NATIONAL BANK

Report on the Task Force on Climate-related Financial Disclosures Advances

2022

TCFD REPORT

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Important Notice and Caution regarding Forward-Looking Statements

Certain statements made in this report are forward-looking statements. All such statements are made in accordance with applicable securities legislation in Canada and the United States. Forward-looking statements in this document may include, but are not limited to, statements with respect to the objectives, priorities, strategies, sustainability commitments and targets or actions of National Bank of Canada (the Bank) that will be taken to achieve them (including with respect to reducing the Bank's greenhouse gas emissions related to its own activities and energy consumption, its climate strategy, reaching net-zero greenhouse gas emissions for its operating and financing activities by 2050 and transitioning to a low-carbon economy), the regulatory environment in which it operates, the causes and potential impacts of climate change globally, its approach to identifying and managing climate-related risks and opportunities, and certain risks it faces. These forward-looking statements are typically identified by verbs or words such as "outlook," "believe," "foresee," "forecast," "anticipate," "estimate," "project," "expect," "intend," and "plan," in their future or conditional forms, notably verbs such as "will," "may," "should," "could," or "would" as well as similar terms and expressions. Such forward-looking statements are made for the purpose of assisting the holders of the Bank's securities in understanding the Bank's vision, strategy and objectives related to sustainability and environmental, social and governance advances, and may not be appropriate for other purposes. These forward-looking statements are based on our current expectations, estimates, and intentions and are subject to inherent risks and uncertainties, many of which are beyond the Bank's control.

Our ability to achieve our sustainability and environmental, social and governance advancement objectives, priorities, and targets (including with respect to reducing the Bank's greenhouse gas emissions related to its own activities and energy consumption, reaching net-zero greenhouse gas emissions for its operating and financing activities by 2050 and transitioning to a low-carbon economy) is based on a number of assumptions and is subject to a number of factors, many of which are beyond the Bank's control and the effects of which can be difficult to predict—including, among others, the transition to a low-carbon economy and the Bank's ability to satisfy stakeholder expectations on environmental and social issues; the need for active and continued participation of stakeholders (including our employees, our clients, our suppliers, the communities in which we are present, and other main change agents); the availability of comprehensive and high-quality greenhouse gas emission and other third party data; the ability of the Bank to develop indicators to effectively monitor our advancements; the development and deployment of new technologies and sustainable products; the ability of the Bank to identify climate-related opportunities as well as assess and manage climate-related risks; the general economic environment and financial market conditions in Canada, the United States, and other countries where the Bank operates; changes made to regulations that affect the Bank's business; the development of environmental, social and governance regulatory requirements; geopolitical and sociopolitical uncertainty; the Bank's ability to achieve its long-term strategies and key short-term priorities; the Bank's ability to recruit and retain key personnel in a competitive environment for talent; and possible impacts of major events affecting the local and global economies, including international conflicts, natural disasters, and public health crises such as the COVID-19 pandemic, whose progress is difficult to predict and which could have continued repercussions on the Bank.

In addition, the assumptions, the data, metrics, measurements, methodologies, scenarios, and other standards used to develop our assumptions and estimates and to monitor our advances, believed to be reasonable at the time of preparation of this report, may subsequently turn out to be inaccurate. Many of these assumptions, the data, metrics, measurements, methodologies, scenarios, and other standards continue to evolve and may differ significantly from those used by others, those that may be used by us in the future or that may be subsequently mandated by government authorities or other standard setters. Such evolution and changes could affect the assumptions and estimates used by us and could affect the comparability of the information and data across industries or companies and from one reporting period to a subsequent reporting period, as well as our ability to achieve our objectives, priorities, strategies, sustainability commitments and targets.

There is a strong possibility that the Bank's express or implied predictions, targets, projections, expectations or conclusions will not prove to be accurate, that its assumptions may not be confirmed and that its vision, strategic objectives and performance targets will not be achieved. The Bank recommends that readers not place undue reliance on forward-looking statements, as a number of factors could cause actual results to differ significantly from the expectations, estimates or intentions expressed in these forward-looking statements. These risk factors include credit risk, market risk, liquidity and funding risk, operational risk, regulatory compliance risk, reputation risk, strategic risk, environmental and social risk, and certain emerging risks or risks deemed significant, all of which are described in greater detail in the Risk Management section beginning on page 65 of the Bank's 2022 Annual Report.

