

BMO Financial Group

# 2020 Climate Report



## Our Approach to Climate Change

In 2020, BMO continued to focus on innovative approaches to managing climate-related financial risks and opportunities. We expanded our work on climate-related scenario analysis and enhanced our capabilities to embed this analysis into our broader risk management approach. We have partnered with our customers to build innovative sustainable finance products to support them during the transition to a net zero economy.

Current State		Future Goals
GOVERNANCE	<ul style="list-style-type: none"><li>• <b>Board:</b> Audit and Conduct Review Committee; Risk Review Committee</li><li>• <b>Management committees:</b> Sustainability Council; Sustainable Finance Steering Committee; Sustainable Bonds Working Group; Disclosure Committee; Risk Management Committee; Global Investment Committee</li></ul>	<ul style="list-style-type: none"><li>• Engage with boards more frequently on risks and opportunities related to climate change</li><li>• Build capacity and strengthen climate change risk management governance</li></ul>
STRATEGY	<ul style="list-style-type: none"><li>• Developing innovative sustainable finance products and making progress toward our goal to mobilize \$400 billion for sustainable finance by 2025</li><li>• Actively contributing to development of climate change knowledge and methodologies for financial institutions</li></ul>	<ul style="list-style-type: none"><li>• Advance sustainable finance strategy with our clients and industry peers</li><li>• Build capacity on climate risk analysis and embed results into long-term strategy and goal setting where feasible</li><li>• Expand climate-related scenario analysis work and capabilities</li></ul>
RISK MANAGEMENT	<ul style="list-style-type: none"><li>• Integrating climate risk analysis into risk frameworks</li><li>• Climate-related risk is an engagement priority for asset management</li></ul>	<ul style="list-style-type: none"><li>• Continue to develop environmental and social risk frameworks, including climate-related risks</li></ul>
METRICS AND TARGETS	<div><div><ul style="list-style-type: none"><li>• Carbon neutral in our operations since 2010</li><li>• 100% renewable electricity in 2020</li><li>• Surpassed goal to align \$250 billion in client investments with sustainable objectives</li><li>• Achieved 71% of goal to mobilize \$150 billion in capital to companies pursuing sustainable outcomes, 43% of which is green finance</li><li>• Tracking carbon-related assets in lending portfolio and explored methodologies to measure carbon intensity of lending portfolio</li><li>• Tracking Scope 1, Scope 2 and some Scope 3 emissions, including supply chain 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## Special Supplement

### 2020 Climate Report

The events of 2020 have placed a spotlight on the resilience of our economies and the livability, workability and inclusivity of our societies. At BMO, we recognize that climate change is a challenging issue that presents a test of resilience and requires us to anticipate risks and capture opportunities.

BMO has supported the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) since 2018. We have been working to implement the TCFD's recommendations and develop programs, approaches and disclosures that align with the TCFD framework. We are focused on the opportunities that the transition to a net zero carbon economy presents, for both our business and our customers. In 2020, we made significant progress on developing our sustainable finance capabilities and partnered with our customers on innovative sustainable finance products to support them during this transition. We also enhanced our approach to managing climate-related financial risk, including expanding our climate-related scenario analysis capabilities and building our capacity to embed such analyses into our broader risk management approach.

This report describes our approach to measuring and managing climate-related impacts and highlights the milestones we achieved in 2020. It is intended to provide investors and other stakeholders with information on the climate-related risks and opportunities we face, and on our strategies for managing risks and capturing opportunities.



## 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 experience<sup>1</sup>. BMO introduced climate change risk and disclosure training for its Board of Directors in 2018. This training is available to all current and new Board members, including members of subsidiary boards.

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 regularly 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 Risk Review Committee (RRC) of the Board of Directors 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. The RRC also reviews revisions to the Risk Appetite Framework, including the addition of a qualitative statement referencing climate change in 2020. The RRC meets eight times annually.

### 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 is comprised of senior leaders from across the organization. The Sustainability Council supports and advises on the implementation of BMO's sustainability strategy, and meets quarterly to discuss sustainability topics, including risks, opportunities and disclosures related to climate change. Climate-related topics discussed during 2020 included the enhancement of BMO's environmental and social risk framework, an introduction to the concept of a Just Transition, BMO's 100% renewable energy commitment, physical climate risk and response, financed emissions and how investors can align to the goals of the Paris Agreement.

