

BMO Financial Group

2019 Climate Report



Our Approach to Climate Change

At BMO, we recognize that climate change is one of the major global challenges of our time. In January 2018, BMO was among the first banks to publicly announce its support for the Financial Stability Board's Taskforce on Climate-related Financial Disclosures (TCFD). Since then, we have advanced innovative approaches to managing climate-related financial risk and opportunity. In 2019, we have taken concrete action to implement the recommendations of the TCFD and published this Climate Report.

GOVERNANCE

Current State

- Board: oversight of sustainability governance by Audit and Conduct Review Committee; climate-related risk training for all directors
- Management committees: Sustainability Council, Sustainable Finance Steering Committee, Global Investment Committee, Risk Management Committee
- Management: General Counsel, Chief Sustainability Officer, Chief Risk Officer, Head of Sustainable Finance, Global Chief Investment Officer

2020 and Beyond

- Continue to inform Board about risks and opportunities related to climate change
- Continue to build capacity and strengthen climate change risk management governance

STRATEGY

Current State

- Incorporated climate change risk into the enterprise risk taxonomy
- Launched climate-related scenario analysis pilot
- Launched Sustainable Finance team
- Continued to support development of climate change knowledge and expertise internally and externally

2020 and Beyond

- Expand scenario analysis program and leverage results to inform strategic responses
- Advance our sustainable finance strategy and work with our clients to capture opportunities

RISK MANAGEMENT

Current State

- Internal policies, financing guidelines and client due diligence
- Climate-related risk considerations embedded in ESG integration for asset management
- Active engagement on climate stewardship program, including support for Climate Action 100+
- Operational environmental management system including carbon neutrality

2020 and Beyond

- Continue to develop environmental and social risk policy framework, including guidance on climate-related risks

METRICS AND TARGETS

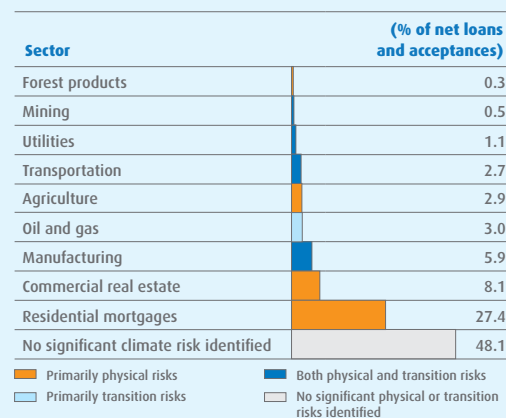
Current State

- Carbon neutral since 2010¹
- Committed to mobilize \$400 billion for sustainable finance by 2025
- Quantified carbon-related assets in lending portfolio²

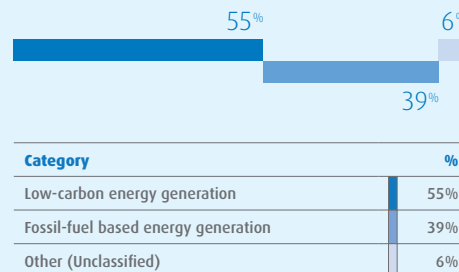
2020 and Beyond

- Maintain carbon neutrality
- Achieve 15% emission reduction target by 2021, relative to 2016
- Develop business-relevant metrics and indicators to assess impact

Sensitivity to Climate Risk of BMO Lending Exposures, as at October 31, 2019



BMO Lending to Power Generation³, as at October 31, 2019



³ Power generation is a subset of utilities, excluding water utilities, independent power producers, and electricity transmission and distribution companies. The share of low-carbon energy generation is calculated on a client-by-client basis using the most recently publicly available information on energy source.

\$400 billion

BMO will mobilize \$400 billion for sustainable finance by 2025

3.3%

of lending portfolio is to carbon-related assets²

¹ BMO's carbon neutral strategy includes reducing emissions, investing in renewable energy and purchasing high-quality carbon credits.

² The value of net loans and acceptances connected to the energy and utilities sector, excluding water utilities, independent power producers, electricity transmission and distribution companies, renewable electricity producers, and nuclear electricity producers. The amount is expressed as a percentage of total net loans and acceptances.

Special Supplement

2019 Climate Report

At BMO, we recognize that climate change is one of the major challenges of our time. In December 2015, nearly 200 governments committed to strengthen the global response to climate change by signing the Paris Agreement to limit the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C. To advance this objective, the Financial Stability Board convened a Taskforce on Climate-related Financial Disclosures (TCFD), which released a set of recommendations for financial market participants to understand and disclose climate-related risks and opportunities.

In January 2018, BMO was among the first banks to publicly announce its support for the TCFD framework. In 2018, we aligned our disclosures about risks and opportunities related to climate change with the recommendations of the TCFD, which were recognized as market-leading in the TCFD's 2018 Status Report. Since then, we have advanced innovative approaches to managing climate-related financial risk. In 2019, we have taken concrete action to implement the recommendations of the TCFD across our business.

This report is BMO's first stand-alone Climate Report. It is intended to provide investors and other stakeholders with pertinent information on the climate-related risks and opportunities we face, and our approach to measuring and managing climate-related impacts.