The foregoing list of risk factors is not exhaustive. Additional information about these risk factors is provided in the Risk Management section of the Bank's 2022 Annual Report and may be updated in the quarterly shareholders' reports subsequently published. Investors and others who rely on the Bank's forward-looking statements should carefully consider the aforementioned factors as well as the uncertainties they represent and the risk they entail. Except as required by law, the Bank does not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time, by it or on its behalf. We caution investors that such forward-looking statements are not guarantees of future performance and that actual events or results may differ materially from these statements due to a number of factors.

This report is provided solely for informational purposes. It does not constitute an offer or a solicitation to buy or to sell any security, product, or service in any jurisdiction nor is it intended to provide investment, financial, legal, accounting, tax, or other advice and such information should not be relied or acted upon for providing such advice.

Introduction

National Bank (the Bank) is proud to publish its 2022 report for the Task Force on Climate-related Financial Disclosures (TCFD). Since our commitment to applying the recommendations of this task force set up by the Financial Stability Board, we have made a number of achievements:

- Set an interim target to reduce greenhouse gas (GHG) emissions from our operations by 25% by the end of 2025[1] to help limit global warming to 1.5°C, the most ambitious goal of the Paris Agreement.
- Adopted a net-zero GHG emission target for our operating and financing activities by 2050.
- Joined the United Nations Net-Zero Banking Alliance (NZBA).
- Set interim objective to reduce the intensity of financed emissions for the Oil & Gas Producers sub-sector by 31% by 2030.[2]

In line with our NZBA commitments, in 2022 we added two interim targets for carbon-intensive sectors, which we will discuss in this report. They involve reducing the intensity of financed emissions in the Commercial Real Estate and Power Generation sectors by 50% and 33%, respectively, by 2030.[3] Moreover, we have pursued our efforts to grow our portfolio of loans related to renewable energy at a faster pace than our portfolio of loans related to non-renewable energy.

Reliable data is essential in allowing us to roll out measures to help us achieve our targets. That's why we're working with industry peers and via government initiatives to support the energy transition ecosystem while developing our capacity to analyze the vulnerability to climate risk of various industries and business sectors.

Given the nature of our activities, we will also be supporting our clients in implementing their own transition plans and taking concrete action to achieve a dynamic, prosperous and innovative low-carbon economy. Lastly, we wanted to mention our efforts to prepare for the move to our new head office in Montreal in 2023, which will play an important role in reducing the footprint of our operations in Canada.

Our knowledge of climate change is advancing every year, as we gain a better understanding of the phenomenon and its causes. Having a positive impact on this global issue will take sustained investment over several generations. Now more than ever, we're committed to working with the industry and doing our part. We remain invested in fighting climate change while supporting the sustained vitality of the Canadian economy.

Laurent Ferreira
President and Chief Executive Officer

Debby Cordeiro
Senior Vice-President – Communications, Public Affairs and ESG

About Us

National Bank of Canada (the Bank) is Quebec's leading bank, and its head office is in Montreal. We are one of the six systemically important banks in Canada and have branches in most Canadian provinces. Our clients in the United States, Europe, Cambodia and elsewhere around the world are served via a network of representative offices, subsidiaries and partnerships. Our securities are listed on the Toronto Stock Exchange.

This report presents the achievements and commitments in terms of climate-related risks and opportunities of the Bank and its main subsidiairies in Canada and covers fiscal 2022, unless otherwise indicated.[4]

External accounting

The information contained in this report is unaudited. Groupe AGÉCO, an independent third party, calculated our greenhouse gas emissions.

1 This target includes Scope 1, 2 and 3 emissions (Scope 3 includes employee business travel and paper consumption as part of the supply chain) and uses 2019 as the reference year. This target includes our activities in Canada and the United States, as well as our subsidiary in Dublin, our branch in London and our representative offices abroad.
2 This target includes Scope 1, 2 and 3 emissions and uses 2019 as the reference year.
3 The target for the Commercial Real Estate sector includes Scope 1 and 2 emissions and uses 2019 as the reference year. The target for the Power Generation sector includes Scope 1 emissions and uses 2019 as the reference year.
4 Some of the information provided in this report does not include Flinks Technology Inc. This has no significant impact on the information provided.

TCFD and the Bank's Position

In keeping with its commitment to protect the environment, in 2018 the Bank announced its support for the Task Force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board. This task force makes recommendations based on the four main pillars of any organization: governance, strategy, risk management and metrics and targets. These four broad categories are intended to establish a framework for the disclosure of climate-related financial information to help institutional investors make informed decisions concerning their exposure to climate-related risks and opportunities.