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 policies, governance mechanisms and strategies to manage climate-related risks and opportunities; providing advisory support to operating groups on identifying, managing, measuring, monitoring and reporting on climate risk associated with our clients and transactions; and producing and publishing climate-related disclosures.

BMO's Risk Management Committee (RMC) is our management's senior risk committee. It reviews and discusses significant risk issues and action plans that arise in executing our enterprise-wide strategy. The RMC provides risk oversight and governance at the highest levels of management. It is chaired by the Chief Risk Officer (CRO) and its members include the CEO, heads of our operating groups, and the Chief Financial Officer.

BMO's CRO reports directly to the CEO and 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. He reports annually to the RRC on the effectiveness of BMO's governance of climate risk, and ensures that BMO's climate risk exposure remains within our risk appetite. Enterprise Risk and Portfolio Management (ERPM) provides risk management oversight, supporting a disciplined approach to risk-taking in 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 in order to identify potential risks in BMO's lending portfolio.

ERPM and the Sustainability Office collaborate on advancing BMO's program for managing climate-related risk across our lines of business. In 2020, the two teams worked together to enhance our environmental and social risk framework, including identifying, mitigating, managing, measuring and monitoring climate-related risks. A working group comprised of individuals from across our footprint – from Sustainability, ERPM (including risk governance, credit risk, operational risk, and stress testing) and BMO Global Asset Management (GAM) – works to ensure a consistent response to evolving international standards and regulations.

<sup>1</sup> Information on the skills and experience of our directors can be found in our [2020 Management Proxy Circular](#).

2020 Management Proxy Circular: [www.bmo.com/home/about/banking/investor-relations/annual-reports-proxy-circulars](http://www.bmo.com/home/about/banking/investor-relations/annual-reports-proxy-circulars)

In 2019, BMO responded to the U.K. Prudential Regulation Authority (PRA) Supervisory Statement on Enhancing Banks' and Insurers' Approaches to Managing the Financial Risks from Climate Change by assigning senior management function accountability for climate change to the CRO, Europe. We are on track in implementing our plan to meet the PRA requirements. In 2020, we included climate change in our risk taxonomy and risk appetite statement. We are currently in the process of conducting scenario analysis for our London portfolio.

To better capture opportunities associated with sustainable finance, we established a Sustainable Finance team in 2019 that is supported by BMO's Sustainability Office and works across the Enterprise to grow and innovate our sustainable finance products and services. The team is responsible for mobilizing sustainable finance opportunities with customers across all lines of business. It includes sustainable finance specialists who are responsible for building customer engagement and identifying market opportunities for products and services as the sustainable finance market grows. We have established 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. The GIC has responsibility for the final approval of all responsible investment policies.

### Climate-Related Opportunities and Strategy

At BMO, we recognize that the transition to a net zero 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 support of 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 net zero carbon economy and we believe this transition will present opportunities, from gains in efficiency to evolving customer demands for sustainable finance and transition finance products. 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 commitments to operational sustainability and sustainable finance are focused responses to this transition.

We recognize an opportunity to differentiate ourselves by developing innovative new products and business services related to climate change, and by accessing new markets with financial solutions that can assist customers during their transition to a net zero carbon economy.

Our Sustainable Finance team is engaging with our customers in order to identify market opportunities for sustainable finance products and services across BMO. We have committed to mobilizing \$400 billion for sustainable finance by 2025, including \$250 billion in client investments to align with sustainable objectives and \$150 billion in capital to companies pursuing sustainable outcomes. Client investments include, among others, innovative approaches to responsible investing taken by BMO GAM to help align customer investments with sustainable objectives. BMO Capital Markets has underwritten significant amounts of sustainable debt and also created a dedicated advisory capability to support our clients in their work on sustainability. These efforts are supported by the Sustainability Office, which guides the growth of our sustainable finance business by identifying opportunities for green lending activity and developing internal processes for tracking and monitoring these investments.

