the bank, including climate risk as part of Environmental & Social Risk and also touching Operational, Market, Credit and Legal & Regulatory risks.

C1.3

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

Yes

C1.3a

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

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction project

Comment

Emissions reduction projects are part of environment/sustainability managers' mandate and therefore influence decisions related to annual performance-based incentive pay.

Who is entitled to benefit from these incentives?

Energy manager

Types of incentives

Monetary reward

Activity incentivized

Energy reduction project

Comment

Energy reduction projects are part of energy managers' mandate and therefore influence decisions related to annual performance-based incentive pay.

Who is entitled to benefit from these incentives?

Facilities manager

Types of incentives

Monetary reward

Activity incentivized

Energy reduction project

Comment

Energy reduction projects are part of facilities managers' mandate and therefore influence decisions related to annual performance-based incentive pay.

Who is entitled to benefit from these incentives?

Executive officer

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

BMO's executive compensation design links to both bank and operating group performance. Performance measures used to fund BMO's short, mid and long-term incentive plans are tied to key elements of the bank's strategic priorities: customer, productivity and growth. Productivity is measured using the efficiency ratio. Growth is measured using financial metrics including net income. Both of these metrics are influenced by business unit profitability which is enhanced through energy and greenhouse gas emissions reduction measures including limiting employee travel for business purposes (e.g., commercial air travel) and substituting alternatives like Webex, Skype and other online conferencing tools. Qualitatively, how the executive's contributions and behaviours align with our responsibility to our customers, employees, the environment and the communities in which we live and work are assessed. Our control functions may recommend adjustments or reductions in compensation to better reflect sustainability-related factors. We also indirectly consider ESG issues in compensation by factoring them into company-wide financial goals and through secondary considerations, including sustainability metrics such as employee pulse scores and material risk events.

Who is entitled to benefit from these incentives?

Business unit manager

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

BMO's Business Unit Managers compensation program provides incentives for the effective management of climate change issues and the achievement of operations-related performance targets. Business Unit Managers performance is assessed, in part, based on the profitability of their areas of accountability which is enhanced through energy and greenhouse gas emissions reduction measures including limiting employee travel for business purposes (e.g., commercial air travel) and substituting alternatives like Webex, Skype and other online conferencing tools.

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Recognition (non-monetary)

Activity incentivized

Efficiency target

Comment

BMO's Sustainability Council includes a number of senior executives who are recognized for their participation efforts and ability to influence change within their various operating groups.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Recognition (non-monetary)

Activity incentivized

Behavior change related indicator

Comment

Employees who participate voluntarily as "Environmental Ambassadors" may be recognized through internal communications about sustainability initiatives/events on our corporate intranet site. Employees may also be recognized through our internal employee recognition system for their efforts.

C2. Risks and opportunities

C2.1

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

	From (years)	To (years)	Comment
Short-term	0	1	
Medium-term	1	3	
Long-term	3	10	

C2.2

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

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	<p>BMO's Sustainability Council meets quarterly to oversee the implementation of our sustainability strategy and discuss topics including climate change risks, opportunities and disclosure.</p> <p>The Sustainability Office coordinates, develops and maintains an enterprise-wide strategy that meets our environmental and social (E&S) responsibilities. It partners with the lines of business and Corporate Support areas (e.g. Risk) to manage E&S business risk. It works with external stakeholders to understand the impacts of our operations and financing decisions.</p> <p>As part of our enterprise risk management framework and credit risk management framework, we evaluate the environmental and social risk associated with credit and counterparty transactions and exposures. Climate change is</p>

			considered within credit and counterparty risk analysis. The credit risk profile feeds into our overall risk reporting and quarterly disclosure directed at key stakeholders including the Board, regulators, and investors.
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C2.2b

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

Consistent with the recommendations of the TCFD and emerging best practice, climate-related risks may include both transition risks and physical risks. Transition risks include substitution of goods, new regulations, or other changes to the economic context of our business and the businesses of our clients. Physical risks include acute and chronic physical changes to the earth that could affect our business, including severe weather, flooding or other impacts of climate change. These potential risks exist for all financial institutions, including BMO, in relation to our own operations as well as through exposure to risks of our clients.

Company level

Company level climate-related risk issues, including reputation, legal/regulatory and strategic risk arising from climate-related issues, are identified and assessed by the Sustainability Office, under the leadership of the Chief Sustainability Officer. Through independent research, benchmarking and participation in industry associations and working groups, BMO monitors regulatory developments, emerging best practices, stakeholder interest, and developments from non-regulatory international bodies to determine the scope and extent of emerging climate-related risks to the organization. In partnership with Enterprise Risk and BMO’s lines of business, the Sustainability Office is piloting world-leading methodologies to identify and assess climate-related risks using scenario analysis. This will inform our assessment of the potential size and scope of identified risks, the relative significance of climate-related risks in relation to other risks and our climate risk management strategy going forward.

Asset level

Asset-level climate-related risks include risks arising from (1) business activities and transactions with our clients, and (2) operations at our own facilities (e.g. offices and retail branches).

1. To identify and assess climate-related risks resulting from our clients, we follow internal environmental and social guidelines that describe the scope of environmental risk and procedures to determine the extent of this risk and whether enhanced due diligence is required. This includes identifying and assessing our clients’ climate change strategies, carbon-mitigation plans, quality of climate change disclosures, and readiness to respond to climate-related regulatory changes. BMO is a signatory to the Equator Principles, a credit risk management framework for identifying, assessing and managing environmental and social risk in project finance transactions. We also apply the World Bank/International Finance Corporation environmental and social screening and assessment process to categorize and assess projects based on the magnitude of their potential impacts and risks.
2. To identify and assess climate-related risks at our own facilities (e.g. retail branches, etc.), BMO monitors existing and new fuel/energy tax and carbon pricing regulations

that could affect our operating costs. The potential size and scope of the risk is assessed based on analysis of our own energy use and emissions. We also track weather data for large urban centres in North America where BMO Financial Group facilities are located that could affect physical risks of our own operations. These areas of analysis are considered in operational risk and sustainability planning and reporting.

BMO defines substantive financial impacts as those that would influence our ability to deliver on our strategic priorities and/or meet financial and sustainability performance objectives. Impacts will vary depending on the nature of the risk and whether it is related to our business activities with our clients, or related to our own operations. For example, with regard to client lending transactions, a substantive impact includes any negative impact on a company's operating leverage such that they would be unable to meet their financial commitments to us.

C2.2c

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Current regulation, including carbon pricing in the jurisdictions where BMO and our clients operate, is considered in the assessment of climate-related risk facing our own operations and those of our clients. For risks resulting from our own operations, BMO monitors existing fuel/energy tax and carbon pricing regulations and assesses how that could affect our operating costs based on analysis of our own energy use and emissions. For credit risk resulting from carbon pricing imposed on our clients, BMO's enterprise wide risk management framework includes identifying and assessing our clients' climate change strategies, carbon-mitigation plans, quality of climate change disclosures, and readiness to respond to climate-related regulatory changes.
Emerging regulation	Relevant, always included	Emerging regulations have the potential to impact BMO's operating cost and those of our clients. BMO's Legal and Regulatory Compliance Group maintains enterprise-wide frameworks that identify, measure, manage, monitor and report on legal and regulatory issues. Through memberships in associations (e.g. Canadian Bankers Association, United Nations Environment Programme – Finance Initiative, Carbon Pricing Leadership Coalition), BMO stays abreast of changes in policies and legislation in the jurisdictions in which we operate. BMO's enterprise-wide risk management framework includes identifying and assessing our clients' climate change strategies, carbon-mitigation plans, quality of climate change disclosures, and readiness to respond to climate-related regulatory changes.
Technology	Relevant, always	Technology risk includes the risk that substitution of existing products with lower emissions options could affect credit risk associated with

	included	clients in carbon intensive sectors. These potential exposures also present opportunities that are reviewed in the context of sustainable finance, responsible lending and asset management strategies. BMO's response at the strategic level involves the development of sustainable finance products and services, including responsible banking and responsible lending programs.
Legal	Relevant, always included	Legal risk could relate to BMO's actions or alleged lack of action in relation to climate change, our disclosures around climate change or the activities of our clients. BMO monitors other legal risks associated with climate change as part of our overall risk assessments of operational, business and reputational risks.
Market	Relevant, always included	Market risk includes the risks associated with our own products and services and it is considered in a variety of contexts. These potential exposures also present opportunities that are reviewed in the context of sustainable finance, responsible lending and asset management strategies. BMO's response at the strategic level involves the development of sustainable finance products and services, including responsible banking and responsible lending programs.
Reputation	Relevant, always included	Reputation risk could relate to BMO's perceived actions or lack of action in relation to climate change, our disclosures around climate change or the activities of our clients. BMO monitors reputational risks associated with climate change as part of our overall risk assessments of operational and business risks. Climate-related reputation risks are addressed within the scope of our reputational risk management framework overseen by BMO's Reputation Risk Management Committee (RRMC).
Acute physical	Relevant, always included	<p>Physical risks include physical changes to the earth that could affect our business, including severe weather, flooding or other impacts of climate change. These potential risks exist for all financial institutions, including BMO, in relation to our own operations as well as through exposure to risks of our clients.</p> <p>We face risks arising from environmental events, such as drought, floods, wildfires, earthquakes, and hurricanes and other storms. These events could potentially disrupt our operations, impact our customers and counterparties, and result in reduced earnings and higher losses. Factors contributing to increased environmental risks include the impacts of climate change and continued intensification of development in areas of greater environmental sensitivity. Our business continuity management provides us with the capability to restore, maintain and manage critical operations and processes in the event of a business disruption.</p>
Chronic	Relevant,	Physical risks include physical changes to the earth that could affect

physical	always included	<p>our business, including changes in weather patterns, rising mean temperatures and rising sea levels. These potential risks exist for all financial institutions, including BMO, in relation to our own operations as well as through exposure to risks of our clients.</p> <p>We track weather data for large urban centres in North America where BMO Financial Group facilities are located that could affect physical risks of our own operations. These areas of analysis are considered in operational risk and sustainability planning and reporting.</p>
Upstream	Not evaluated	
Downstream	Relevant, always included	<p>Climate change issues have affected the strategy of our wholly-owned asset manager, BMO Global Asset Management. BMO Global Asset Management is a founding signatory of the UN Principles for Responsible Investment and has a commitment to take financially-material ESG issues – including climate change - into account in all relevant investment strategies.</p> <p>Considerations of material ESG factors are integrated into our overall investment approach. Our research analysts and portfolio managers follow a process that assesses the potential impact of any ESG-related risks on the investments held in our internally managed portfolios, and we seek partners that do the same. This process informs our asset allocation, stock selection, portfolio construction, investor engagement efforts and proxy voting activities.</p>

C2.2d

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

Climate-related Risks:

The process for managing climate-related risks is integrated into BMO's enterprise-wide risk management framework. This framework assists the bank in managing its risk-taking activities and is anchored in the three-lines-of-defence approach to managing risk. The Sustainability Office coordinates, develops and maintains an enterprise-wide strategy that meets our environmental and social (E&S) responsibilities. It partners with the lines of business (LOB) and Corporate Support areas (e.g. Risk) to manage E&S business risk. It works with external stakeholders to understand the impacts of our operations and financing decisions.