BMO's Approach to Climate Risk and Opportunity

Fiscal 2018 and earlier	Fiscal 2019	Fiscal 2020 and beyond
GOVERNANCE		
<p>Established Sustainability Council (2008)</p> <p>Established executive responsibility for sustainability (2010)</p> <p>Amended ACRC charter to include sustainability oversight (2018)</p> <p>Appointed Chief Sustainability Officer (2018)</p> <p>Released Statement on Climate Change (2018)</p> <p>Provided climate change risk and disclosure training to BMO's Board of Directors (2018)</p> <p>Established internal TCFD implementation working group (2018)</p>	<p>Rolled out climate risk and disclosure training to BMO's subsidiary Boards of Directors and London Risk Management Committee</p> <p>Established Sustainable Finance team</p> <p>Assigned SMF accountability for climate change to Chief Risk Officer, Europe</p> <p>Established working group for scenario analysis</p>	<p>Continue to inform Board about risks and opportunities related to climate change</p> <p>Continue to build capacity and strengthen climate change risk management governance mechanisms</p>
STRATEGY		
<p>BMO GAM predecessor signed UNPRI (2006)¹</p> <p>Integrated Sustainability Principles into BMO's enterprise-wide strategy (2016)</p> <p>Incorporated environmental and social risk into Reputation Risk Corporate Standard (2018)</p> <p>Integrated considerations of ESG factors, including climate change, across investment strategies</p>	<p>Launched climate-related scenario analysis program</p> <p>Launched Sustainable Finance strategy</p> <p>Incorporated climate change risk into the enterprise risk taxonomy</p> <p>Identified climate-sensitive lending sectors</p> <p>Initiated research on approach to scenario analysis in investment portfolios at BMO GAM</p> <p>Integrated carbon footprint reporting into ESG portfolio analytics at BMO GAM</p> <p>Joined Phase 2 of UNEP-FI TCFD Pilot Project for Banks</p>	<p>Expand scenario analysis program and leverage results to inform strategic responses</p>
RISK MANAGEMENT		
<p>Initiated comprehensive ESG engagement program with BMO GAM investee companies (2000)</p> <p>Signed Equator Principles (2005)</p> <p>Released Environmental Policy (2008)</p>	<p>Reviewed environmental and social (E&S) risk policy framework</p> <p>Disclosed BMO GAM's Climate change engagement: a framework for the future²</p>	<p>Further develop E&S risk framework</p> <p>Enhance guidance on climate-related risk in credit risk policy framework</p>
METRICS AND TARGETS		
<p>Achieved carbon neutrality (2010)</p> <p>Achieved three successive multi-year enterprise emission reduction targets (since 2008)</p>	<p>Made progress toward emission reduction target</p> <p>Established a sustainable finance target</p> <p>Formalized tracking of ESG-related inquiries</p> <p>Quantified carbon-related assets in our lending portfolio</p> <p>Integrated carbon footprint reporting into ESG portfolio analytics at BMO GAM</p>	<p>Maintain carbon neutrality</p> <p>Achieve emission reduction targets</p> <p>Develop business-relevant metrics and indicators to assess impact and exposures</p> <p>Develop metrics and targets tied to sustainable finance goals</p>

¹ F&C Asset Management was a founding signatory to the UN PRI in 2006. In 2014, F&C was acquired by BMO through its wholly owned subsidiary, BMO Global Asset Management (Europe) Limited.

² www.bmogam.com/se-en/intermediary/wp-content/uploads/2019/10/climate-change_esg-viewpoint.pdf

Governance

BOARD OVERSIGHT

BMO's directors are recruited and evaluated based on a skills matrix that includes sustainability experience, and eight of our 14 current independent directors have such experience¹. In 2018, BMO developed and delivered online climate change risk and disclosure training for its Board of Directors, and made it available to all current and new Board members. In 2019, this training was updated and rolled out to the Boards of Directors of all of BMO's subsidiaries, and was also provided to the London Risk Management Committee, in line with the Supervisory Statement on Enhancing Banks' and Insurers' Approaches to Managing the Financial Risks from Climate Change issued by the UK Prudential Regulation Authority (UK PRA), as well as the TCFD framework.

Board-level oversight of sustainability, including climate-related risks and opportunities, is embedded in the charter of the Audit and Conduct Review Committee (ACRC) of BMO's Board of Directors. The ACRC meets annually with BMO's Chief Sustainability Officer and General Counsel to review and discuss matters related to sustainability, including climate change and climate-related disclosures.

The ACRC reviews and guides strategy, action plans, and performance objectives and targets related to BMO's operational footprint and sustainable finance commitment in order to ensure that management is adequately addressing opportunities associated with the transition to a lower-carbon economy.

The Risk Review Committee of the Board of Directors (RRC) assists the Board in fulfilling its risk management oversight responsibilities. This involves overseeing the identification and management of BMO's risks, including our risk culture, adherence by operating groups to risk management corporate policies and procedures, and compliance with risk-related regulatory requirements. Our risk management framework is reviewed on a regular basis by the RRC in order to provide guidance for the governance of our risk-taking activities.