In 2020, we surpassed our goal to mobilize \$250 billion in client investments to align with sustainable objectives, reaching \$444.8 billion at year-end. BMO GAM's comprehensive global investor engagement program, described in more detail below in the section on Risk Management, includes climate change as a key topic. BMO GAM's Responsible Engagement Overlay (*reo*®) service, which provides institutional investors access to BMO GAM's engagement and voting expertise, experienced significant growth in 2020, with assets under advice reaching \$433.9 billion as at September 30, 2020.

BMO GAM is a founding signatory to the UN Principles for Responsible Investment, so the identification of financially material Environmental, Social and Governance (ESG) issues is an integral part of its investment processes. BMO GAM applies an approach to ESG integration that is tailored 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 strategies, for which ESG considerations are a formal part of the investment mandate. Assets under management in these funds totalled \$9.1 billion as at September 30, 2020. 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's Sustainable Finance team also experienced significant growth in 2020, achieving 71% of our goal to mobilize \$150 billion in capital to companies pursuing sustainable outcomes. 43% of the \$106.9 billion in capital provided since the beginning of fiscal 2019 included transactions that enable the transition to a lower-carbon economy. For example, BMO was the sustainability structuring agent and sole bookrunner providing Maple Leaf Foods with the first sustainability-linked loan in Canada. This \$2 billion credit facility allows for an interest rate margin reduction if Maple Leaf Foods achieves predetermined sustainability targets related to electricity use, water use, solid waste and carbon neutrality. We were also the sustainability structuring agent and lead arranger on a sustainability-linked reserve-based lending facility for a northern Europe-based exploration and production borrower. This facility was more than US\$3 billion and included environmental targets that, if met, would allow for an interest rate margin reduction on the drawn spread. BMO Capital Markets also underwrote \$42.7 billion of sustainable bonds in fiscal 2020, which included several green bonds, with proceeds used to support renewable energy and energy efficiency projects, green buildings, pollution prevention, and more.

## Climate-Related Risks and Strategy

We recognize that climate change poses potential risks to our organization, our customers and the communities where we operate. 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 net zero carbon economy.

BMO's Risk Management Framework (RMF) guides our risk-taking activities in order to align them with our risk appetite, client needs, shareholder expectations and regulatory requirements. The RMF provides for the direct management of each individual risk type, as well as the management of risks on an integrated basis. The RMF is overseen by the CRO. It guides and is anchored in the three-lines-of-defence approach to managing risk, as described in the Enterprise-Wide Risk Management section of our [2020 Annual Report to Shareholders](#). Our approach to evaluating risk exposures includes climate-related transition risks and physical risks.

## IDENTIFYING AND ASSESSING CLIMATE-RELATED RISKS

In 2020, we incorporated specific climate considerations as part of our enhanced environmental and social risk framework. Climate-related risk has been identified as a material risk and is included in our enterprise-wide risk taxonomy as a subset of environmental and social risk. We have established processes to measure and manage this risk and we continue to analyze the magnitude, time horizon and potential financial and non-financial impact. For instance, we have expanded our climate change scenario analysis capabilities, discussed on page 10, and developed a qualitative risk appetite statement on environmental and social risk, including climate change.

To identify and assess specific climate-related risks arising from our customer relationships, we follow internal guidelines that outline the scope of environmental and social risk, and 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 implementing an enhanced environmental and social risk policy framework in order to improve our governance and management of climate-related risks.

To keep informed of evolving practices related to climate-related risk, 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, best practices and initiatives from non-regulatory international bodies.

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. As a member of the Equator Principles Steering Committee, BMO actively contributed to the evolution of the Equator Principles and the release of EP4 in 2019. We are implementing the EP4 framework, which includes more stringent requirements related to climate change for in-scope transactions and in 2020 we conducted training on the new framework for our Capital Markets team. We also apply an 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.

Going forward, BMO's evolving climate change scenario analysis work will inform our process for climate-related risk assessment.

## 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, Risk Management, and others, 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.

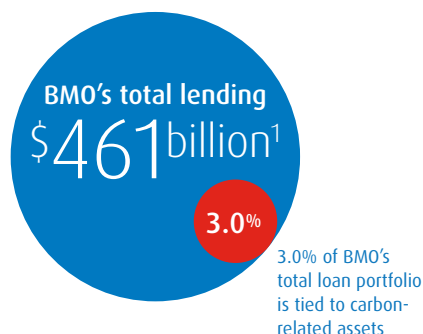
### Credit and Counterparty Risk

Climate-related risks could affect our exposure to credit and counterparty risk by impacting our customers' revenues, costs, or access to capital 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, and we apply enhanced due diligence to transactions with customers operating in higher risk sectors. Our Environmental and Social Risk Financing Guideline includes direction on how to develop an understanding of specific climate change impacts on the borrower and its operations, including regulatory and/or legislative changes. This includes efforts to develop an understanding of borrowers' climate change adaptation and mitigation strategies.