In 2018, BMO's Procurement and Corporate Real Estate groups were responsible for establishing environmental management processes. Within Corporate Real Estate, the Environmental Sustainability group was responsible for establishing and maintaining an

operational environmental management system aligned with the ISO 14001 framework, and for setting objectives and targets to align the bank's operations with its Environmental Policy.

As part of our enterprise risk and credit risk management frameworks, we evaluate the environmental risks associated with credit and counterparty transactions and exposures. We have developed and implemented internal policies and financing guidelines to address environmental risks for specific lines of business including Commercial Banking and Capital Markets. These financing guidelines provide guidance on how to identify, manage and mitigate E&S risks that may arise in financing transactions. The LOBs perform due diligence as part of the transaction approval process which includes assessment and screening for environmental risks. A higher level of environmental due diligence is applied in our assessments of clients active in environmentally sensitive industry sectors and we avoid doing business with borrowers that have poor environmental track records. BMO has been a signatory to the Equator Principles since 2005 and applies its credit risk management framework to identify, assess and manage the E&S risk of transactions within its scope. We also apply E&S screening procedures to categorize and assess projects based on the magnitude of their potential impacts and risks.

Climate-related Opportunities:

Climate change and the global transition to a lower carbon economy will drive new and different demands. We recognize an opportunity to differentiate ourselves by developing innovative new products and services related to climate change and by offering financing solutions that assist our customers during their transition to a low-carbon economy. BMO has committed to mobilizing \$400 billion for sustainable finance by 2025 and created a Sustainable Finance Group in Capital Markets to execute this strategy. They will be supported by BMO's Sustainability Office, which is also identifying green and socially beneficial lending activity and improving internal processes for tracking and monitoring such investments to organize and guide the growth of our sustainable finance business.

These developments build on BMO's existing activities such as sustainable finance product underwriting and advisory services, including green, social and sustainability bond underwriting and green financing, as well as innovative approaches to responsible investing taken by BMO Global Asset Management. BMO is exploring additional ways to capture sustainable finance opportunities as this market grows, driven in part by changing capital flows associated with market and regulatory forces.

Example - Transition Opportunity:

BMO is managing several opportunities related to the transition to a low carbon economy. In FY2018, BMO underwrote US\$6.3 billion in sustainable bonds, including US\$4.8 billion in green bonds and US\$1.5 billion in sustainable development bonds. For example, in 2018, BMO Capital Markets acted as joint lead/bookrunner on the Ontario government's \$1 billion green bond (the province's largest to date). Proceeds from the bond are helping finance key eco-friendly infrastructure projects, such as the Eglinton Crosstown light rail transit project in Toronto. BMO's recognition of the market opportunity associated with sustainable finance and the transition to a low carbon economy is articulated in our Purpose to "Boldly Grow the Good

in Business and Life” which includes a commitment to mobilize \$400 billion for sustainable finance by 2025.

Example - Physical Risk:

BMO manages operational climate risks through our environmental management process. This includes tracking and monitoring weather data where our properties are located since annual weather fluctuations can affect our building energy use, operating costs and the useful life of our assets. We manage energy consumption through energy savings projects such as lighting, HVAC and controls upgrades. If the life-span of assets (e.g. HVAC equipment) are negatively impacted, we modify our capital forecasting.

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

Transition risk

Primary climate-related risk driver

Policy and legal: Increased pricing of GHG emissions

Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

Increases in fuel/energy taxes, carbon pricing and related policy measures (e.g. clean fuel standards, carbon pricing) are likely to increase the cost of electricity and/or natural gas in the regions where BMO operates. This is likely to increase BMO’s operational expenses related to real estate including retail branches, office towers, data centres, etc.

Time horizon

Current

Likelihood

Very likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

3,375,000

Potential financial impact figure – maximum (currency)

6,750,000

Explanation of financial impact figure

We have estimated the financial impact of increased fuel/energy tax and carbon pricing regulations based on our 2018 energy costs of \$67.5 million CAD. Assuming such taxes result in cost increases ranging from 5% to 10%, our energy-related operating costs could be impacted by between \$3.375 million and \$6.75 million annually.

Management method

We monitor the regulatory landscape for new fuel/energy taxes and carbon pricing regulations on an ongoing basis through our internal risk management group, feedback from our third party facilities management service providers and participation in industry associations. We also continue to actively manage energy consumption and costs through energy savings projects such as lighting, HVAC and controls upgrades. Where opportunities exist, we also manage costs and insulate the organization against price increases by entering into bulk fuel/electricity purchase contracts at the wholesale level.

In 2018, BMO's Procurement and Corporate Real Estate groups were responsible for establishing environmental management processes. Within Corporate Real Estate, the Environmental Sustainability group was responsible for establishing and maintaining an operational environmental management system aligned with the framework set out in ISO 14001, and for setting objectives and targets related to aligning the bank's operations with its Environmental Policy.

There is no additional cost/effort required to keep abreast of the potential regulatory changes as this is a function of our current risk management process. In 2018, the amount invested in energy efficiency projects at BMO was about \$7 million.

Cost of management

7,000,000

Comment

We believe that by focusing on both price (costs of fuels/electricity and any associated taxes) and demand (consumption), the product of which is “expense”, we are well positioned to manage any future regulatory/tax changes.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Other

Type of financial impact

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description

Changes to average seasonal temperatures and weather patterns (e.g., hotter summers and colder winters) are likely to increase the amount of energy required to cool and heat the buildings that we occupy, resulting in increased operating costs.

Temperature/weather changes could also impact capital costs by shortening the life-span of heating, ventilation and air conditioning (HVAC) equipment, which could be operating beyond normal design parameters. This might result in us having to invest in upgrading or replacing the equipment before scheduled end-of-life.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

3,400,000

Potential financial impact figure – maximum (currency)

10,100,000

Explanation of financial impact figure

We have estimated the financial impact of increased energy use based on our 2018 energy costs of \$67.5 million CAD. Heating or cooling energy consumption can change by 5% for every degree decrease or increase, respectively, in mean (average) outdoor temperature. A change in mean outdoor temperature of between 1-3 degrees Celsius could impact our energy-related operating costs by between \$3.4 - \$10.1 million annually.

Changes in mean temperature could also shorten the life-span of HVAC systems resulting in more frequent capital expenditure on equipment upgrades/replacement.

Management method

We track and monitor the weather data where our properties are located, since the annual weather fluctuations can affect our building energy use. We actively manage energy consumption through energy savings projects such as lighting, HVAC and controls upgrades. If the life-span of HVAC equipment is negatively impacted, we will modify our capital forecasting.

In 2018, BMO's Procurement and Corporate Real Estate groups were responsible for establishing environmental management processes. Within Corporate Real Estate, the Environmental Sustainability group was responsible for establishing and maintaining an operational environmental management system aligned with the framework set out in ISO 14001, and for setting objectives and targets related to aligning the bank's operations with its Environmental Policy.

There is no additional cost/effort required to track changes to average mean temperatures as it is part of our annual carbon emissions calculations exercise, as performed by in-house resources. In 2018, the amount invested in energy efficiency projects at BMO was about \$7 million.

Cost of management

7,000,000

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Customer

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Other

Type of financial impact

Increased credit risk (e.g., increased probability of default and/or loss given default)

Company- specific description

The transition to a lower carbon economy may pose policy, technology and reputational risks to BMO's clients, resulting in increased credit risk in our corporate loan portfolio. For example, BMO's clients in carbon-intensive industries may be faced with higher operating costs from climate regulations (e.g. carbon pricing) or reduced demand for existing products due to new lower emission options and/or changing consumer preferences. This could have a negative impact on our clients' operating leverage such that may affect their ability to meet their financial commitments to us.

Time horizon

Medium-term

Likelihood

About as likely as 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)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

BMO has not yet quantified climate-related risks to our corporate loan portfolio. Future risk is dependent on policy implementation where our clients operate. BMO's lending to the natural resources sector is approximately \$28 billion, or 7% of the total lending. While not all of this lending is necessarily carbon-intensive or subject to climate-related transition risks, this figure is provided to give a sense of scale.

Management method

As part of our enterprise risk management framework and credit risk management framework, we evaluate the environmental risk associated with credit and counterparty transactions and exposures. We have developed and implemented specific financing guidelines to address environmental risks for specific lines of business. To limit our potential exposure to clients' environmental risks, we apply enhanced due diligence to transactions with clients operating in environmentally sensitive industry sectors, and we

avoid doing business with borrowers that have poor environmental risk management track records. BMO has been a signatory to the Equator Principles since 2005 and applies its credit risk management framework to identify, assess and manage the environmental risk of transactions within its scope. We also apply the World Bank/International Finance Corporation environmental screening and assessment process to categorize and assess projects based on the magnitude of their potential impacts and risks. These principles have been integrated into our credit risk management framework.

BMO is piloting world-leading methodologies to identify and assess climate-related risks using scenario analysis which will inform our risk management strategy going forward. The budget for implementing and conducting the climate-related scenario analysis is approximately \$750,000.

Cost of management

750,000

Comment

BMO is committed to addressing the recommendations of the TCFD and as such, is conducting climate-related scenario analysis on our lending, beginning with our oil and gas portfolio. This will help us better understand and quantify these risks. We are also participating in Phase 2 of the UNEP-FI's pilot as well as a Canadian Bankers Association (CBA) working group to develop methodologies.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

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

Type of financial impact

Increased capital costs (e.g., damage to facilities)

Company- specific description

We face risks arising from environmental events, such as drought, floods, wildfires, earthquakes, and hurricanes and other storms. These events could potentially disrupt our operations, impact our customers and counterparties, and result in reduced earnings and higher losses. Factors contributing to increased environmental risks include the impacts of climate change and continued intensification of development in areas of greater environmental sensitivity.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The impact has not been quantified financially.

Management method

Our business continuity management provides us with the capability to restore, maintain and manage critical operations and processes in the event of a business disruption. In addition, we also support the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), and we are considering the integration of climate-related scenario analysis into our risk management and strategic processes. This includes evaluation of credit risk associated with assumptions around the global transition to a low carbon economy and the physical effects of climate change identified by the TCFD. The goal is to enhance our understanding of the evolving impact of risks associated with environmental events and climate change, together with possible mitigation strategies.

There is no additional cost/effort to manage the risk of environmental events as it is included in BMO's existing business continuity management program.

Cost of management

0

Comment

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

Resource efficiency

Primary climate-related opportunity driver

Move to more efficient buildings

Type of financial impact

Reduced operating costs (e.g., through efficiency gains and cost reductions)

Company-specific description

Changes in consumer preferences and emerging regulation (e.g. more efficient building codes, mandatory energy reporting) are likely to result in improved energy efficiency in the real estate sector over time. This will help BMO reduce its energy consumption, meet its five-year target to reduce absolute carbon emissions by 15% compared to the fiscal 2016 baseline, and save on energy-related operating costs related to retail branches, office towers, data centres, etc.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

500,000

Potential financial impact figure – maximum (currency)

700,000

Explanation of financial impact figure

We have estimated the financial impact of more efficient buildings based on our 2018 energy costs of \$67.5 million, and the energy savings required to meet our emission reduction target. In 2017, we established a new five-year target to reduce absolute carbon emissions by 15% compared to the fiscal 2016 baseline. Assuming a 15% emission reduction results in a 15% reduction in energy costs over the five year period, then the total estimated energy cost savings are \$10.1 million over the same five-year period. It is estimated that this opportunity will contribute 25%-35% to the overall emissions reduction target, so the energy cost savings would be between \$2.5 and \$3.5 million over the five-year period. We estimate annual energy-related cost savings of between \$0.5 and \$0.7 million.