MANAGEMENT'S ROLE

The Chief Executive Officer (CEO) has delegated responsibility for sustainability to BMO's General Counsel, who is a member of the Executive Committee and reports directly to the CEO. BMO's General Counsel also has accountability for areas such as legal and regulatory risk, reputation risk and business conduct. This organizational structure aligns responsibility for sustainability with accountability for these related areas.

BMO's General Counsel chairs the BMO Sustainability Council, which was established in 2008 and comprises 19 senior leaders from business and Corporate Support areas across the organization as at fiscal year-end 2019. The Sustainability Council supports and advises on the implementation of BMO's sustainability strategy, and meets quarterly to discuss sustainability topics, including the risks, opportunities and disclosures related to climate change.

BMO's Chief Sustainability Officer (CSO) reports to the Corporate Secretary and to the General Counsel. The CSO is responsible for the development and execution of BMO's sustainability strategy, including internal advisory and support efforts, stakeholder engagement and disclosure. This mandate includes monitoring climate-related issues, developing strategies to manage risks and opportunities associated with climate change across the organization, and producing and publishing climate-related disclosures.

BMO's Chief Risk Officer (CRO) reports directly to the CEO and is head of Enterprise Risk and Portfolio Management and chair of the Risk Management Committee (RMC). The CRO is responsible for providing independent review and oversight of enterprise-wide risks and leadership on risk issues, developing and maintaining a risk management framework and fostering a strong risk culture across the organization. ERPM provides risk management oversight, supporting a disciplined approach to risk-taking for independent transaction approval and portfolio management, policy formulation, risk reporting, stress testing, modelling and risk education. ERPM is responsible for conducting climate change scenario analysis to identify potential risks in BMO's lending portfolio.

In 2019, BMO's Sustainability Office collaborated with ERPM to develop and implement a program for managing climate-related risk across our lines of business. The two teams worked together to incorporate climate change risk into the enterprise-wide risk taxonomy and to quantify carbon-related assets in our lending portfolio. A working group comprised of individuals from Sustainability, ERPM (including credit and operational risk) and BMO Global Asset Management (GAM) was established to identify global best practices for managing

climate-related financial risks and to coordinate BMO's climate-related risk management program.

In 2019, BMO also responded to the UK PRA Supervisory Statement on Enhancing Banks' and Insurers' Approaches to Managing the Financial Risks from Climate Change by assigning Senior Management Function (SMF) accountability for climate change to the CRO, Europe. At the same time, we developed an initial implementation plan outlining how BMO intends to meet the requirements of the UK PRA Supervisory Statement.

To better capture opportunities associated with sustainable finance, we established a Sustainable Finance team in 2019 that is supported by BMO's Sustainability Office. The group brings together existing capabilities in BMO Capital Markets and BMO Global Asset Management. It is responsible for mobilizing the enterprise to pursue opportunities that involve sustainability with customers across all lines of business. It includes Sustainable Finance specialists responsible for building customer engagement and identifying market opportunities for products and services as the sustainable finance market grows. We also created a Sustainable Finance Steering Committee composed of BMO Executives, which is responsible for reviewing, validating and monitoring BMO's sustainable finance strategy.

The Global Investment Committee (GIC) oversees all responsible investment policies and activities at BMO GAM, including those related to climate change. GIC members include the Global Chief Investment Officer (CIO), the CIO North America and other senior representatives from BMO GAM's regulated entities. This committee has responsibility for the final approval of all responsible investment policies.

¹ Information on the skills and experience of our directors can be found in our 2019 Management Proxy Circular.

Climate-Related Opportunities and Strategy

At BMO, we recognize that the transition to a lower-carbon economy will be a complex endeavour that will happen over time. As energy needs continue to increase, and the energy mix continues to evolve, there will remain a need for affordable energy and to support local communities to promote a smooth and just transition that addresses climate goals while taking social impacts into account. Our clients will play a critical role in the transition to a lower carbon economy and we believe this transition will give rise to opportunities, from gains in efficiency to evolving customer demands. BMO is committed to making a positive impact by working with our clients on this journey through product innovation. Our operating groups are actively pursuing operational efficiency gains. Our commitment to maintaining carbon neutrality and mobilizing \$400 billion for sustainable finance by 2025 is a focused response to this transition.

RESOURCE EFFICIENCY

Changes in consumer preferences and emerging regulations related to energy efficiency and reporting are likely to improve energy efficiency. This presents BMO with an opportunity to reduce its operating costs and achieve its emission reduction targets. BMO has taken the steps necessary to qualify for third-party certification under the ISO 14001 environmental management system standard at select facilities; the principles underlying this standard are being applied across our corporate real estate portfolio. BMO has also taken steps to implement elements of the LEED and BOMA certification standards, which is improving energy efficiency in our buildings.