The Bank has drawn up a roadmap to implement the TCFD recommendations and improve its disclosure of information related to managing climate-related risks. It is also working with various industry partners to identify and implement sound management practices that promote the transition to a low-carbon economy. Over the past year, we continued to analyze climate scenarios to assess our exposure to climate risks and defined new interim targets for reducing our financed emissions, in line with our climate commitments.

Key Orientations

In 2019, the Bank adopted nine environmental, social and governance (ESG) principles to highlight the importance of sustainable development and balance the interests of various stakeholders in society. These principles are based on the three ESG areas of focus and align with the Sustainable Development Goals (SDGs) set out by the United Nations (UN) in 2015.

Three principles to develop a green economy

1. We consider the fight against climate change in our economic and community activities.
2. We support and advise our clients in their energy transition.
3. We manage and reduce our environmental footprint in all our sectors of activity.

Main UN Sustainable Development Goals addressed by these principles

For a full list of our ESG principles, consult the 2022 ESG Report, available in the Corporate responsibility section of nbc.ca.

Our Commitments

We aim to follow the most rigorous climate risk management standards while having a positive impact on all our stakeholders.

In accordance with our principles, we have made the following commitments:

- Grow the portfolio of loans related to renewable energy at a faster pace than the portfolio of loans related to non-renewable energy.
- Not offer or grant new financing related to oil and gas exploration, exploitation or production in the Arctic.
- Not finance new thermal coal mining and processing activities.

In 2022, the Bank also pursued its commitment to the following initiatives:

The Green Bond Principles

Sustainable Development Goals

CDP Disclosure Insight Action

Climate Engagement Canada

RIA Responsible Investment Association

Signatory of: PRI Principles for Responsible Investment

TCFD Task Force on Climate-Related Financial Disclosures

PCAF Partnership for Carbon Accounting Financials

Signatory of: UN environment programme finance initiative Principles for Responsible Banking

Governance

The Bank has drawn up an effective governance framework that oversees climate-related risks and opportunities and ensures that ESG initiatives are rolled out, monitored and maintained. Climate-related risks and opportunities are actively managed by the Bank's executives and are among the priorities monitored by the Board of Directors.

Oversight by the Board of Directors

The Bank is committed to growing its business while balancing the interests of its various stakeholders, particularly in terms of ESG. The Bank has therefore adopted measures to boost its commitment in this area, notably by adding responsibilities linked to ESG criteria to the mandates of the Board and its committees and by rolling out an ESG strategy based on the ESG principles adopted by the Board. More specifically, the Board ensures ESG criteria are integrated into long-term strategic objectives while overseeing the progress and integration of ESG initiatives and principles.

The Board and all of its committees have been assigned ESG responsibilities according to their respective roles, responsibilities and the expertise of their members. The goal is to ensure the Bank's activities are conducted in keeping with stringent corporate responsibility standards. The description of the mandates below is not exhaustive and only includes elements related to this report.

Committee	Main ESG responsibilities
Conduct Review and Corporate Governance Committee	The **Conduct Review and Corporate Governance Committee** must keep abreast of exemplary ESG practices and oversee the Bank's ESG strategy. This committee is responsible for regularly reviewing the ESG practices in effect at the Bank and making recommendations to improve them. It ensures that the Bank operates in accordance with these practices and its One Mission. It also ensures that the directors are qualified by evaluating the performance and effectiveness of the Board and its members and by planning director succession and the composition of the Board. This committee ensures that management has measures in place to enable dialogue with the Bank's stakeholders, including the application of the Stakeholder Engagement Guidelines. It examines certain Bank statements related to ESG, including the Report on Environmental, Social and Governance Advances, the Inclusion and Diversity Booklet, the Human Rights Statement and this report.
Risk Management Committee	The **Risk Management Committee** ensures that the risk management framework accounts for environmental, social and governance risks and that they are identified, appropriately monitored, and integrated into the existing risk management processes. Climate risk is an integral component of the Bank's risk management approach and is reviewed periodically. This committee also oversees top and emerging risks that could have a significant negative impact on the Bank's financial results, reputation and long-term strategy. It examines certain Bank statements related to ESG, including the Report on Advances for the Task Force on Climate-related Financial Disclosures (TCFD).
Audit Committee	The **Audit Committee** is responsible for monitoring trends related to control mechanisms and the integration of environmental criteria into financial reporting. An update on TCFD disclosure is presented periodically.

For more information, consult the Governance section on **nbc.ca**.

Governance (cont.)

Competencies of the members of the Board

The knowledge and expertise of board members when it comes to social and environmental responsibility, governance and corporate culture are included in the Bank's competency table and are taken into account to ensure the Board has a balance of complementary competencies and to plan its succession. This enables directors to approve, oversee, advise on and challenge management decisions concerning ESG issues, including climate risks.