Strategy to realize opportunity

BMO has taken action to achieve third-party certification to the ISO 14001 standard for our environmental management systems at four facilities in Canada and the UK as a way to ensure energy efficiency gains are realized. ISO 14001 principles and lessons learned from third-party certification are applied to other facilities with the goal of continually improving our environmental performance. This contributed to BMO achieving three consecutive enterprise-wide emissions reduction targets. BMO has also taken action to adopt elements of LEED and BOMA to improve energy efficiency in our buildings. Methods we use to leverage this opportunity include continually updating our internal design and construction standards to include performance specifications for the build out of office space in order to achieve additional energy reductions (for example, 1 watt per square foot for lighting). These measures are expected to contribute to our current and future absolute emissions reduction goals.

Total costs associated with our ISO 14001 EMS certifications and third party verification of our carbon emissions are minimal, totalling less than \$75K annually.

Cost to realize opportunity

75,000

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Type of financial impact

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

Company-specific description

We recognize an opportunity to differentiate ourselves by developing innovative new products and business services that are related to climate change and by offering financing solutions that can assist our customers during their transition to a low-carbon economy. These opportunities are being captured through our sustainable finance product underwriting and advisory services, including green, social and sustainability bond underwriting and green financing.

BMO is developing a Sustainable Financing Framework, which will further drive our sustainable finance business and demonstrate our commitment to being a leader in this space. The framework aligns with ICMA's 2018 Green Bond Principles and LMA's 2018 Green Loan Principles.

BMO's Purpose to "Boldly Grow the Good in Business and Life" includes a commitment to double the bank's mobilization for sustainable finance to \$400 billion, including providing \$150 billion in capital to companies pursuing sustainable outcomes.

Time horizon

Current

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)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The annual potential financial impact figure has been calculated based on BMO's commitment to mobilize \$400 billion for sustainable finance by 2025, including providing \$150 billion in capital to companies pursuing sustainable outcomes. Beginning

immediately, and assuming equal distribution across the time period, BMO expects to mobilize approximately \$25 billion for this area of sustainable finance annually.

Strategy to realize opportunity

To execute this strategy, BMO created a Sustainable Finance Group in Capital Markets, including a Sustainable Finance Specialist, to build client engagement and identify market opportunities for products and services as the sustainable finance market grows. BMO's also created a Sustainable Finance Steering Committee responsible for reviewing, validating and monitoring sustainable finance activities. They will be supported by BMO's Sustainability Office, which is also identifying green and socially beneficial lending activity and improving internal processes for tracking and monitoring such investments to organize and guide the growth of our sustainable finance business.

BMO's existing sustainable finance activities include green bond underwriting and green financing, as well as innovative approaches to responsible investing taken by BMO GAM. For example, in FY2018, BMO underwrote US\$6.3 billion in sustainable bonds including acting as joint lead/bookrunner on the Ontario government's \$1 billion green bond. Proceeds from the bond are financing key eco-friendly infrastructure projects, such as the Eglinton Crosstown light rail transit project in Toronto.

There is no additional cost required to realize this opportunity because it is part of BMO enterprise-wide strategy and therefore included in the mandates of the lines of business, as well as the Sustainability Office. The operating costs of the Sustainability Office are the equivalent of five full-time equivalents (FTE).

Cost to realize opportunity

0

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

We recognize an opportunity to differentiate ourselves by developing innovative new products and business services that are related to climate change and by offering financing solutions that can assist our customers during their transition to a low-carbon economy. These opportunities are being captured through innovative approaches to responsible investing taken by BMO Global Asset Management.

BMO's Purpose to "Boldly Grow the Good in Business and Life" includes a commitment to double the bank's mobilization for sustainable finance to \$400 billion by 2025, including \$250 billion in client investments, which, as trusted advisors, BMO will help to align with sustainable objectives. This is complemented with products and advisory services to help clients chart a path to improved sustainability. We will also create an impact investment fund to find and scale solutions to the sustainability problems faced by clients and seed the fund with \$250 million in capital.

Time horizon

Current

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)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The annual potential financial impact figure has been calculated based on BMO's commitment to mobilize \$400 billion for sustainable finance by 2025, including providing \$250 billion in client investments, which, as trusted advisors, BMO will help to align with sustainable objectives. Beginning immediately, and assuming equal distribution across the time period, BMO expects to mobilize approximately \$41.6 billion for this area of sustainable finance annually. As at September 30, 2018, our Responsible Investing team at BMO GAM held US\$2.9 billion in assets under management in our range of Responsible Funds as well as US\$160 billion in third party assets under advice through our reo service.

Strategy to realize opportunity

Climate change issues have affected the strategy of our wholly-owned asset manager, BMO Global Asset Management. BMO Global Asset Management is a founding

signatory of the UN Principles for Responsible Investment and has a commitment to take financially-material ESG issues – including climate change - into account in all relevant investment strategies. BMO Global Asset Management has responded by taking specific steps to address climate risk. Some of these include:

- Integrating ESG factors, including climate change, into the investment analysis process for all relevant asset classes.
- Developing investment products that allow investors to direct capital towards climate solutions or lower carbon investments. These include the Climate Opportunity Partners private equity fund, which is entirely invested in solution providers; and green bond investments, which include two dedicated mandates for institutional investors.

There is no additional cost required to realize this opportunity because it is already part of BMO Global Asset Management’s mandate.

Cost to realize opportunity

0

Comment

C2.5

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

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	We recognize an opportunity to differentiate ourselves by developing innovative new products and business services that are related to climate change and by offering financing solutions that can assist our customers during their transition to a low-carbon economy. This opportunity is expressed in BMO’s sustainable finance commitment to mobilize \$400 billion for sustainable finance by 2025. The magnitude of the impact is medium.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	The transition to a lower carbon economy may pose policy, technology and reputational risks to BMO’s downstream value chain such as clients in carbon-intensive industries. The transition also present opportunities for clients to realize resource efficiencies, participate in carbon markets and develop or expand low emission product offerings to access new markets. BMO is currently piloting climate scenario analysis to evaluate the magnitude of the risk. We believe the opportunity associated with sustainable finance outweighs the risk and our commitment to mobilize \$400 billion for sustainable finance by 2025 will include financing for climate solutions.

		The magnitude of the impact is medium.
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	<p>BMO is adapting to the physical risks from climate change on our facilities and capitalizing on the opportunity for resource efficiency by adopting elements of LEED and BOMA to improve energy. We are mitigating the effects of climate change by implementing energy efficiency upgrades. These measures are expected to contribute to our current and future absolute emissions reduction goals and increase resilience of our real estate portfolio.</p> <p>The magnitude is medium-low.</p>
Investment in R&D	Impacted for some suppliers, facilities, or product lines	<p>BMO's Sustainability Office is highly engaged in collaborative efforts to advance TCFD implementation and research and develop innovative approaches to identifying and managing climate risk through the Canadian Bankers Association (CBA) TCFD Working Group and Phase 2 of the United Nations Environment Programme Finance Initiative's scenario analysis pilot. These investments will enable us to better evaluate the magnitude of climate-related risks.</p> <p>The magnitude of the impact is low.</p>
Operations	Impacted for some suppliers, facilities, or product lines	<p>BMO has implemented energy efficiency initiatives across our operations. Some examples include:</p> <ul style="list-style-type: none"> - Achieved third-party certification to the ISO 14001 standard for our environmental management systems at four facilities in Canada and the UK, as a way to ensure energy efficiency gains are realized. - Applied ISO 14001 principles and lessons learned from third-party certification to other facilities with the goal of continually improving our environmental performance. - Adopted elements of LEED and BOMA to improve energy efficiency in our buildings. <p>BMO has been carbon neutral for the past eight years. We have maintained carbon neutrality by limiting emissions from energy use and other sources, investing in electricity from renewable energy sources, and purchasing locally based carbon credits.</p> <p>The magnitude of these impacts is considered to be low.</p>
Other, please specify		

C2.6

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

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	<p>BMO offers products and financing solutions to assist customers during the transition to a low carbon economy. These opportunities are being captured through our sustainable finance product underwriting and advisory services, including green, social and sustainability bond underwriting and green financing, as well as through innovative approaches to responsible investing taken by BMO Global Asset Management, among other activities. The growth of products offerings in this segment is factored in to the financial planning.</p> <p>BMO's Purpose to "Boldly Grow the Good in Business and Life" will mobilize \$400 billion for sustainable finance by 2025 including:</p> <ul style="list-style-type: none"> - \$250 billion in client investments, which, as trusted advisors, BMO will help to align with sustainable objectives - Provide \$150 billion in capital to companies pursuing sustainable outcomes - Complement this with products and advisory services to help clients chart a path to improved sustainability <p>BMO will also create an impact investment fund to find and scale solutions to the sustainability problems faced by clients and seed fund with \$250 million in capital.</p> <p>The magnitude of the impact is considered to be medium.</p>
Operating costs	Impacted for some suppliers, facilities, or product lines	<p>Increased operating costs could result from factors such as: increases in fuel/energy taxes and carbon pricing, and changes to seasonal temperatures leading to increases in the amount of energy required for heating/cooling. These costs are factored into the financial planning process.</p> <p>The magnitude of the impact is low.</p>
Capital expenditures / capital allocation	Impacted for some suppliers, facilities, or product lines	<p>The costs related to investment in energy efficiency initiatives for our operations are factored in to the financial planning process. For example, in 2018 about \$7MM was invested in energy efficiency projects at BMO. Physical changes to the climate and weather patterns can also affect the useful life of equipment such as HVAC. If the life-span of HVAC equipment is negatively impacted, we will modify our capital forecasting.</p> <p>The magnitude of the impact is low.</p>
Acquisitions and divestments	Not impacted	The costs related to acquisitions and divestments are not relevant to our identified risks and opportunities.
Access to	Impacted for	Our activity in the green bond market provides access to capital

capital	some suppliers, facilities, or product lines	<p>for projects that are environmentally sustainable. In FY2018, BMO underwrote US\$6.3 billion in sustainable bonds including US\$4.8 billion in green bonds and US\$1.5 billion in sustainable development bonds. BMO Capital Markets also participated in \$6.8 billion of renewable energy equity and debt financing and provided \$3.9 billion of loan commitments to renewable energy entities and projects.</p> <p>The magnitude of the impact is currently low but is expected to become medium, as expressed in our commitment to mobilize \$400 billion for sustainable finance by 2025.</p>
Assets	Impacted for some suppliers, facilities, or product lines	<p>An increase in sustainable lending and investment assets is expected to meet our commitment to sustainable financing. BMO's Purpose to "Boldly Grow the Good in Business and Life" includes a commitment to double the bank's mobilization for sustainable finance to \$400 billion by 2025. This includes providing \$150 billion in capital to companies pursuing sustainable outcomes, and \$250 billion in client investments which, as trusted advisors, BMO will help to align with sustainable objectives.</p> <p>The magnitude of the impact is considered to be medium because BMO's Purpose to "Boldly Grow the Good in Business and Life" includes a commitment to double the bank's mobilization for sustainable finance.</p>
Liabilities	Impacted for some suppliers, facilities, or product lines	<p>BMO considers environmental risk associated with credit and counterparty transactions and exposures. To limit our potential exposure to clients' environmental risks, we apply enhanced due diligence to transactions with clients operating in environmentally sensitive industry sectors, and we avoid doing business with borrowers that have poor environmental risk management track records. BMO has been a signatory to the Equator Principles since 2005 and applies its credit risk management framework.</p> <p>The magnitude of the impact is low.</p>
Other		

C3. Business Strategy

C3.1

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

Yes

C3.1a

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

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

C3.1c

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

i) BMO has established a Strategic Framework, with Sustainability Principles set out alongside our Strategic Priorities, focused on pursuing our corporate vision and building a foundation of trust with our stakeholders. This framework is championed by BMO's CEO. Climate change and the global transition to a lower carbon economy will drive new and different demands. BMO's business model is adaptive to market trends, opportunities and client demands, and will respond to these new demands through product innovation.