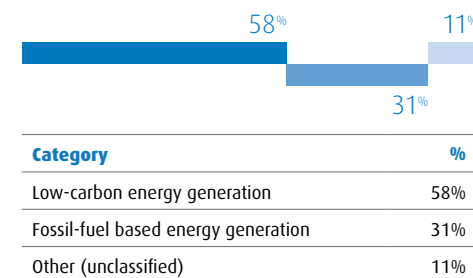
To avoid overexposure to any one sector or geographic region that might be impacted by climate-related risks, BMO maintains a diverse lending portfolio. We have conducted a sector-specific analysis across our lending portfolio to assess our exposure to climate-sensitive industries. In 2020, our lending in support of carbon-related assets was approximately \$13.7 billion and represented 3.0% of our total lending portfolio<sup>1</sup>. In our power generation portfolio, approximately 58% of lending was to low-carbon energy generation assets<sup>2</sup>. The results of these analyses, shown below, will inform the development of our climate risk program going forward, including our prioritization of sectors in which to pilot scenario analysis methodologies.

## Lending to Carbon-Related Assets

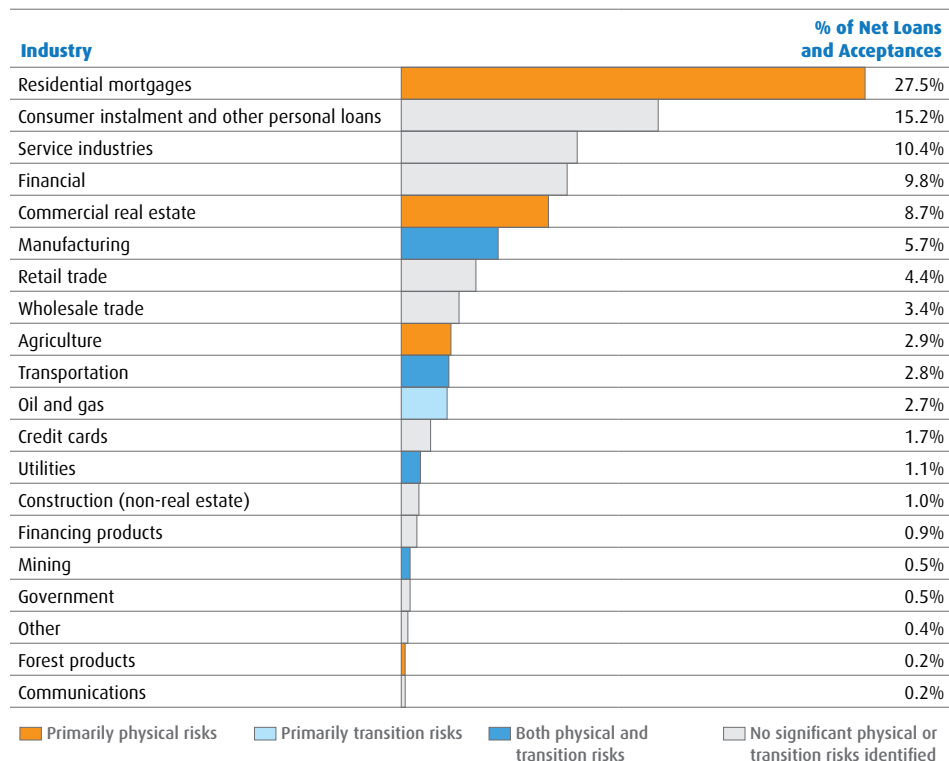


<sup>1</sup> Total loans and acceptances, net of allowance for credit losses on impaired loans.

## BMO's Lending to Power Generation, as at October 31, 2020



## Sensitivity to Climate Risk of BMO Lending Exposures, as at October 31, 2020



<sup>1</sup> 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, 2020, and is expressed as a percentage of total loans and acceptances, net of allowance for credit losses on impaired loans.