PRODUCTS, SERVICES AND MARKETS

We recognize an opportunity to differentiate ourselves by developing new and innovative products and business services related to climate change, and by accessing new and emerging markets with financial solutions that can assist customers during their transition to a lower-carbon economy. Significant infrastructure investments will be required for this transition, including alternative power solutions, improvements to public transit infrastructure and retrofitting of existing infrastructure to make it more climate-resilient.

Our Sustainable Finance team is engaging with our customers and identifying market opportunities for sustainable finance products and services across BMO, so that we can meet our sustainable finance commitment. These opportunities are being addressed in the innovative approaches to responsible investing taken by BMO Global Asset Management (GAM), where we are leveraging our position as trusted advisors to help align customer investments with sustainable objectives, and in Capital Markets, where we have created a dedicated advisory capability that can support our clients in their work on sustainability. These efforts are supported by the Sustainability Office, which is organizing and guiding the growth of our sustainable finance business by identifying opportunities for green lending activity and improving internal processes for tracking and monitoring such investments.

BMO GAM is a signatory to the UN Principles for Responsible Investment. The identification of financially material environmental, social and governance (ESG) issues forms an integral part of its investment processes. It applies a tailored approach to ESG integration by investment strategy and asset class, to ensure that the additional analysis is relevant and meaningful to each investment process. BMO GAM also offers specific ESG Specialist Strategies Funds,

for which ESG considerations are a formal part of the investment mandate. Assets under management in these funds are US\$5.4 billion as at September 30, 2019. Many of the funds offer investors the opportunity to direct capital toward climate change solutions or lower-carbon assets. These offerings include the Climate Opportunity Partners private equity fund, which is entirely invested in solutions providers; green bond investment mandates; and a group of Responsible Funds.

BMO GAM also has in place a comprehensive global program of investor engagement, within which climate change is a key topic. This is discussed further below in the section on Risk Management. BMO GAM also offers this engagement expertise to third-party clients through the Responsible Engagement Overlay (*reo*[®]) service, which has assets under advice of US\$161 billion as at September 30, 2019.

Climate-Related Risks and Strategy

We recognize that climate change poses potential risks to our organization and our customers. Climate-related risks can be categorized as physical risks associated with the effects of a changing climate, and transition risks associated with the shift to a lower-carbon economy.

BMO's processes for identifying, assessing and managing climate-related risks are integrated into our enterprise-wide risk management framework. This framework, overseen by the CRO, assists BMO in managing its risk-taking activities and is anchored in the three-lines-of-defence approach to managing risk, as described in the Enterprise-Wide Risk Management section of our [2019 Annual Report to Shareholders](#). Our current approach to evaluating enterprise risk exposures implicitly includes certain types of transition risk and physical risk.

In 2019, BMO incorporated climate change into our enterprise-wide risk taxonomy as part of environmental and social risk. BMO is conducting further analysis to determine the magnitude and time horizon of these risks and their potential financial impact on BMO, including through the piloting of approaches to scenario analysis, discussed at page 8. BMO has also developed a qualitative risk appetite statement on environmental and social risk, including climate change.

IDENTIFYING AND ASSESSING CLIMATE-RELATED RISKS

To keep informed of emerging issues, BMO conducts independent research, participates in global forums with our peers, maintains an open dialogue with our internal and external stakeholders and monitors regulatory developments, emerging best practices and initiatives from non-regulatory international bodies. This helps us determine the scope and extent of existing and emerging climate-related risks. The inclusion of climate change in our enterprise risk taxonomy provides a basis for discussing and identifying the impacts of climate change on our operations and business activities.

To identify and assess climate-related risks arising from our customer relationships, we follow internal guidelines that outline the scope of environmental and social risk, and we establish procedures, including enhanced due diligence, to determine the extent of our exposure to any such risk. These include identifying and assessing our customers' climate change strategies and carbon mitigation plans, as well as the quality of their climate change disclosures and their readiness to respond to climate-related regulatory changes or reputation risk. We are also enhancing our environmental and social risk policy framework in order to improve our governance and management of climate-related risks and opportunities.

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 and social risk of transactions within its scope. We also apply environmental and social screening and assessment process to categorize and assess projects based on the magnitude of their potential impacts and risks, including climate change.

BMO's evolving climate change scenario analysis program will inform our process for climate-related risk identification and assessment going forward.

MANAGING CLIMATE-RELATED RISKS

We recognize that both physical and transition risks could heighten other key risk exposures that BMO faces. The Sustainability Office works with the lines of business and Corporate Support areas to develop, coordinate and maintain an enterprise-wide strategy that addresses our environmental and social responsibilities. To manage any related business risks, we work with these business partners, as well as external stakeholders, to better understand the impacts of our operations and financing decisions.

Credit and Counterparty Risk

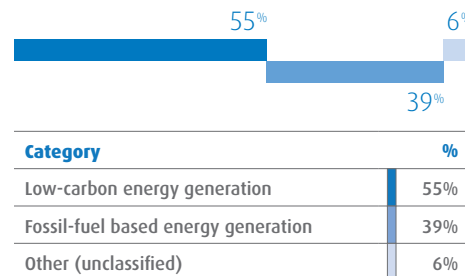
Climate-related risks could affect our exposure to credit and counterparty risk by impacting our customers' revenues or costs such that they may become unable to meet their financial commitments to BMO. Borrowers may face losses or increases in their operating costs as a result of acute or chronic changes in climate conditions and/or climate-related policies, such as carbon emissions pricing. Revenues may be affected by new and emerging technologies, which could disrupt the existing economic system

and displace demand for certain commodities, products and services.