Our operations: Our ECO5 Strategy is an organizational framework that guides our footprint reduction activities. Namely, it helps us: (1) measure and reduce the environmental impacts of our operations, including our company-wide greenhouse gas emissions, (2) lower our costs, (3) gather data on our environmental performance and publicly report on our progress, and (4) continually improve our environmental performance.

Our business: BMO also considers the environmental impacts of our business by integrating environmental and social impacts and governance considerations into decision-making and financing and lending activities. In 2019, BMO unveiled a new corporate purpose to 'Boldly Grow the Good in Business and Life' with a commitment to mobilize \$400 billion for sustainable finance by 2025. This will form the basis of corporate strategy during that timeframe and will drive capital to companies pursuing sustainable outcomes, including those related to the transition to a lower carbon economy. We take a balanced approach to driving this transition by supporting the conventional fossil fuel industry and the renewable energy industry during this transition period.

We are also developing a focused climate change and sustainable finance strategy to chart BMO's course over the global transition to a lower-carbon economy. BMO's Sustainable Finance Specialist continues to build client engagement and identify market opportunities for sustainable finance products and services. BMO also has a full-time Green Bond Strategist who writes monthly market intelligence reports for internal and client use. Working groups have been established on sustainable finance and sustainability topics with membership across the enterprise. We are also identifying green and socially beneficial lending activity and improving internal processes for tracking and monitoring such investments that will help organize and guide the growth of our sustainable finance business.

ii) Environmental Impact is one of BMO's Sustainability Principles. BMO supports this principle by committing to reducing our environmental footprint while considering the impacts of our business. In delivering on our operational EGO5 Strategy, BMO has met three separate multi-year enterprise emissions reduction targets. In 2017, we set an ambitious new five-year target

to reduce enterprise carbon emissions related to energy consumption, waste and business travel by 15% by the end of fiscal 2021, based on fiscal 2016 levels. BMO has also been carbon neutral, enterprise-wide, since 2008 and aims to maintain carbon neutral status.

iii) **Our operations:** The most substantial business decision within our operations that has been influenced by climate change has been investment in energy efficiency upgrades to our real estate portfolio. In 2018, BMO invested about \$7 million on upgrades to lighting, HVAC, building envelope, etc. The aspect of climate change that influenced this decision is the need to reduce greenhouse gas emissions.

Our business: The most substantial business decision within our business activities influenced by climate change in 2018 was related to sustainable finance product underwriting and advisory services. The decision, in January 2018, was to act as joint lead/bookrunner on the Ontario government's \$1 billion green bond (the province's largest green bond offering to date). Proceeds from the bond are helping to finance key eco-friendly infrastructure projects, such as the Eglinton Crosstown light rail transit project in Toronto. The aspect of climate change that influenced this decision is the need support the transition to a lower carbon economy.

In January 2018, BMO also made the business decision to support the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD), and was one of the first banks to do so. Since then, we rolled out training focused on TCFD and climate change for our Board of Directors, enhanced our climate-related disclosure to align with TCFD recommendations, developed and published an innovative TCFD index and have taken significant steps to incorporate climate-related scenario analysis into our approach to risk assessment for risks related to climate change. We have also decided to join industry working groups and pilot projects related to TCFD, for example through the Canadian Business Association (CBA) and the United Nations Environment Programme – Finance Initiative (UNEP-FI). The aspects of climate change that influenced this decision is the need to develop climate change knowledge and expertise, and the need to better understand risks and opportunities related to climate change and the transition to a lower-carbon economy, and to provide relevant information to stakeholders.

C3.1g

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

BMO is a supporter of the TCFD framework and is taking steps to implement the guidance contained therein. Climate-related scenario analysis has not yet been used to inform our business strategy, but we are currently piloting world-leading methodologies to identify climate-related risks through scenario analysis on our lending portfolio, beginning with our oil and gas portfolio. This will help us better understand and quantify climate-related risks and will inform our climate risk management strategy going forward. As we refine our methodology for scenario analysis we plan to expand the approach to other areas of our lending portfolio, beginning with the sectors that are particularly sensitive to climate-related risks. We are also participating in Phase 2 of the UNEP-FI's climate-related scenario analysis pilot, as well as a

Canadian Bankers Association (CBA) working group to advance industry-wide methodologies and innovative approaches to identifying and managing climate-related risk.

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

Scope

Scope 1+2 (location-based) +3 (upstream)

% emissions in Scope

100

Targeted % reduction from base year

15

Base year

2016

Start year

2017

Base year emissions covered by target (metric tons CO₂e)

175,268

Target year

2021

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

% of target achieved

40.4

Target status

Underway

Please explain

In 2017, BMO established a new five-year target to reduce enterprise carbon emissions related to energy consumption, waste and business travel by 15% by the end of fiscal 2021, based on fiscal 2016 levels. Overall, we estimate that Scope 1, 2 and 3 total absolute emissions in FY2018 decreased by about 6.06% from fiscal 2016 to fiscal 2018 after adjusting for weather variations and emission factors, which shows good performance towards achieving the annual target.

BMO adjusts the base year (or baseline) emissions for changes in weather variations and emission factors. Weather affects how much energy is needed to operate BMO's facilities and is an integral component of energy and emissions calculations, especially for comparing multi-year emissions. BMO tracks the weather data (including heating and cooling degree days) of 151 and 82 representative weather stations in Canada and the United States, respectively. Per CDP guidelines, improvements in emission factors also trigger recalculation or adjustment of base year emissions. In general:

Emissions Reduction = Base Year Emissions - Reporting Year Emissions +/- Adjustments

where Adjustments refers to weather variations, emissions factors, major acquisitions/deletions, and other variables that may significantly affect the emissions data. Weather adjustments are performed using either regression analysis, degree-days ratio, or other methods.

Target reference number

Abs 2

Scope

Scope 2 (market-based)

% emissions in Scope

100

Targeted % reduction from base year

90

Base year

2018

Start year

2018

Base year emissions covered by target (metric tons CO₂e)

99,061

Target year

2018

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

% of target achieved

100

Target status

Achieved

Please explain

We have set an indicative target to offset at least 90% of Scope 2 emissions through the purchase of renewable energy certificates (RECs) in North America. REC purchases represent offsets of purchased electricity and so apply only to Scope 2 emissions. In fiscal 2018, we purchased 149,199 MWh of Green-e or EcoLogo RECs to offset about 90% of Scope 2 emissions for all facilities or locations in the United States (in support of RE100 initiative) and selected provinces in Canada with relatively carbon intensive electricity grids. For provinces in Canada where electricity is generated primarily through “green” electricity sources (e.g. hydroelectricity), we use carbon offsets to achieve neutrality for the remaining Scope 2 emissions. However, we do not or cannot account carbon offsets for Scope 2 market-based emissions.

C4.2

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

Target

Renewable electricity consumption

KPI – Metric numerator

Renewable energy consumption MWh

KPI – Metric denominator (intensity targets only)

Base year

2018

Start year

2018

Target year

2018

KPI in baseline year

149,199

KPI in target year

149,199

% achieved in reporting year

100

Target Status

Achieved

Please explain

We have set an indicative target to offset at least 90% of Scope 2 emissions through the purchase of renewable energy certificates (RECs) in North America. REC purchases represent offsets of purchased electricity and so apply only to Scope 2 emissions. In fiscal 2018, we purchased 149,199 MWh of Green-e or EcoLogo RECs to offset about 90% of Scope 2 emissions for all facilities or locations in the United States (in support of RE100 initiative) and selected provinces in Canada with relatively carbon intensive electricity grids. For provinces in Canada where electricity is generated primarily through “green” electricity sources (e.g. hydroelectricity), we use carbon offsets to achieve neutrality for the remaining Scope 2 emissions. However, we do not or cannot account carbon offsets for Scope 2 market-based emissions.

Part of emissions target

This is part of target Abs2 - Scope 2 (market-based) target. The renewable energy consumption target is also part of a complementary initiative, i.e. EPA’s Green Power Partnership Program, for BMO’s facilities in the United States.

Is this target part of an overarching initiative?

Other, please specify

Maintain carbon neutrality status

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	119	467
To be implemented*	2	8
Implementation commenced*	10	24
Implemented*	556	5,558
Not to be implemented	0	0

C4.3b

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

Initiative type

Energy efficiency: Building services

Description of initiative

Other, please specify
Combined lighting, HVAC and controls

Estimated annual CO₂e savings (metric tonnes CO₂e)

4,334

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

864,940

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

4,324,681

Payback period

4 - 10 years

Estimated lifetime of the initiative

11-15 years

Comment

The activity type includes combined lighting, HVAC, and controls upgrades made at various branch, office, and critical facilities in Canada and the United States. This is part of the ongoing program and voluntary activity focusing on energy retrofits to reduce Scope 1 and Scope 2 emissions.

Initiative type

Energy efficiency: Building fabric

Description of initiative

Other, please specify
Combined building envelope improvements

Estimated annual CO₂e savings (metric tonnes CO₂e)

1,224

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

112,970

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

2,824,211

Payback period

>25 years

Estimated lifetime of the initiative

21-30 years

Comment

The activity type includes combined building envelope improvements implemented at various branch and office facilities (e.g., window film, roof insulation, windows/doors upgrades, etc.). This is part of the ongoing program and voluntary activity focusing on energy retrofits to reduce Scope 1 and Scope 2 emissions.