<sup>2</sup> Power generation is a subset of utilities that excludes 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 sources.

BMO is aware of industry initiatives to develop additional measures of portfolio climate-related impacts, including emissions associated with lending and underwriting activities, or financed emissions. At the time this report was published, no globally accepted methodology for measuring financed emissions had been established. The topic is a subject of internal research and evaluation, and in 2020, we began to implement leading methodologies to estimate the GHG emissions associated with our lending activity. We calculated the weighted average carbon intensity of our lending activity as a first step to better understanding our financed emissions and our exposure to carbon-intensive companies.

We will continue to assess the credibility, reliability, comparability and decision usefulness of approaches to quantifying Scope 3 emissions such as those proposed by the Partnership for Carbon Accounting Financials (PCAF) and the Science-Based Targets initiative (SBTi), and how they could be incorporated into our climate risk management processes and disclosures.

### Operational Risk

BMO is committed to reducing the environmental impact of our operational activities by managing our use of energy, transportation and water, as well as our material consumption, waste and emissions. Our exposure to operational risks related to our use of resources 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 works with Corporate Real Estate to assess these risks. We maintain an operational environmental management system that is aligned with the principles of ISO 14001 and we are committed to continuously improving our environmental management system, including by setting objectives and targets that align BMO's operations with its [Environmental Policy](#), and reporting on our progress. In 2020, we developed sustainable

design and construction guidelines that include energy intensity performance specifications for office and retail construction and renovation projects. These guidelines reflect industry best practices developed by the U.S. and Canada Green Building Councils, the International WELL Building Institute and other organizations. By implementing elements of the Leadership in Energy and Environmental Design (LEED) and WELL standards, we increase the energy efficiency of our buildings. We maintain ISO 14001 certification at two office buildings in Canada and two in the United Kingdom, and we have achieved Leadership in Energy and Environmental Design (LEED) certification at nine locations globally.

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.

BMO first achieved carbon neutral status in our operations in 2010 and we have continued to maintain carbon neutrality each year. Our carbon neutral strategy is based on a three-pronged approach that includes promoting energy efficiency and limiting emissions, purchasing electricity from renewable sources and purchasing high-quality carbon offsets<sup>1</sup>. In 2020, we set and met a goal to match 100% of our global electricity usage with electricity procured from renewable sources, including investing in renewable energy certificates that will enable the generation of approximately 400,000 MWh of renewable electricity each year. This helps to clean the electrical grids where we operate while investing in the renewable energy market and creating demand to stimulate its growth.

We track and analyze our Scope 1 and 2 GHG emissions and our Scope 3 GHG emissions associated with waste generation, business travel and purchased goods and services. BMO has set and achieved three successive multi-year enterprise-wide 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 are making progress toward this target by investing in energy-saving initiatives such as lighting retrofits, heating and cooling infrastructure upgrades, and building envelope improvements. At the end of fiscal 2019, we had achieved a reduction of 8.7% relative to our fiscal 2016 baseline, demonstrating good progress toward achieving our target. We are investigating setting further science-based emission reduction targets in the future.

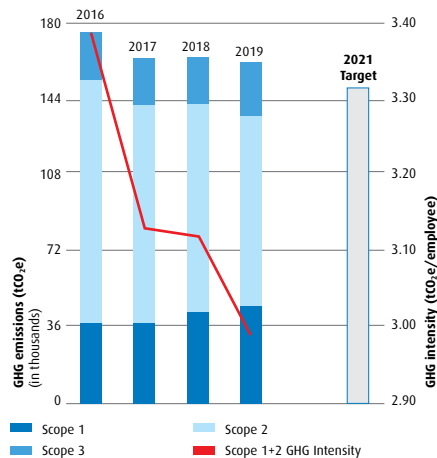
Facility	Certification
BMO executive offices – First Canadian Place, Toronto, ON	LEED Gold – Existing Buildings Operation and Maintenance
BMO branch – 9630 Macleod Trail SE, Calgary, AB	LEED Silver – New Construction
BMO branch – 5111 New Street, Burlington, ON	LEED Certified – Core and Shell
BMO branch – 1454 Merivale Road, Ottawa, ON	LEED Silver – New Construction
BMO branch – 105 Clair Road E, Guelph, ON	LEED Silver – New Construction
BMO branch – 631-645 Commissioners Road E, London, ON	LEED Silver – New Construction
BMO customer contact facility – Mississauga, ON	LEED Gold – Core and Shell
BMO Harris branch – 12920 S Route 47, Huntley, IL	LEED Silver – New Construction
BMO Harris branch – 15450 W National Avenue, New Berlin, WI	LEED Silver – New Construction