During meetings of the Board or of the committees they are members of, directors also regularly attend presentations and in-depth sessions given by Bank representatives (or occasionally by external consultants) to further enhance their knowledge of areas related to their duties. Over the past fiscal year, the following training sessions related to climate risk and ESG issues were provided:

Training provided by the Bank	Participants
Update on funded portfolio emissions and targets	Risk Management Committee
ESG strategy for greenhouse gas-intensive industries	Risk Management Committee

The Bank also encourages directors to participate in training programs offered by various organizations. Directors therefore participated in training, congresses and conferences related to ESG issues and climate change offered by a number of recognized organizations.

For more information on our governance practices and the Board's achievements, and for a full list of training provided by the Bank, consult the **2023 Management Proxy Circular** on **nbc.ca**.

Dialogue with stakeholders

Constructive, open and transparent dialogue with our stakeholders is a key priority for the Bank. It allows us to identify and understand their views and concerns and respond appropriately to the changing needs of our society. To demonstrate its commitment to these principles, the Board has adopted Stakeholder Engagement Guidelines that identify the Bank's main stakeholders and describe how the Bank maintains an ongoing dialogue with them.

For more information, consult the **2023 Management Proxy Circular** and our **Stakeholder Engagement Guidelines**, as well as the Report on Environmental, Social and Governance Advances, available in the **Corporate responsibility** section of **nbc.ca**.

Role of management

ESG working group

Led by the Chief Financial Officer and Executive Vice-President – Finance, the ESG working group is a multidisciplinary team that includes a number of officers from various Bank sectors. Its main duty is to develop and support the Bank's ESG strategy and initiatives. This working group is responsible for implementing the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), the United Nations Principles for Responsible Banking and the Bank's commitments in terms of climate change. Members meet monthly and, at least twice a year, the ESG working group reports to the Conduct Review and Corporate Governance Committee on advances made, as well as on ongoing and upcoming ESG projects. It also gives occasional presentations to the other committees on specific topics of interest, such as the TCFD report.

Specialized ESG team

This team helps the ESG working group develop the Bank's environmental, social and governance strategy and ensures it is implemented in collaboration with all business sectors. The ESG team interacts with the Board and its committees, as well as with officers and executives, when reporting on progress. It also reports monthly to the ESG working group.

The ESG team maintains a constructive ongoing dialogue with all of the Bank's business lines and with external stakeholders to improve the Bank's ESG practices and related processes.

Strategy

The Bank acknowledges that it plays an influential role in the fight against climate change. For years, it has worked to have a positive impact on its stakeholders. Based on our three environmental principles, we aim to identify and develop sustainable business opportunities while identifying, managing and mitigating climate-related risks. The Bank is committed to maintaining an open dialogue with its stakeholders to meet market needs and improve the energy efficiency of its operations. This dialogue has allowed us to identify business opportunities related to renewable energy, responsible investment and energy efficiency.

Our priorities	Our commitments and actions		
Consider the fight against climate change in our economic and community actions	Reduce GHG emissions for our operating and financing activities to zero by 2050. The Bank has strengthened its commitment by joining the NZBA.	Use the PCAF methodology to measure our financed emissions, starting with high-intensity sectors. They will be disclosed gradually in our TCFD report.	Set progressive reduction targets for financed emissions using internationally recognized decarbonization scenarios.
Support and actively advise our clients in their transition towards a lower-carbon economy	Consolidate our energy transition expertise by creating the Energy & Infrastructure Sustainability Impact Group so we can support and actively advise our Commercial Banking sector clients in their transition while providing comprehensive solutions.	Make capital available for the transition and continue to grow the portfolio of loans related to renewable energy at a faster pace than the portfolio of loans related to non-renewable energy.	Roll out products and services to support our clients in their transition and offer investment products aligned with the UN SDGs.
Increase our capacity to assess and manage climate risks	Continue to develop our analytical and stress testing skills so we can better identify, quantify and disclose the vulnerability to climate risk of various industries and business sectors.	Gradually integrate climate indicators into the risk appetite framework and ESG criteria into the credit adjudication process.	Work with our peers, regulatory organizations and international organizations to improve the climate risk management and disclosure framework.
Reduce the carbon footprint of our operations	Reduce GHG emissions from our operations by 25% by the end of 2025.[1]	Roll out energy efficiency initiatives, including policies governing employee travel and the layout of workspaces in the new head office.	Maintain carbon neutrality by offsetting the remaining annual GHG emissions from our activities.
Support the energy transition ecosystem (incubators, accelerators, peer groups, government initiatives)	Collaborate with various groups, as a signatory of the UN Principles for Responsible Banking (PRB), to align strategies with the UN SDGs and the objectives of the Paris Agreement.	Together with our peers, contribute to improving the methodology and the quality of climate data through the PCAF.	Contribute to the work of the Canadian Bankers Association, the Sustainable Finance Action Council and Finance Montréal and participate in various public consultations (OSFI, SEC, BCBS).[2]