C4.3c

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

Method	Comment
Dedicated budget for energy efficiency	Annually, we set aside a specified capital amount, which is used to fund energy efficiency activities across the enterprise.
Dedicated budget for other emissions reduction activities	As an organization committed to carbon neutrality (achieved in 2010), we recognize that achieving this goal annually is dependent on funding other emission reduction activities such as the purchase of renewable energy and carbon offsets. BMO specifically budgets for these expenditures on an annual basis.
Employee engagement	Employee engagement continues to be a key element in our overall strategy to reduce emissions across the organization. Our Environmental Ambassadors (employee volunteers) act as champions in the field to promote our sustainability efforts. Our employees participate in driving down emissions by promoting behavioural change and also provide ideas to the Sustainability Office for deployment consideration on a broader basis. BMO invests annually in internal communication support media (e.g. intranet, newsletters, etc.) to support employee engagement efforts.
Financial	As an organization (financial institution) with access to capital, we have the

optimization calculations	opportunity to move beyond normal capital restrictions where there is a positive impact from a "cash flow" perspective on the annual expense line. We regularly assess initiatives using this cash flow basis or life-cycle approach which allows for extended ROI projects to be approved.
Internal price on carbon	Since 2008, BMO has been monetizing the value of carbon emissions savings (based on an internally established price of carbon) including energy cost savings and other benefits as part of wider energy-related initiatives and business cases.
Lower return on investment (ROI) specification	There are a variety of means by which we determine whether emissions reductions initiatives receive funding. While not the only reason, ROI specification is one of them. We do look at extended ROI for owned assets, particularly in the case of real estate assets where there is an expectation that we will occupy beyond the short term.

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

Responsible investment funds

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

Low-carbon product

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

Other, please specify

Internal Methodology

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

Comment

BMO Sustainable Opportunities Global Equity Fund: This is a socially responsible investment (SRI) strategy offered by BMO Investment Inc., that aims to provide long-

term growth of capital by investing in a globally diversified portfolio of equity securities that excludes companies primarily involved in the development and infrastructure of fossil fuels. The BMO Sustainable Opportunities Global Equity Fund provides Canadian investors with the option to have a diversified portfolio while avoiding fossil fuel producers.

BMO Responsible Funds: This fund range excludes companies with fossil fuel reserves. This exclusion is already in place for Global and EM funds and being phased in by 2020 for our UK-orientated funds. The funds also engage with investee companies to encourage management and disclosure on climate change.

Private Equity Fund: BMO runs the Climate Opportunity Partners LP, a private equity fund of funds focusing on a climate change investment theme. This fund offers investors access to investment opportunities arising from global efforts to tackle the causes and impacts of climate change.

Engagement Service (reo): BMO's engagement service, reo, allows institutional investors to delegate responsibility to BMO for engagement and/or proxy voting. Climate change is a major part of the engagement we deliver through this service to these clients, including participation in the Climate Action 100+ initiative.

Level of aggregation

Product

Description of product/Group of products

Green bonds

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

Low-carbon product

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

Other, please specify

Green Bond Principles

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

Comment

In FY2018, BMO underwrote US\$4.8 billion in green bonds. For example, in January 2018, BMO Capital Markets assisted the Ontario government by acting as joint lead/bookrunner on its \$1 billion green bond (the province's largest green bond offering to date). Proceeds from the bond are helping to finance key eco-friendly infrastructure projects, such as the Eglinton Crosstown light rail transit project in Toronto.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

November 1, 2015

Base year end

October 31, 2016

Base year emissions (metric tons CO₂e)

37,837

Comment

Scope 2 (location-based)

Base year start

November 1, 2015

Base year end

October 31, 2016

Base year emissions (metric tons CO₂e)

115,333

Comment

Scope 2 (market-based)

Base year start

November 1, 2016

Base year end

October 31, 2017

Base year emissions (metric tons CO₂e)

103,350

Comment

BMO set an indicative target to offset at least 90% of Scope 2 location-based emissions through the purchase of Renewable Energy Certificates (RECs) in North America. Thus, the Scope 2 (market-based) base year emissions will always be the same as the Scope 2 (location-based) reporting year emissions. In FY2018, the location-based emissions

(tCO₂e) are as follows: Scope 1 = 42,883; Scope 2 = 99,061; Scope 3 = 21,391; Total Emissions = 163,335 (please see also C6. Emissions data).

C5.2

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

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

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)

42,883

Start date

November 1, 2017

End date

October 31, 2018

Comment

The Scope 1 emissions in 2018 show good progress towards achieving the target. BMO adjusts the base year (or baseline) emissions for changes in weather variations and emission factors. Weather affects how much energy is needed to operate BMO's facilities and is an integral component of energy and emissions calculations, especially for comparing multi-year emissions BMO tracks the weather data (including heating and cooling degree days) of 151 and 82 representative weather stations in Canada and the United States, respectively. Per CDP guidelines, improvements in emission factors also trigger recalculation or adjustment of base year emissions. In general:

Emissions Reduction = Base Year Emissions - Reporting Year Emissions +/- Adjustments

where Adjustments refers to weather variations, emissions factors, major acquisitions/deletions, and other variables that may significantly affect the emissions data. Weather adjustments are performed using either regression analysis, degree-days ratio, or other methods.

While the absolute Scope 1 emissions appear to have increased from 37,837 to 42,883 tCO₂e in fiscal 2018 (using fiscal 2016 as the base year), the change in emissions was largely affected by weather. The overall heating degree days were relatively higher in fiscal 2018 that naturally increased Scope 1 emissions. There was a slight change in

Scope 1 emission factors due to the updated global warming potential (GWP) based on the IPCC Fifth Assessment Report.

The Scope 1 emissions calculations are summarized below. Overall, we estimate that Scope 1 emissions decreased by about 2.18% from fiscal 2016 to fiscal 2018 after adjusting for weather variations and emission factors.

- FY2016 Scope 1 Emissions: 37,837 tCO₂e
- Emissions Adjustment Factors: 0.01%
- Total Adjusted Baseline (Emissions Factors): 37,840 tCO₂e
- Weather Adjustment Factors: 17.26%
- Weather Sensitive Total: 34,758 tCO₂e
- Non-Weather Sensitive Total: 3,083 tCO₂e
- Total Adjusted Baseline (Weather and Emissions Factors): 43,840 tCO₂e
- FY2018 Target Reduction: 2.20%
- Total GHG Target: 42,875 tCO₂e
- FY2018 Actual: 42,883 tCO₂e
- Actual Year vs. Base Year Reduction: 2.18%

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

BMO is reporting both location-based and market-based emissions following the GHG Protocol Scope 2 Guidance. As part of BMO's carbon neutrality mandate, BMO has been implementing energy efficiency, as the "first fuel," across its portfolio to continually reduce its Scope 2 location-based emissions. BMO has also been procuring Green-e or EcoLogo certified RECs as the contractual instrument to offset at least 90% of Scope 2 location-based emissions. Please see C6.3 for additional comments.

C6.3

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

Reporting year

Scope 2, location-based

99,061

Scope 2, market-based (if applicable)

9,906

Start date

November 1, 2017

End date

October 31, 2018

Comment

The Scope 2 emissions in 2018 show good progress towards achieving the target. BMO adjusts the base year (or baseline) emissions for changes in weather variations and emission factors. Weather affects how much energy is needed to operate BMO's facilities and is an integral component of energy and emissions calculations, especially for comparing multi-year emissions. BMO tracks the weather data (including heating and cooling degree days) of 151 and 82 representative weather stations in Canada and the United States, respectively. Per CDP guidelines, improvements in emission factors also trigger recalculation or adjustment of base year emissions. In general:

Emissions Reduction = Base Year Emissions - Reporting Year Emissions +/- Adjustments

where Adjustments refers to weather variations, emissions factors, major acquisitions/deletions, and other variables that may significantly affect the emissions data. Weather adjustments are performed using either regression analysis, degree-days ratio, or other methods. The Scope 2 emissions calculations are summarized below. Overall, we estimate that Scope 2 emissions decreased by about 8.22% from fiscal 2016 to fiscal 2018 after adjusting for weather variations and emission factors. Part of the reduction is due to improvement in emission factors in North America.

- Total FY2016 Scope 2 Emissions: 115,333 tCO₂e
- Emissions Adjustment Factors: -9.67%
- Total Adjusted Baseline (Emissions Factors): 104,181 tCO₂e
- Weather Adjustment Factors: 3.60%
- Weather Sensitive Total: 104,181 tCO₂e
- Non-Weather Sensitive Total: 0 tCO₂e
- Total Adjusted Baseline (Weather and Emissions Factors): 107,931 tCO₂e
- FY2018 Target Reduction: 8.16%
- Total GHG Target: 99,127 tCO₂e
- FY2018 Actual: 99,061 tCO₂e
- Actual Year vs. Base Year Savings: 8.22%

Scope 2 market-based emissions show reduction by about 90.0% from 99,061 (location-based) to 9,906 (market-based) tCO₂e in fiscal 2018. As explained in C4.1 and C4.2, BMO purchased about 149,199 MWh of Green-e or EcoLogo certified RECs to reduce overall emissions from electricity and achieve the emission reduction target.

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?

No

C6.5

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

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Explanation

For this question, we have determined those scope 3 categories that are relevant to ensure that BMO's GHG inventory appropriately reflects the emissions of the company, and serves the decision-making needs of users, both internal and external to the company. We assess relevance based on the criteria in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World Resources Institute and the World Business Council for Sustainable Development. Criteria for determining the relevance of scope 3 emissions include:

- (a) size of the emissions;
- (b) our ability to influence emissions reductions;
- (c) extent to which the emissions contribute to our company's risk exposure;
- (d) if the emissions are deemed critical by key stakeholders;
- (e) extent to which outsourced activities contribute to our emissions; and
- (f) any specific sector guidance available.

BMO Financial Group's Scope 3 emissions resulting from our purchase of goods and services are deemed relevant from a size perspective, as they have the potential to contribute significantly to the company's total scope 3 emissions. Purchased goods and services include:

- technology/telecommunications equipment (personal computers, servers, copiers, printers, routers, switches, etc.),
- office supplies (e.g. pens, paper, etc.), - furniture and fixtures for premises (desks, chairs, lighting, building materials, etc.),
- consulting services as provided by third parties and,
- marketing and advertising materials.

The primary reason BMO Financial Group has not focused on the specific measurement of emissions related to its supply chain is due to the lack of available source data, but

we plan to work with our suppliers in the upcoming year to both assess the nature of and quantify Scope 3 emissions in this category. Since early 2008 we have employed a Sustainable Procurement questionnaire as part our competitive bid process (supply chain focus) and have scored the results to these questions as part of overall decision process. While this process does not provide results that would allow us to quantitatively answer this question, it has proved beneficial in affecting supplier behaviour for a number of our key relationships.

Capital goods

Evaluation status

Not relevant, explanation provided

Explanation

This is not relevant to BMO as our ongoing strategy is to lease facilities space and transportation equipment for use in our operations whenever possible. We have determined that none of the criteria noted in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World Resources Institute and the World Business Council for Sustainable Development, have been met in for this Scope 3 category.

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

Evaluation status

Not relevant, explanation provided

Explanation

This scope 3 emission source represents upstream emissions of purchased electricity and the associated transmission and distribution losses. We do not consider this relevant for BMO as we have limited ability to influence.