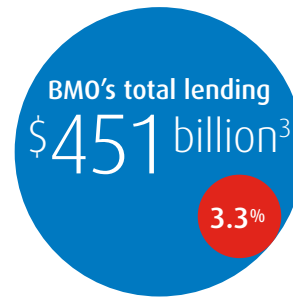
We have implemented financing guidelines to address environmental risks for specific lines of business, and we apply enhanced due diligence to transactions with customers operating in environmentally sensitive industries. This includes efforts to develop an understanding of borrowers' climate change adaptation and mitigation strategies.

To avoid overexposure to any one sector or geographic region that might be impacted by climate-related risks, BMO maintains a diverse lending portfolio. We have conducted a sector-specific analysis across our lending portfolio to assess our exposure to climate-sensitive industries. The results of this analysis are disclosed below. We have determined that our lending in support of carbon-related assets in 2019 was approximately \$14.7 billion and represented 3.3% of our total lending portfolio¹. We have also analyzed our power generation portfolio and determined that approximately 55% of lending is to low-carbon energy generation². The results of this analysis are disclosed below.

BMO's Lending to Power Generation², as at October 31, 2019



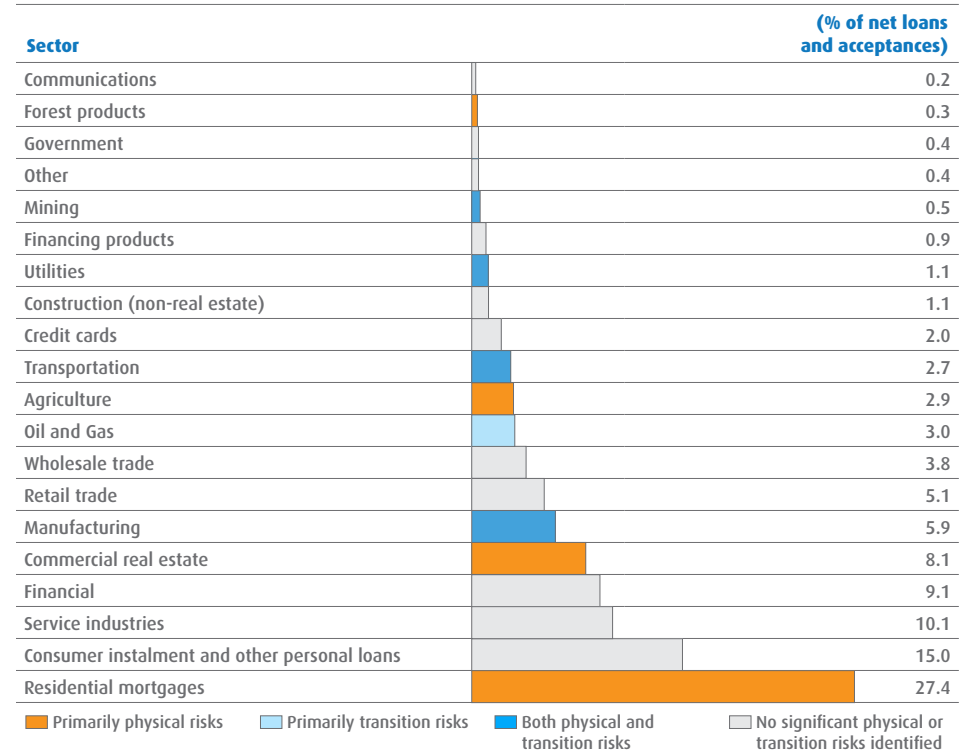
Lending to Carbon-Related Assets



3.3% of BMO's total loan portfolio is tied to carbon-related assets

³ Total loans and acceptances, net of allowance for credit losses on impaired loans.

Sensitivity to Climate Risk of BMO Lending Exposures, as at October 31, 2019



¹ Carbon-related assets are measured as the value of net loans and acceptances connected to the energy and utilities sectors, excluding water utilities, independent power producers, electricity transmission and distribution companies, renewable electricity producers, and nuclear electricity producers. The amount is reported as at October 31, 2019, and is expressed as a percentage of total net loans and acceptances.

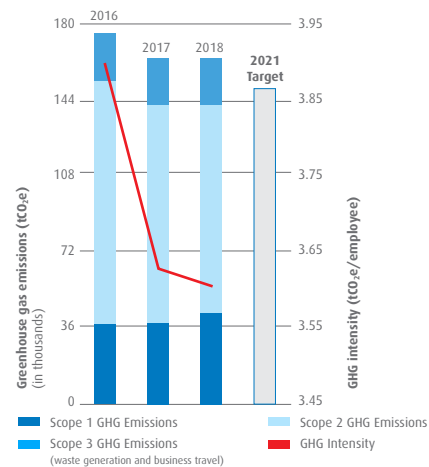
² Power generation is a subset of utilities, excluding water utilities, independent power producers, and electricity transmission and distribution companies. The share of low-carbon energy generation is calculated on a client-by-client basis using the most recently publicly available information on energy source.