**Environmental Policy:** [corporate-responsibility.bmo.com/our-practices/environmental-stewardship/environmental-policy-and-approach/](https://corporate-responsibility.bmo.com/our-practices/environmental-stewardship/environmental-policy-and-approach/)  
**Website:** <https://corporate-responsibility.bmo.com/our-practices/environmental-stewardship/>

<sup>1</sup> Information on BMO's carbon neutral strategy is available on our [website](#).



## BMO's Greenhouse Gas Emissions Performance



Physical risks from environmental events, such as droughts, floods, wildfires, earthquakes, and hurricanes and other storms could also potentially disrupt our operations, impact our customers or counterparties, and result in lower earnings and higher losses. Our business continuity management preparations provide us with the capability to restore, maintain and manage critical operations and processes in the event of a business disruption.

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. Consistent with our Supplier Code of Conduct, BMO is developing a Sustainable Procurement program that considers current and future suppliers' sustainability performance and risk management, including risks related to climate change. In 2020, we conducted an analysis to estimate the GHG emissions embedded in our supply chain, identified as Scope 3 category 1 emissions from purchased goods and services in the GHG Protocol. This information enabled us to set a baseline and identify carbon hot spots in our supply chain, and will also inform the development of our sustainable procurement program. We also joined CDP Supply Chain to help us better understand the environmental impact of our procurement activities and to provide a platform for engaging with strategic suppliers on climate-related risks and opportunities.

In 2020, in line with our goal to divert waste from landfill and work toward a sustainable economy, we partnered with the Recycling Council of Ontario to develop an enterprise-wide strategy to eliminate plastic waste in our operations.



### 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	<p>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.</p> <p>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.</p>
Green Bonds	<p>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.</p>
Sovereign Debt	<p>BMO GAM's country-level ESG tool includes data on environmental risks, including indicators drawn from Yale University's Environmental Performance Index.</p>
Property	<p>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.</p>

BMO GAM has a comprehensive global investor engagement program that dates back nearly 20 years. Climate change is one of the core priorities of this engagement, and the Responsible Investment team has five members who are working on climate change engagement, as well as a water management expert. In 2020, we engaged with approximately 60 companies on the topic of climate change.



Our ESG Viewpoint, [Climate change engagement: a framework for the future](#), outlines our expectations of investee companies, which are 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+.



## SCENARIO ANALYSIS ON BMO'S LENDING

BMO has undertaken climate change scenario analysis to explore climate vulnerabilities in order to enhance our resilience to climate-related risks. In 2020, we continued to expand our scenario analysis work, evaluating both physical and transition risks for a selection of climate-sensitive lending portfolios.

Our 2020 scenario analysis activities build on a pilot conducted in 2019 that focused on upstream oil and gas counterparties. We are improving our capabilities to conduct climate change scenario analysis enterprise-wide and developing an approach to climate risk stress-testing that is consistent with our broader risk management approach and that can be replicated for other sectors in our portfolio. In 2020, we tested this approach on our commercial real estate and agriculture portfolios. These were selected for their contribution to our overall lending activity (\$40.0 billion and \$13.5 billion, respectively, jointly amounting to 11.6% of our total lending portfolio in 2020). We evaluated the potential impact of both physical and transition risks under a range of scenarios, as shown in the table below. We also continue to develop our approach to scenario analysis on our London portfolio in line with our implementation plan for the PRA Supervisory Statement on Enhancing Banks' and Insurers' Approaches to Managing the Financial Risks from Climate Change, beginning with the oil and gas and metals and mining sectors. The results will be shared with the business and with leaders in Risk so they can factor potential climate risk considerations into their decisions.