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Explanation

BMO Financial Group's scope 3 emissions resulting from upstream transportation and distribution are deemed relevant from a size perspective, as they have the potential to contribute significantly to the company's total scope 3 emissions. Emissions from the transportation and distribution of products purchased by BMO, between tier 1 suppliers and our own operations (in vehicles and facilities not owned or controlled by BMO) are relevant. We have not attempted to quantify these emissions to date. Emissions from the transportation and distribution services purchased by BMO related to outbound logistics of sold products (in vehicles and facilities not owned or controlled by the reporting company) are relevant. BMO Financial Group distributes product information to customers and shareholder information to shareholders. Doing so may result in transportation emissions relating to the delivery of paper statements, Annual Reports, Corporate Responsibility Reports and other paper correspondence. The lack of readily

available information is the prime reason we do not currently measure/report on emissions from this source.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

1,227

Emissions calculation methodology

Scope 3 emissions from waste generated in operations is focused on waste-to-landfill data for relatively larger corporate facilities. Per GHG Protocol Technical Guidance for Calculating Scope 3 Emissions, average-data method is used for calculating emissions from waste generated in operations. The average-data method involves estimating emissions based on total waste going to each disposal method (e.g., landfill) and average emission factors for each disposal method. The waste to landfill data are annualized and inputted to the Microsoft© Excel-Access based tool to calculate the resulting emissions. The mixed Municipal Solid Waste factor incorporates all emissions associated with transporting the waste, dumping it in a landfill, degrading and releasing methane as it decomposes in anaerobic conditions, and finally the residual biogenic carbon "credit" for the biogenic carbon that gets stored in the landfill long term.

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

27.4

Explanation

BMO Financial Group's Scope 3 emissions resulting from waste generated in operations are deemed relevant from a strategic perspective, as they contribute to the company's total scope 3 emissions. The percentage noted relates to the data available for the 17 large facilities (floor area of facilities where waste data is available as a percentage of enterprise facilities floor area). A significant number of our facilities are smaller in size and geographically dispersed across North America. It is not economical to gather waste information from these locations and our focus is therefore on those larger facilities which are either owned or, if leased, where we are a major tenant.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

20,164

Emissions calculation methodology

Scope 3 emissions from business travel consist primarily of Air Travel (Short-Haul, Medium-Haul and Long-Haul), Employee Vehicles, Rail Travel, and Rental Cars. Per

GHG Protocol Technical Guidance for Calculating Scope 3 Emissions, the distance-based method is used for calculating emissions from business travel. The distance-based method involves determining the distance and mode of business trips, then applying the appropriate emission factor for the mode used. BMO uses a customized Microsoft® Excel-Access based tool for the calculation of greenhouse gas emissions. The Microsoft® Excel-Access based tool for BMO is fully compliant with both (a) The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard and (b) ISO 14064 Part 1: Greenhouse gases.

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

100

Explanation

BMO Financial Group's Scope 3 emissions resulting from business travel are deemed relevant from a size perspective, as they contribute significantly to the company's total scope 3 emissions. We obtain primary data for the types of employee business travel noted (commercial air, rental cars, personal automobile and rail). Due to the lack of readily available data for ground transportation such as taxis, limousines and public transit, these emissions are not included in our inventory.

Employee commuting

Evaluation status

Relevant, not yet calculated

Explanation

BMO Financial Group's Scope 3 emissions resulting from employee commuting are deemed relevant from a size perspective, as they would contribute to the company's total Scope 3 emissions. Emissions from approximately 45,454 employees commuting between their homes and BMO Financial Group workplaces are relevant. The lack of readily available information about their commuting modes and travel distances is the prime reason we do not currently calculate/report on emissions from this source.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Explanation

With the shift to Operational control starting fiscal 2017, emissions from leased assets are now accounted for in Scope 1 and Scope 2. Defensible and transparent consumption estimates are utilized for leasehold facilities where actual data is not available. Consumption estimates are calculated based on type of facility, and either a proxy for intensity per square foot where sufficient sample of similar facilities (with actual data) available, or based on published intensities for facility type by subregion (state/province) or region (country) as applicable.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Explanation

Not relevant as this Scope 3 activity source includes only emissions from transportation and distribution of products after the point of sale – not applicable to BMO. We have determined that none of the criteria noted in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World Resources Institute and the World Business Council for Sustainable Development, have been met in for this Scope 3 category.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Explanation

As a financial institution, our products are financial services as opposed to tangible goods and therefore this Scope 3 source is not relevant. We have determined that none of the criteria noted in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World Resources Institute and the World Business Council for Sustainable Development, have been met in for this Scope 3 category.

Use of sold products

Evaluation status

Not relevant, explanation provided

Explanation

As a financial institution, our products are financial services as opposed to tangible goods. We have determined that none of the criteria noted in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World Resources Institute and the World Business Council for Sustainable Development, have been met in for this Scope 3 category.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Explanation

As a financial institution, our products are financial services as opposed to tangible goods. We have determined that none of the criteria noted in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World Resources Institute and the World Business Council for Sustainable Development, have been met in for this Scope 3 category.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Explanation

Any assets that BMO owns and leases to third parties are included in our Scope 1 and Scope 2 reported numbers. We have determined that none of the criteria noted in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World Resources Institute and the World Business Council for Sustainable Development, have been met in for this Scope 3 category.

Franchises

Evaluation status

Not relevant, explanation provided

Explanation

BMO Financial Group does not engage in franchise activity. We have determined that none of the criteria noted in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World Resources Institute and the World Business Council for Sustainable Development, have been met in for this Scope 3 category.

Investments

Evaluation status

Relevant, not yet calculated

Explanation

BMO Financial Group's Scope 3 emissions resulting from investments are deemed relevant from a size perspective, as they have the potential to contribute significantly to the company's total scope 3 emissions. We are aware of the discussions related to financed emissions and are following the work being done by the GHG Protocol and the UNEP Finance Initiative re: disclosure guidance for financial institutions. We have not yet evaluated the impact on our organization. There are many factors to be considered including availability, credibility, and consistency of information as well as the direction of the regulatory landscape in North America which is where the bulk of our activities take place.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Explanation

We have determined that no additional upstream Scope 3 emissions are relevant to BMO using the criteria noted in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World

Resources Institute and the World Business Council for Sustainable Development, have been met in for this Scope 3 category.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Explanation

We have determined that no additional upstream Scope 3 emissions are relevant to BMO using the criteria noted in Table 6.1 of "The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard", developed by the World Resources Institute and the World Business Council for Sustainable Development, have been met in for this Scope 3 category.

C6.7

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

No

C6.10

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

Intensity figure

6.16

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

141,944

Metric denominator

unit total revenue

Metric denominator: Unit total

23,037

Scope 2 figure used

Location-based

% change from previous year

3.01

Direction of change

Decreased

Reason for change

The total revenue during the reporting year (FY2018) and previous year (FY2017) were C\$23,037 and C\$22,260 million, respectively. Thus, total revenue increased by 3.49% in FY2018 versus FY2017. The combined gross Scope 1 and 2 location-based emissions for the reporting year (FY2018) and previous year (FY2017) were 141,944 tCO₂e and 141,414 tCO₂e, respectively. The total gross emissions increased only slightly by 0.37% in the reporting year compared to the previous year. Although our emission reduction activities resulted in a significant decrease in emissions FY2018 vs. FY2017, other factors such as changes in physical operating conditions (e.g., weather) contributed to the slight overall increase. Emission reduction activities included efficiency upgrades to HVAC equipment and controls, lighting/signage upgrades, and building envelope improvements (e.g., windows, roof insulation). Scope 1 and Scope 2 location-based emissions per million-dollar revenue decreased from 6.35 to 6.16 or by 3.01% over the same period. Note that the intensity figure comparisons do not account for changes in weather and emission factors. While this information has been provided, as requested, we do not believe that this is the most relevant indicator, due to the weak correlation between emissions and revenue for our industry.

Intensity figure

3.12

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

141,944

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

45,454

Scope 2 figure used

Location-based

% change from previous year

0.19

Direction of change

Decreased

Reason for change

The full time equivalent employees (FTE) during the reporting year (FY2018) and last year (FY2017) were 45,454 and 45,200, respectively. Thus, total FTEs increased by 0.56% in FY2018 versus FY2017. Scope 1 and Scope 2 location-based emissions per FTE decreased from 3.13 to 3.12 or by 0.19% over the same period. The intensity figure comparisons do not account for changes in weather and emission factors. Emissions reduction activities have contributed to the decrease in total Scope 1 and Scope 2 emissions (please refer to C7.9a for the detailed comparison of year-over-year

combined Scope 1 and 2 emissions and the reasons for change). Emission reduction activities include efficiency upgrades to HVAC equipment and controls, lighting/signage upgrades, and building envelope improvements (e.g. windows, roof insulation).

Intensity figure

0.085

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

141,944

Metric denominator

square meter

Metric denominator: Unit total

1,679,350

Scope 2 figure used

Location-based

% change from previous year

2.17

Direction of change

Increased

Reason for change

The total floor area during the reporting year (FY2018) and last year (FY2017) were 1,679,350 and 1,709,439 square meters, respectively. Thus, total floor area decreased by 1.76% in FY2018 versus FY2017. Scope 1 and Scope 2 location-based emissions per square meter increased from 0.083 to 0.085 or by 2.17% over the same period. The intensity figure comparisons do not account for changes in weather and emission factors. Emissions reduction activities have contributed to the decrease in total Scope 1 and Scope 2 emissions (please refer to C7.9a for the detailed comparison of year-over-year combined Scope 1 and 2 emissions and the reasons for change). Emission reduction activities include efficiency upgrades to HVAC equipment and controls, lighting/signage upgrades, and building envelope improvements (e.g. windows, roof insulation).

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 CO ₂ e)	GWP Reference
CO ₂	42,738	IPCC Fifth Assessment Report (AR5 – 100 year)
CH ₄	106	IPCC Fifth Assessment Report (AR5 – 100 year)
N ₂ O	39	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO ₂ e)
Canada	24,828
United States of America	17,736
Other, please specify Other International Locations	319

C7.3

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

- By business division
- By facility
- By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO ₂ e)
Bank of Montreal	23,340
BMO Nesbitt Burns	1,807
Harris Bank	16,829
BMO CMC	908

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
Retail Facilities (Branches, ATMs)	21,296	-90	-180
Office Facilities	14,683	-90	-180
Special Purpose Facilities (Operations Centres, Data Centres, Learning Centres)	4,366	-90	-180
Transportation Equipment	2,538	-90	-180

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Stationary combustion (facilities)	40,254
Mobile combustion (transport)	2,538
Fugitive emissions (HFCs - facilities)	91

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Canada	23,135	6,307	259,089	19,045
United States of America	72,327	0	130,154	130,154
Other, please specify Other International Locations	3,599	3,599	7,221	0

C7.6

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

- By business division
- By facility
- By activity

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Bank of Montreal	24,106	9,220
BMO Nesbitt Burns	2,628	686
Harris Bank	70,643	0
BMO CMC	1,684	0

C7.6b

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

Facility	Scope 2 location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Retail Facilities (Branches, ATMs)	59,045	4,187
Office Facilities	28,266	5,376
Special Purpose Facilities (Operations Centres, Data Centres, Learning Centres)	11,750	343
Transportation Equipment	0	0

C7.6c

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

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Retail Activities (Branches, ATMs)	59,045	4,187
Office Activities	28,266	5,376
Special Purpose Activities (Operations Centres, Data Centres, Learning Centres)	11,750	343
Transportation Activities	0	0