Operational Risk

Our exposure to many types of operational risk could be heightened by climate-related physical and transition risks. For example, changes in climate patterns and climate-related policies may result in increases in the operating and capital costs associated with the energy and equipment used to heat, cool and power our facilities. BMO's Sustainability Office also works with Risk and the Corporate Real Estate group to manage operational risks arising from climate change. This includes establishing and maintaining an operational environmental management system that is aligned with the framework set out in ISO 14001, as well as setting objectives and targets that align BMO's operations with its [Environmental Policy](#), which includes greenhouse gas (GHG) emission reduction targets. We also monitor the regulatory landscape for new fuel or 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 have set a goal of maintaining BMO's carbon-neutral status, which was first achieved in 2010. Our carbon neutral strategy involves a three-pronged approach that includes promoting energy efficiency and limiting emissions, purchasing electricity from renewable sources and purchasing high-quality offsets¹. We track and analyze our Scope 1 and 2 GHG emissions, as well as our Scope 3 GHG emissions associated with waste generation and business travel. BMO has set and achieved three successive multi-year enterprise emission reduction targets since 2008. Our current target is to achieve a 15% reduction in absolute GHG emissions by the end of fiscal 2021, relative to our fiscal 2016 baseline. We plan to accomplish this by investing in energy-saving initiatives, such as lighting retrofits, heating and cooling infrastructure upgrades and building envelope improvements. At the end of fiscal 2018, we had achieved a reduction of 6.06% relative to our fiscal 2016 baseline, demonstrating good progress toward achieving our target. We are investigating setting science-based emission reduction targets for the future.

BMO's Greenhouse Gas Emissions Performance



¹ Information on BMO's carbon-neutral strategy is available on our [website](#).

Changing climate patterns and climate-related policies may also affect the operating and capital costs of our suppliers. Suppliers may choose to pass these costs on to their customers, which could result in higher purchasing costs for BMO. BMO is developing a Sustainable Procurement program that will consider current and future suppliers' sustainability performance and risk management, including risks related to climate change.

Legal and Regulatory Risk

Legal and regulatory risk could arise from BMO's actions, or alleged lack of action, in relation to climate change, our climate change disclosures, or our customers' activities. BMO monitors legal risks associated with climate change as part of our overall risk assessment of operational, business and reputation risks.

Reputation Risk

Reputation risk could arise from BMO's perceived actions, or perceived lack of action, in relation to climate change, our climate change disclosures, or our customers' activities. BMO monitors reputation risks associated with climate change as part of our overall risk assessment of operational and business risks. Climate-related reputation risks are addressed within the scope of our reputation risk management framework, in which the CSO plays an advisory role. The framework is overseen by BMO's Reputation Risk Management Committee.

Market Risk

Market risk could be affected by the impact of transition and physical risks on market conditions, including equity and commodity prices, which could increase the risk of losses in our trading and underwriting portfolios. Any adverse impacts would be captured and mitigated by the existing limit monitoring processes and risk management framework.

BMO GAM considers climate change to be an investment risk within its approach to ESG integration. This is discussed further below in the section on Risks to BMO's Investment Activity.

Insurance Risk

Insurance risk could arise as a result of the physical effects of climate change that could affect BMO's insurance business. BMO has short-term insurance risk exposures, and we regularly monitor market conditions and climate change hazards to mitigate this risk. Reinsurance transactions that transfer insurance risk from BMO Insurance to independent reinsurance companies are also used to mitigate our exposure to insurance risk by diversifying risk and limiting claims. Our reinsurance business, in turn, assumes property catastrophe and other reinsurance risks from independent reinsurers in various jurisdictions worldwide in order to diversify our geographic reinsurance exposures in accordance with our BMO Insurance risk management framework. BMO Insurance will be exiting the P&C Reinsurance market with the last treaty expiring in March 2021. However, catastrophic risk will remain until all outstanding claims are settled and paid.

Strategic Risk

Social and political reactions to climate-related issues could affect our exposure to strategic risk by limiting or expanding external business opportunities. In response, we are developing sustainable finance products and services, including responsible banking and responsible lending programs.