## BMO's 2020 Scenario Analysis Pilots

	Commercial Real Estate Pilot	Agriculture Pilot	Metals and Mining Pilot
Lending portfolio	Commercial Real Estate	Agriculture	Metals and Mining
Transition risks assessed	Policy risk from carbon pricing resulting in higher cost of oil and GDP decline in selected economies Policy risk from carbon pricing resulting in higher energy prices Regulatory risk resulting in more stringent energy efficiency requirements	Policy risk from carbon pricing resulting in higher input costs and consumer prices Market risk from shifts in consumers' dietary preferences to lower-carbon products Market risk from shifts away from fossil fuels	The impact of policies, such as carbon pricing resulting in higher energy prices, on the cost of operations
Physical risks assessed	Acute risk from flooding due to East coast storm surge, Rocky Mountain snow melt and massive rainfall events in Ontario and Quebec	Chronic risk from increased average temperature and precipitation Acute risk from increased volatility of weather patterns	Not assessed
Climate scenarios assessed	BMO evaluated three reference scenarios, consistent with emerging global regulatory practices including those used by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) Orderly transition (2°C, RCP 8.5) – climate policies introduced early and become gradually more stringent; net zero carbon emissions achieved before 2070; 67% change of limiting global warming to 2°C Disorderly transition (2°C, RCP 8.5) – climate policies introduced beginning in 2030; sharper emission reductions needed to reach net zero carbon emissions by 2070 Hothouse world (3°C+, RCP 8.5) – currently implemented policies are preserved; emissions grow until 2080 leading to global warming of 3°C or more; irreversible climatic changes occur		BMO applied the REMIND (Regional Model of Investment and Development) coupled with the MAGPIE (Model of Agriculture Production and Its Impacts on the Environment) integrated assessment modelling framework. The Bank evaluated two immediate action transition scenarios: Immediate 2°C – collective action is taken now to reduce emissions towards a 2°C target Immediate 1.5°C – immediate action is taken now to reduce emissions towards a 1.5°C target
Time horizon	Short-term – immediate Medium-term – 2030 Long-term – 2040+		
Climate risk metrics	Potential impact on credit losses		

We plan to consolidate learnings from these pilots to expand such analysis to other sectors and risk types in order to identify potential material financial risks and to inform our business strategy related to climate change. The results of the scenario analysis pilots are provided to the Sustainability Council – educating our leaders about potential climate outcomes enables them to incorporate these insights into their decision-making, improving the resilience of our long-term strategic plans.



In 2020, BMO's Artificial Intelligence team conducted geospatial modelling to create a rainfall flood risk map for a selection of our residential real estate assets. This enabled us to assess the vulnerability of our mortgage portfolio to property damage and to quantify the potential adverse economic consequences of flooding.



## Convening and Catalyzing

BMO is committed to being a convenor and catalyst in mobilizing action that can effectively address the challenges posed by climate change. We actively participate 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 net zero carbon economy.

BMO also actively participated in Phase 2 of the United Nations Environment Programme – Finance Initiative (UNEP FI) climate-related scenario analysis pilot. Through this work we advanced methodologies and innovative approaches to identifying and managing climate-related risks in the real estate, agriculture and metals and mining sectors.

### Scenario Analysis on BMO's Investment Activity

BMO GAM has also been examining scenario analysis from the perspective of an asset manager. In 2020, BMO GAM developed tools for analysis and client reporting on scenario analysis. BMO GAM's Risk team developed a stress testing tool based on scenarios developed by the Dutch National Bank.

BMO GAM also contributed to the Paris Alignment Investment Initiative, run by the Institutional Investors Group on Climate Change, including co-chairing the working group on strategic asset allocation. The Initiative published a report for consultation in August 2020 that set out specific criteria investors could use to align their investment portfolios with a global goal of net zero carbon emissions by 2050, consistent with limiting the global temperature rise to 1.5 degrees C.