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				
Other emissions reduction activities	7,646	Decreased	5.41	Emissions reduction initiatives related to real estate facilities continue to focus primarily on programmatic efficiency upgrades to HVAC equipment and controls, lighting/signage, and building envelope (such as windows and roofs) as well as space optimization strategies. Our strategy is to promote energy efficiency as the “first-fuel” complemented by operational improvement and employee awareness programs. In FY2018, we reduced our emissions by 7,646 tCO2e, as a result of emissions reduction initiatives. Scope 1 and Scope 2 emissions in the previous year using Operational control was 141,414 tCO2e (see also C5. Emissions methodology), resulting in a decrease of 5.41% (i.e. $-7,646 / 141,414 * 100\% = -5.41\%$).
Divestment				
Acquisitions				
Mergers				
Change in	1,867	Increased	1.32	Change in output reflects the impacts of

output				<p>owned facilities occupied for the full year in FY2017 and vacated in FY2018, as well as those owned facilities that were not in our inventory in FY2017 and occupied in FY2018. We consider this organic reduction or addition of facilities, due to the closure and opening of bank branches, which typically balance each other every year. However, in FY2018, we slightly increased our emissions by 1,867 tCO₂e, as a result of changes in output. Scope 1 and Scope 2 emissions in the previous year using Operational control was 141,414 tCO₂e (see also C5. Emissions methodology), resulting in an increase of 1.32% (i.e. $1,867 / 141,414 * 100\% = 1.32\%$).</p>
Change in methodology	3,396	Decreased	2.4	<p>Change in methodology represents the net impact resulting from changes in provincial emissions factors for electricity in Canada, Emissions & Generation Resource Integrated Database (eGRID) emissions factors for electricity in the US, and global warming potentials (GWPs). Per CDP guidelines, improvements or changes in emission factors trigger adjustment of emissions. CDP 2019 submission (FY2018 data) references (a) Environment Canada's 2019 published Provincial electricity emissions factors (as at 2017); (b) U.S. Environmental Protection Agency's 2019 published eGRID (as at 2016); and (c) United Nations Intergovernmental Panel on Climate Change (IPCC)'s Fifth Assessment Report on GWPs for 100-year time horizon. We have isolated the impacts of the change in emissions factors as a main contributing factor for the overall change in Scope 2 electricity emissions. In FY2018, we decreased our emissions by 3,396 tCO₂e, as a net result of changes in methodology or improvements in emissions factors. Scope 1 and Scope 2 emissions in the</p>

				previous year using Operational control was 141,414 tCO ₂ e (see also C5. Emissions methodology), resulting in a decrease of 2.40% (i.e. $-3,396 / 141,414 * 100\% = -2.40\%$).
Change in boundary				
Change in physical operating conditions	9,706	Increased	6.86	Change in physical operating conditions refers to weather normalization. Weather adjusted energy use (and its associated emissions) is the energy that the building portfolio would have used in the current fiscal year (FY2018) under the same weather conditions as the previous year (FY2017). On average for representative BMO locations or weather stations, heating degree days increased by about 18.7% and cooling degree days increased by about 5.7% from FY2017 to FY2018. Generally, this leads to expected increase in electricity consumption during summer months and increase in heating fuel (including electric heat) during the winter months. Statistical process or analysis tool was used to factor out the variations in degree days and adjust the weather sensitive component of the energy use of facilities under Scope 1 and Scope 2. As an overall effect in FY2018, our emissions increased by 9,706 tCO ₂ e, as a net result of changes in degree days (physical operating conditions). Scope 1 and Scope 2 emissions in the previous year using Operational control was 141,414 tCO ₂ e (see also C5. Emissions methodology), resulting in an increase of 6.86% (i.e. $9,706 / 141,414 * 100\% = 6.86\%$).
Unidentified				
Other				

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 0% but less than or equal to 5%

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	216,548	216,548

Consumption of purchased or acquired electricity		149,199	238,181	387,380
Consumption of purchased or acquired steam		0	9,084	9,084
Total energy consumption		149,199	463,813	613,012

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	No
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)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

206,401

Comment

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

6,560

Comment

Fuels (excluding feedstocks)

Fuel Oil Number 2

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

3,573

Comment

Fuels (excluding feedstocks)

Propane Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

14

Comment

C8.2d

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

Diesel

Emission factor

0.07081

Unit

metric tons CO₂e per GJ

Emission factor source

GHG Protocol Stationary Combustion (2010)

Comment

Fuel Oil Number 2

Emission factor

0.07393

Unit

metric tons CO₂e per GJ

Emission factor source

GHG Protocol Facilities (2000)

Comment

Natural Gas

Emission factor

0.05064

Unit

metric tons CO₂e per GJ

Emission factor source

GHG Protocol Stationary Combustion (2010)

Comment

Propane Gas

Emission factor

0.06009

Unit

metric tons CO₂e per GJ

Emission factor source

GHG Protocol Facilities (2000)

Comment

C8.2f

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

Basis for applying a low-carbon emission factor

Energy attribute certificates, Renewable Energy Certificates (RECs)

Low-carbon technology type

Wind

Hydropower

Region of consumption of low-carbon electricity, heat, steam or cooling

North America

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

149,199

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

0

Comment

BMO has set an indicative target to offset at least 90% of Scope 2 location-based emissions through the purchase of RECs in North America. In fiscal 2018, we purchased about 149,199 MWh of Green-e or EcoLogo certified RECs to offset about 90% of Scope 2 emissions. The RECs are sourced from a combination of wind and hydropower.

C9. Additional metrics

C9.1

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

Description

Other, please specify

Water use

Metric value

0.73

Metric numerator

Water use

Metric denominator (intensity metric only)

Floor area in square meters

% change from previous year

0.38

Direction of change

Increased

Please explain

As a financial institution, we continue not to be a water-intensive industry and organization. Yet, while fresh water is relatively abundant in Canada, water rates and demand are continuously rising. The production, treatment and distribution of water are also energy intensive. For the past several years we have focused our efforts on establishing a reliable baseline for water consumption across our facilities. In 2017, we set a target to reduce water use intensity (m³ water consumption / m² real estate floor area) by 8% compared to the fiscal 2016 baseline.

Over the years, we have been monitoring the water use intensity in those facilities for which data are available. Reported water use intensities for the past several years are as follows:

2015: 0.7534 m³/m²

2016: 0.7449 m³/m²

2017: 0.7287 m³/m²

2018: 0.7314 m³/m²

The 2018 water consumption or intensity appears to be about 1.44% slightly below target of 0.7211 m³/m² or 3.2% reduction target using FY2016 as the base year. The increase in water use intensity is most likely due to warmer summer and greater need for irrigation. The reported water consumption and target for the given data coverage are not weather-normalized. We continue to implement various water reduction measures where possible, which include upgrades of (a) water using building system equipment (boilers, AC units, chillers, cooling towers, and other equipment) and (b) water fixtures in building (faucets, showers, toilets, urinals, and other fixtures).

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)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

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

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

 BMO FY2018 Emissions Verification Statement.pdf

Page/ section reference

Please refer to pages 1 to 2 of the attached Verification Statement.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

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

 BMO FY2018 Emissions Verification Statement.pdf

Page/ section reference

Please refer to pages 1 to 2 of the attached Verification Statement.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope

Scope 2 market-based

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

 BMO FY2018 Emissions Verification Statement.pdf

Page/ section reference

Please refer to pages 1 to 2 of the attached Verification Statement.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope

Scope 3- all relevant categories

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

 BMO FY2018 Emissions Verification Statement.pdf

Page/section reference

Please refer to pages 1 to 2 of the attached Verification Statement.

Relevant standard

ISO14064-3

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

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

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Other, please specify
Combination

Project identification

Will Solutions – Quebec Based Community and Private Sector Credits Will Solutions provide Quebec based community and private sector credits. Will Solutions' Sustainable Community Solution encourages, quantifies, and clusters together the GHG reduction efforts of both small and medium-sized public and private entities in order to create high quality carbon credits validated to the Verified Carbon Standard (VCS), a highly respected international standard. The carbon credits generated come from diverse

source activities such as energy efficiency for buildings, redirection of waste from landfills, and improvement of industrial and commercial processing practices.

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO₂e)

10,000

Number of credits (metric tonnes CO₂e): Risk adjusted volume

10,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Landfill gas

Project identification

City of Guelph – Landfill Gas Project The City of Guelph generates carbon credits due to the collection and destruction of methane emissions at its Eastview Landfill. Renewable electricity is generated on the landfill site by using the methane as fuel. The carbon credits that result from the methane destruction are certified to applicable ISO standards and the electricity generated is renewable energy.

Verified to which standard

Other, please specify
ISO 14064-2

Number of credits (metric tonnes CO₂e)

60,000

Number of credits (metric tonnes CO₂e): Risk adjusted volume

60,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Methane avoidance

Project identification

City of Guelph – Organics Waste Processing Facility The City of Guelph actively collects and processes organic waste at its Waste Innovation Centre located in Guelph, Ontario. The organic waste is processed into usable compost – thereby diverting waste from landfill and avoiding methane emissions. The resulting methane avoidance generates high quality carbon credits that are certified to applicable ISO standards.

Verified to which standard

Other, please specify
ISO 14064-2

Number of credits (metric tonnes CO2e)

25,000

Number of credits (metric tonnes CO2e): Risk adjusted volume

25,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Methane avoidance

Project identification

Halifax Renewable Energy Corporation (HREC) – Landfill Gas to Energy HREC and its subsidiaries own and operate a renewable energy project on a landfill near Halifax, Nova Scotia. The project collects methane emissions from landfill waste and utilizes the methane to generate electricity for local consumption. The carbon credits that result from the methane destruction are certified to the ISO standards and the electricity generated is renewable energy.

Verified to which standard

Other, please specify
ISO 14064-2

Number of credits (metric tonnes CO2e)

35,000

Number of credits (metric tonnes CO₂e): Risk adjusted volume

35,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

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

Yes

C11.3a

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

Objective for implementing an internal carbon price

Change internal behavior
Drive energy efficiency
Identify and seize low-carbon opportunities

GHG Scope

Scope 1
Scope 2
Scope 3

Application

Selected business units.

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

30

Variance of price(s) used

BMO uses differentiated and evolutionary carbon pricing as the price of instruments such as renewable energy credits (RECs) and carbon offsets varies by region and time period. The price reported represents the upper-range price for BMO to mitigate emissions and achieve carbon neutrality. We apply a carbon price to the following business units: Corporate Real Estate.

Type of internal carbon price

Shadow price
Implicit price
Offsets

Impact & implication

BMO uses a number of instruments, such as renewable energy credits (RECs) and carbon offsets, to reduce its carbon footprint. As the price of these instruments varies, BMO's internal carbon price represents the upper-range price to mitigate emissions and achieve carbon neutrality. The internal carbon price is set through a combination of shadow price, implicit price, and offsets. BMO is not directly exposed to risks from regulations such as cap-and-trade schemes that affect the cost of carbon emissions. Currently, the internal price of carbon helps BMO uncover opportunities and guide decisions on more cost-effective means to reduce our carbon footprint. For example, BMO has partnered with an electric utility in one of the U.S. states to bundle brown and green power through on-bill financing without significant premium. This initiative has lowered the quantity and cost for RECs requirements. The cost savings can be further reinvested in low-carbon technologies and emission reduction initiatives.