Risks to BMO's Investment Activity

Within our asset management business, BMO GAM integrates considerations of climate-related risk into investment processes by specific asset class. Examples include:

Asset Class	Risk Management Activities
Equities and Fixed Income	BMO's ESG portfolio analytics tools help fund managers flag companies as highly exposed to climate risk based on their emissions performance relative to their sector average. Fund managers work with the Responsible Investing team to understand the drivers of emissions performance and the strategies that companies are taking to mitigate this risk. We are also assessing physical risks for investee companies in certain sectors. For example, BMO GAM has engaged companies in the food and beverage industry on water risk management.
Green Bonds	BMO GAM oversees green bond mandates for individual institutional clients, and also invests in green bonds under our Responsible Sterling and Euro Bond strategies. We have a comprehensive in-house assessment process to screen bonds and ensure they meet our standards.
Sovereign Debt	BMO GAM's country-level ESG tool includes data on environmental risks, including indicators drawn from Yale University's Environmental Performance Index.
Property	BMO Real Estate Partners has a Responsible Property Investment strategy that considers environmental issues in relation to both existing assets and assets at the due diligence stage, and includes an assessment of how energy efficiency is factored into property management and refurbishment.

BMO GAM has a comprehensive global program of investor engagement that dates back nearly twenty years. Climate change is one of the core priorities of this engagement, and the Responsible Investment team has five members working on climate change engagement, as well as a water management expert. In 2019, we engaged with 126 companies on the topic of climate change.

Our ESG Viewpoint, "Climate change engagement: a framework for the future," sets out our expectations of investee companies, which are closely aligned with those of the TCFD.

At BMO GAM, we engage both one-on-one and through the Climate Action 100+ initiative, through which we lead on engagement with six companies and collaborate on engagement with several more. Our engagement also involves sectors beyond the mandate of Climate Action 100+, and in 2019 included a focus on banks in the Association of Southeast Asian Nations (ASEAN) region that are exposed to risk through their lending.

SCENARIO ANALYSIS

BMO is establishing a climate change scenario analysis program, in line with the TCFD recommendations. In 2019, we applied leading scenario analysis methodologies in a pilot project to test the resilience of a selection of upstream oil and gas counterparties to the impacts of climate transition scenarios. BMO's lending to the oil and gas sector is approximately \$13.4 billion, or 3.0% of our total lending portfolio.

We considered both a short-term disorderly scenario and a long-term orderly climate transition scenario. In the disorderly scenario, a carbon tax is implemented over a short timeframe. The orderly scenario was developed using the REMIND 2°C model, in which a carbon tax is implemented gradually.

The short-term scenario reflects a disorderly transition to a lower-carbon economy and assessed the impact of a carbon tax of \$25, \$50 and \$100 per tonne, implemented over three years. The long-term scenario looks ahead to 2040 and reflects a more orderly transition, in which a carbon tax is implemented gradually. Results of the analysis have been reported to the Sustainability Council.

BMO's Scenario Analysis Pilot	
Transition risks included	Policy, technology, market
Climate scenarios assessed	Disorderly transition – carbon tax implemented over a short term Orderly transition – REMIND 2°C model
Business segment	Capital Markets
Lending portfolio	Selection of upstream oil & gas borrowers
Time horizon	Short-term: 2021 Long-term: 2040
Climate risk metrics	Scenario-adjusted risk rating and probability of default

We are building an internal capacity at BMO to conduct climate change scenario analysis enterprise-wide. As we refine our methodology, we plan to expand the approach to other types of climate-related risk and other sectors of our lending portfolio, starting with the sectors that are particularly sensitive to climate-related risks. These efforts will help us identify potential material financial risks, and will inform our business strategy in relation to climate change going forward.

Convening and Catalyzing

BMO is committed to playing a role as a convener and catalyst in mobilizing action that can effectively address the challenges posed by climate change. We are actively participating in the following initiatives, working groups and multi-stakeholder partnerships. These collaborations support the development of climate change knowledge and expertise, including a better understanding of the risks and opportunities related to climate change and the transition to a lower-carbon economy.

To advance this work, BMO is participating in Phase 2 of the United Nations Environment Programme – Finance Initiative (UNEP-FI) climate-related scenario analysis pilot, and has joined industry working groups to advance methodologies and innovative approaches to identifying and managing climate-related risks.

BMO GAM has also been looking at scenario analysis from the point of view of an asset manager. In 2018, we co-led a collaboration by the Institutional Investors Group on Climate Change, which considered the implementation of scenario analysis by asset owners and managers. In 2019, BMO GAM began to work on developing an understanding of how scenario analysis could be applied within its investment management processes, involving members of our Responsible Investment team, Investment Risk Oversight team, Fiduciary and Solutions teams and Fundamental Equity and Credit teams. This work is ongoing, and we will report on our progress.