Initiative	Key Area of Focus
Equator Principles	BMO has been a signatory to the Equator Principles since 2005. We represent North America on the Equator Principles Steering Committee and were actively involved in the EP4 update, which included climate change and risk management in its scope.
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. It participated in the Paris Aligned Investment Initiative, which published a report outlining how investment portfolios can align with the Paris Agreement.
Climate Action 100+	BMO GAM was a founding member of this US\$40 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 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 considering the social aspects of the transition to a lower-carbon economy.
UNEP FI TCFD Pilot Project for Banks – Phase 2	BMO participated in Phase 2 of the UNEP FI TCFD Banking Pilot to enhance our TCFD implementation. The pilot broadened and expanded the group of participating banks and external partners, enhanced the existing TCFD toolkit (including scenarios, data and methodology, reporting and governance), and established 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 on Standardization in the Field of Environmental Management	A member of BMO's Sustainability Office is the head of the Canadian delegation, and subject matter expert and international negotiator for the harmonized Standards Council of Canada Mirror Committees to ISO's Technical Committee 207 – Environmental Management and ISO's Technical Committee 207/Sub-Committee 1 on Environmental Management Systems. This work is focused on creating tools to help organizations of any size build robust, credible and reliable environmental management systems to improve their environmental performance.
ISO Technical Committee 322 on Standardization in the Field of Sustainable Finance	A member of BMO's Sustainable Finance Team is the Chair of Canada's Mirror Committee to ISO's Technical Committee 322 on Standardization in the Field of Sustainable Finance. Its work will promote the integration of environmental, social and governance practices in financing activities.
Canadian Standards Association – Technical Committee on Transition and Sustainable Finance	BMO is participating in a Canadian Technical Committee to develop a national standard of Canada for transition and sustainable finance. The first draft of the Transition and Sustainable Finance Taxonomy is expected to be released by February 2021.

## Metrics and Targets

In assessing our approach to climate-related risks and opportunities, BMO tracks the following metrics. We also track our sustainable finance activity and have provided \$45.7 billion in capital to companies pursuing objectives related to climate and the environment since 2019.

100%  
renewable electricity  
achieved in 2020

### Climate-Related Metrics and Targets

Metric	Unit of Measure	2020	2019	2018	2017	2016		
Managing climate-related risks								
Lending to carbon-related assets	% of total assets	3.0	3.3	N/A	N/A	N/A		
Operational efficiency <sup>1</sup>							Target	Progress
GHG emissions from fuel (Scope 1)	tonnes CO <sub>2</sub> e	TBD <sup>2</sup>	45,672	42,883	38,065	37,837		
GHG emissions from electricity and steam (Scope 2)	tonnes CO <sub>2</sub> e	TBD <sup>2</sup>	90,457	99,062	103,350	115,334		
GHG emissions from waste generated in operations (Scope 3 category 5) <sup>3</sup>	tonnes CO <sub>2</sub> e	TBD <sup>2</sup>	530	1,227	1,167	1,401		
GHG emissions from business travel (Scope 3 category 6) <sup>4</sup>	tonnes CO <sub>2</sub> e	TBD <sup>2</sup>	24,655	20,164	20,667	20,696		
<b>Total GHG emissions</b>	tonnes CO <sub>2</sub> e	<b>TBD<sup>2</sup></b>	<b>161,314</b>	<b>163,336</b>	<b>163,249</b>	<b>175,268</b>	15% reduction by 2021 vs. 2016	On track – 8.7% reduction since 2016
Carbon credits retired	tonnes CO <sub>2</sub> e	TBD <sup>2</sup>	71,401	74,180	67,775	115,715		
GHG reductions from RECs	tonnes CO <sub>2</sub> e	TBD <sup>2</sup>	89,913	89,156	95,474	59,553		
<b>Net GHG emissions</b>	tonnes CO <sub>2</sub> e	<b>TBD<sup>2</sup></b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	Carbon neutral in operations	Achieved

Additionally, as part of BMO GAM's ESG integration approach, we monitor the portfolio-weighted carbon intensity of the portfolios within our key fundamental equity and fixed income strategies. We have published this data for our specialist ESG strategies, including our Responsible and Sustainable Funds and SDG Engagement Fund.

<sup>1</sup> Additional information on BMO's operational efficiency performance, including energy, water and waste data, can be found on our website at: [Environmental Performance](#).

<sup>2</sup> Available online in June 2021 at: [Environmental Performance](#).

<sup>3</sup> Scope 3 category 5 emissions include indirect GHG emissions from BMO's solid waste sent to municipal landfills (North America only).

<sup>4</sup> Scope 3 category 6 emissions include indirect GHG emissions from employee business travel in non-company owned assets.

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

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