C12. Engagement

C12.1

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

Yes, our customers

Yes, other partners in the value chain

C12.1b

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

Type of engagement

Collaboration & innovation

Details of engagement

Other – please provide information in column 5

% of customers by number

23

% Scope 3 emissions as reported in C6.5

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

We engage with our customers, clients and investee companies in a variety of ways. Engagement and initiatives are selected based on the scale of the potential risk and/or opportunity.

1. BMO GAM Responsible Investing, Engagement: BMO GAM investor engagement

efforts focus on encouraging investee companies to adopt best practices in several areas including environmental standards and climate change.

2. BMO GAM Responsible Investing, Products: BMO GAM offers clients a range of Responsible Funds so they can invest in companies that are making a positive contribution to society and the environment; avoid investing in companies with damaging/unsustainable business practices; and improve, using our influence as investors to encourage the adoption of ESG best practices through engagement efforts and proxy voting. This includes best practice around climate-related risks and disclosure.

3. Responsible Lending, Climate-related Risk: Through our lending practices, we encourage borrowers to make responsible choices in their operations, especially as we consider how we can best support the transition to a lower-carbon economy while acknowledging the ongoing importance of Canada's energy sector and supporting our clients in that sector. We evaluate environmental risks, implement internal policies and financing guidelines for environmental risk identification, and perform due diligence on each transaction. A higher level of environmental due diligence is applied for clients in environmentally sensitive industries. BMO has been an Equator Principles signatory since 2015.

4. Responsible Lending, Climate-related Opportunity: We engage clients in the renewable energy sector, acting as advisors on mergers and acquisitions, lead equity and debt financing transactions, and provide capital for project finance and other corporate facilities to companies that are active in the renewable energy markets.

% of customers covered is calculated as the % of revenue that integrates ESG criteria. This includes the following lines of business: 100% of BMO Private Banking, 100% of BMO Global Asset Management and 100% of BMO Capital Markets Investment and Corporate Banking.

BMO does not currently calculate financed emissions. As such, we are unable to provide coverage of Scope 3 emissions at this time.

Impact of engagement, including measures of success

1. BMO GAM Responsible Investing: The success of these efforts is measured by milestones – instances of change in the way these companies address ESG issues after we engage with them. In 2018, we engaged 617 companies and influenced change in the outcomes of 127 engagements (see p. 36-37 of 2018 ESG Report for examples).

2. BMO GAM Responsible Investing, Products: We look at the growth in assets held by ESG offerings, including our reo (our engagement and proxy voting service), as a measure of effectiveness. As at 30 September 2018, we held US\$2.9 billion in assets in the BMO GAM range of Responsible Funds, as well as US\$160 billion in third party assets under advice through our reo service. This is an increase from 30 September 2017, at which time we held US\$2.4 billion in assets in the BMO GAM range of Responsible Funds, and US\$154 billion in third party assets under advice through our reo service.

3. Responsible Lending, Climate-related Risk: BMO closed 3 project finance transactions following the Equator Principles III.

4. Responsible Lending, Climate-related Opportunity: In 2018, BMO participated in \$6.8

billion of renewable energy equity and debt financing and provided \$3.9 billion of loan commitments to renewable energy entities and projects.

C12.1c

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

BMO engages with other value chain partners such as facilities managers and downstream value chain partners outside of customers/clients. Our strategy for prioritizing engagements is based on a combination of factors, including: opportunity to generate cost savings/reduce GHG emissions, the ability to create or raise awareness, and advance BMO's reputation as a responsible citizen.

Example 1

BMO works extensively with facilities management (FM) providers in Canada/United States to identify business case and execute energy savings opportunities across our facilities. Through our combined efforts, we have implemented capital projects for energy savings initiatives such as interior/exterior lighting retrofits, heating/cooling infrastructure upgrades and building envelope improvements. Additionally, no/low cost operational improvements have been introduced to reduce utilities consumption, operational costs and the resultant emissions. The engagement strategy is founded on surfacing opportunities with FM service providers using utility data analysis, benchmarking/monitoring, energy assessments, capital planning, project management, and measurement & verification. Initiatives are prioritized based on a combination of cost savings and emissions reductions in this order of importance. These efforts directly contributed to our organization's success in reducing facilities related emissions by in excess of 5% in the F2018 versus F2017.

Measures of Success:

- Reduced ongoing operational costs in the form of utilities cost reductions as well as maintenance cost reductions
- Reduced GHG emissions as a result of both capital and operational improvements – reduced utilities consumption translates into reduced emissions
- Reduced emissions contribute to reduced costs for expenditures of carbon offsets and/or renewable energy in order to maintain our commitment to Carbon Neutrality
- Positive impact on awareness of both employees and customers, relative to BMO's climate change initiatives

Example 2

BMO partners with a preferred supplier to facilitate the environmentally responsible recycling or refurbishment/resale of technology equipment. In many cases, equipment deemed to have reached the end of its useful life from a BMO perspective, can be refurbished and reused by other organizations (e.g. schools). This activity avoids the creation of harmful greenhouse gases from the manufacture of new equipment and defers the impact to the waste/recycling stream. Compugen's CarbonBank™ program works as follow. "End of first life" IT technology is decommissioned and securely transported to a Compugen configuration centre, where all equipment is checked and hard drives are completely wiped of all data using National Institute of Standards and Technology (NIST) data-erasure standards. Technology isn't limited to just

laptop and desktop computers, but includes any IT technology, including networking/storage and even smartphones. The CarbonBank program manages to find a second life for almost all types of technology that it receives. The equipment is then tested and refurbished for resale into new markets, such as educational districts, computer retail stores, or small businesses. Carbon credits are generated through avoidance of emissions associated with the traditional e-waste recycling process and the manufacture of new IT equipment and are verified by an accredited third party.

Measures of success:

- Reduced GHG emissions from avoided new equipment manufacturing (e.g. using repurposed equipment) & landfill avoidance for technology assets taken out of service (BMO includes waste to landfill in its emissions calculations). In F2018 approximately 3,964 tonnes of greenhouse gas emissions were avoided.
- Reduced costs to BMO for disposal of technology equipment

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

Other

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support	Our subsidiary BMO Global Asset Management (BMO GAM) has engaged extensively with policymakers both directly and through its membership of the Institutional Investors Group on Climate Change (IIGCC). In the past year, BMO Global Asset Management undertook public policy engagements, including: Signing the 2018 Global Investor Statement to Governments on Climate Change, and signing the investor letter setting out expectations of power companies in accelerating decarbonization. In past year's BMO GAM has also signed a letter from 130 global investors urging G20 leaders to ratify the COP21 Paris Agreement on climate change, signed a global investor letter to G20 leaders encouraging the ratification of the COP21 Paris Agreement, engaged the World Bank on approaches to measuring green finance, and written to the US Securities and Exchange Commission on company	N/A. Support of international standards.

		sustainability disclosure reforms.	
Climate finance	Support	We have engaged on the Financial Stability Board’s Task Force on Climate-Related Financial Disclosures (TCFD) through our active membership within the Institutional Investors group on Climate Change (IIGCC), the Canadian Bankers’ Association and UNEP-FI through which we are engaging policy makers to promote robust and consistent climate related reporting standards for energy intensive sectors as well as financial sector companies. We provided joint feedback with Canadian peer banks to the Financial Stability Board’s recommendations of the Task Force on Climate-related Financial Disclosures consultation document. Building on 2017 engagement activities, in 2018 BMO participated on two separate government roundtables on the topic of climate related financial disclosure that was attended by BMO’s General Counsel with active participation. One was organized by the Federal Government and included Finance Minister Bill Morneau and the Minister of Environment Catherine McKenna. Mark Carney was a guest speaker. The second event was organized by the Government of Ontario and hosted by then-Premier Kathleen Wynne. Michael Bloomberg was a guest speaker.	N/A. Support of international standards.
Climate finance	Support	BMO engaged Canada's Expert Panel on Sustainable Finance directly in 2019 by providing feedback on the Panel's Interim Report. BMO strongly supports the Panel's work and commented on the challenges to realizing the full potential of sustainable finance in Canada, including solutions for facilitating increased sustainable lending to address financing gaps, supporting implementation of the TCFD recommendations, developing a Canadian 'sustainable' or 'green' taxonomy, and fostering growth of the sustainable bond market.	N/A. Support of national standards.
Climate finance	Support	BMO has engaged on the development of taxonomies for sustainable finance, including the EU Action Plan on Sustainable Finance and Taxonomy of Sustainable Finance and the Canadian Standards Association Green Taxonomy Technical Committee.	N/A. Support of international standards.

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

Institutional Investors Group on Climate Change

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Calling for clear consistent climate change policies in order to promote an orderly transition to a low carbon economy.

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

Representation from our subsidiary BMO Global Asset Management (EMEA) on the Board, participating actively in policy work.

C12.3e

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

BMO personnel participated as head of delegation, subject matter expert and international negotiator for the harmonized Standards Council of Canada / CSA Mirror Committee on ISO/TC 207/SC 1 - Environmental Management Systems (EMS). BMO supported participation in both international and national meetings related to the development and maintenance of EMS standards, such as the internationally recognized ISO 14001, that meet stakeholder needs, are market-based and support sustainability. As such, BMO provided a service to both Canada and the extended international community and supported actions to provide organizations of any size with a common framework, built on international consensus, upon which they could build robust, credible and reliable environmental management systems aimed at improving environmental performance.

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?

Only authorized BMO representatives knowledgeable of climate strategy are involved in climate related engagement with stakeholders or policy makers. BMO's Sustainability Council,

composed of a cross section of leadership are kept apprised of climate strategy matters through quarterly Sustainability Council meetings, including any engagement opportunities.

BMO's participation as an international negotiator for the harmonized Standards Council of Canada / CSA Mirror Committee on ISO/TC 207/SC 1 - Environmental Management Systems - is closely aligned with the Environmental Sustainability group's mandate and the organization's continued focus on energy and cost reduction. As an organization that has publicly announced and achieved both Carbon Neutrality and absolute emissions reduction targets, the ISO 14001 framework is very much aligned with our internal focus on energy practices specifically and climate change implications in general. The establishment of and tracking against specific targets and adoption of ISO 14001 for environmental management system implementation are examples of processes for direct activities that align with policy, relative to the initiative identified.

C12.4

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

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 BMO_2018 ESG_PAS_en.pdf

Page/Section reference

Pages 57-59, 62-64

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

 BMOClimateChangeDec2018.pdf

Page/Section reference

All pages

Content elements

Governance
Strategy
Risks & opportunities
Emission targets

Comment

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

 bmo_ar2018.pdf

Page/Section reference

Pages 22-23, 81, 115

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

 BMO FY2018 ECO5 Summary - Operational.pdf

Page/Section reference

All pages

Content elements

Emissions figures

Emission targets

Other metrics

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

 BMOProxy_March2019-1.pdf

Page/Section reference

24-25, 46-49, 55-57

Content elements

Governance

Risks & opportunities

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

 BMOEnvironmentalPolicy_Nov2018d.pdf

Page/Section reference

All pages

Content elements

Governance
Strategy

Comment

C14. Signoff

C-FI

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

Forward-looking Information Statement attached.

 CDP - BMO Forward Looking Statement 2019 - submission.docx

C14.1

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

	Job title	Corresponding job category
Row 1	General Counsel and Chair, BMO Sustainability Council	Other C-Suite Officer

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