Initiative	Key Area of Focus
Equator Principles	BMO has been a signatory to the Equator Principles since 2005 and represents North America on the Equator Principles Steering Committee.
Institutional Investors Group on Climate Change	BMO GAM is a member of this collaborative platform, which encourages the adoption of public policies, investment practices and corporate behaviour that address the long-term risks and opportunities associated with climate change.
Climate Action 100+	BMO GAM was one of the founding members of this US\$34 trillion global investor engagement collaboration, which is working to ensure that the world's largest corporate greenhouse gas emitters take necessary action on climate change.
Transition Pathway Initiative	BMO GAM supports the Transition Pathway Initiative, which assesses the state of companies' preparedness for the transition to a lower-carbon economy.
Investor Statement on Just Transition	BMO GAM supports the 2019 Statement of Investor Commitment to Support a Just Transition on Climate Change, which commits investors to consider the social aspects of the transition to a lower-carbon economy.
Government of Canada Expert Panel on Sustainable Finance	In 2019, the Government of Canada's Expert Panel on Sustainable Finance released its final report on sustainable finance in Canada. BMO supports the panel's recommendations, and directly engaged with, and provided feedback to, the members of the expert panel as they developed those recommendations.
UNEP-FI TCFD Pilot Project for Banks – Phase 2	BMO is participating in Phase 2 of the UNEP-FI TCFD Banking Pilot to enhance our TCFD implementation. The pilot aims to broaden and expand the group of participating banks and external partners, enhance the existing TCFD toolkit (including scenarios, data and methodology, reporting and governance), and establish UNEP-FI's leadership position as an essential platform for advice and dialogue.
Canadian Bankers Association – TCFD Working Group	BMO is participating in a forum for the industry to develop, share and disseminate best practices on climate-related disclosures that align with the recommendations of the TCFD.
ISO Technical Committee 207/ Sub-committee 1 on Standardization in the Field of Environmental Management Systems	A member of BMO's Sustainability team is the Head of the Canadian Delegation and the Chair of Canada's Mirror Committee to ISO's Technical Committee 207/Sub-committee 1 on Environmental Management Systems, which is focused on developing standards-based tools in support of sustainability.
ISO Technical Committee 322 on Standardization in the Field of Sustainable Finance	A member of BMO's Sustainability team was selected by the International Chair of ISO's Technical Committee on Environmental Management as one of two experts to represent over 80 countries at the inaugural meeting of ISO/TC 322 on Standardization in the Field of Sustainable Finance. Its program of work will promote the integration of environmental, social and governance practices into institutional investment decision-making and wider finance management.
Canadian Standards Association – Technical Committee on Green and Transition Finance in Canada	BMO is participating in a Canadian Technical Committee to develop a National Standard of Canada for Green and Transition Finance.
CDP Financial Services Sector Technical Working Group	BMO is participating in a Technical Working Group to finalize the development of a new financial services sector reporting framework that is aligned with TCFD recommendations.

Metrics and Targets

In assessing our approach to climate-related risks and opportunities, BMO tracks the following metrics.

Climate-Related Metrics and Targets

Metric	2019	2018	2017	2016	
Managing climate-related risks					
Lending to carbon-related assets (% of total assets) ¹	3.3	N/A	N/A	N/A	
Capturing climate-related opportunities					
Renewable energy – participation in equity and debt financing (\$ billions) [▲]	7.9	6.8	6.4	2.4	
Renewable energy – loan commitments (\$ billions) [▲]	4.2	3.9	4.2	3.6	
Sustainable bond underwriting (US\$ billions)	9.4	6.3	N/A	N/A	
Maintaining carbon neutrality					Target
Scope 1 GHG emissions (tCO ₂ e)	TBD ²	42,883	38,065	37,837	15% reduction by 2021 vs. 2016
Scope 2 GHG emissions (tCO ₂ e)	TBD ²	99,062	103,350	115,334	
Scope 3 GHG emissions ³ (tCO ₂ e)	TBD ²	21,391	21,834	22,097	
Use of procured renewable electricity (MWh)	TBD ²	149,199	158,749	115,138	90% of Scope 2 emissions ⁴

▲ 2019 data for this metric has been externally assured.

¹ Carbon-related assets are measured as the value of net loans and acceptances connected to the energy and utilities sectors, excluding water utilities, independent power producers, electricity transmission and distribution companies, renewable electricity producers, and nuclear electricity producers. The amount is reported as at October 31, 2019, and is expressed as a percentage of total net loans and acceptances.

² Available online in June 2020 at: [Environmental Performance](#)

³ Scope 3 emissions include indirect GHG emissions from employee business travel in non-company owned assets and the solid waste sent to municipal landfills (North America only).

⁴ Target to offset 90% of Scope 2 location-based emissions through the purchase of renewable energy certificates each year.

Additionally, as part of BMO GAM's ESG integration approach, we monitor the portfolio-weighted carbon intensity of our portfolios within our key fundamental equity and fixed income strategies. We have published this data for some of our specialist ESG strategies including our [Responsible Global Equity](#), [Responsible Global Emerging Markets Equity](#) and [Responsible Euro Corporate Bond](#) funds.

Environmental Performance: <https://corporate-responsibility.bmo.com/our-practices/environmental-stewardship/enviro-targets-performances/>

Responsible Global Equity: www.bmogam.com/gb-en/intermediary/wp-content/uploads/2019/05/bmo-responsible-global-equity-strategy-esg-profile-and-impact-report-2019.pdf

Responsible Emerging Markets Equity: www.bmogam.com/gb-en/intermediary/wp-content/uploads/2019/06/bmo-responsible-global-emerging-markets-equity-strategy-esg-profile-and-impact-report-2019.pdf

Responsible Euro Bond funds: www.bmogam.com/gb-en/intermediary/wp-content/uploads/2019/08/impact-summary-responsible-euro-corporate-bond-fund.pdf