1 This absolute target includes Scope 1, 2 and 3 emissions (Scope 3 includes employee business travel and paper consumption as part of the supply chain) and uses 2019 as the reference year. This target includes our activities in Canada and the United States, as well as our subsidiary in Dublin, our branch in London and our representative offices abroad.
2 OSFI: Office of the Superintendent of Financial Institutions (Canada); SEC: Securities and Exchange Commission; BCBS: Basel Committee on Banking Supervision

Identifying and Assessing Climate-related Opportunities

Since the fight against climate change is a priority for the Bank and its stakeholders, it is essential to offer sustainable and appropriate solutions. The Bank has rolled out a number of initiatives in this regard over the past few years.

Sustainable bonds[1]

In 2018, the Bank developed one of the first Canadian reference frameworks for issuing sustainable bonds.[1] As at December 31, 2022, the proceeds of sustainable bonds were used by the Bank to finance over $3.2 billion in projects in the field of sustainable development. Under the reference framework, these proceeds can be used to finance or refinance, in whole or in part, eligible businesses and eligible projects that fall within the following categories: Renewable Energy, Energy Efficiency, Pollution Prevention and Control, Sustainable Water and Wastewater Management, Sustainable Buildings and Low-Carbon Transportation, among others.

Eligible projects are selected and evaluated by the Bank, and the Sustainable Bond Committee is responsible for reviewing and making a final decision on the selection of loans and investments that will qualify as eligible businesses or projects. Each year, the Bank publishes a report that presents the reference framework, the use of funds and a few examples of projects financed.

To learn more about the reference framework for the Bank's sustainable bonds and see a few examples of the projects financed, consult the Sustainability Bond Report available in the **Capital and debt** section on **nbc.ca**.

1 In line with the International Capital Markets Association (ICMA) Green Bond Principles and Social Bond Principles, the Bank's sustainability bonds will be allocated to financing projects and organizations that credibly contribute to environmental objectives (climate change mitigation and adaptation, natural resource conservation, biodiversity conservation and pollution prevention and control) or seek to achieve positive socioeconomic outcomes for target populations.

National Bank Investments Inc.

National Bank Investments Inc. (NBI), a wholly owned subsidiary of the Bank, is a signatory of the United Nations Principles for Responsible Investment and a member of the Responsible Investment Association of Canada. With one of Canada's largest open architecture structures, NBI follows a rigorous process to select portfolio managers recognized for their expertise in each asset class. NBI has incorporated ESG criteria into its investment decisions since January 2018, notably through its external manager selection process called OP4+. Its monitoring efforts are based on a cycle during which the organization, the people, the process, the portfolio, the performance and the integration of ESG criteria by portfolio sub-managers are assessed on an ongoing basis. Criteria for assessing external managers include measures and targets to reduce the portfolio's carbon footprint. This favours managers who have set greenhouse gas emission reduction argets for their portfolios.

As part of its analyses of how portfolio managers integrate ESG factors, NBI asked managers to share their climate plans. Many of them are members of the Net-Zero Asset Managers (NZAM) initiative and have committed to align their assets under management with net-zero emissions targets. In total, 30% of NBI portfolio managers have made this commitment.

In 2022, NBI improved its offer of sustainable exchange-traded funds (ETF) by launching the NBI Sustainable Canadian Short Term Bond ETF (NSSB), managed by AlphaFixe Capital Inc.

NBI's sustainable development products invest in securities aligned with one or more of the United Nations Sustainable Development Goals (SDG), in particular SDG 7 – Affordable and clean energy and SDG 13 – Climate action.

NBI is also pursuing research in responsible investing. One of its research initiatives involves climate risk in portfolio management. In collaboration with the Chief Investment Office, we began to develop a framework to integrate climate risk into our long-term income projections. We analyze scenarios to enhance the quality of our projections by incorporating the impact of climate change and use this information to guide our strategic asset allocation decisions. This research will continue in 2023, and we will continue to refine our methodology.

Going beyond portfolio management, NBI also wants to meet its clients' growing need to better understand responsible investment. That's why NBI has produced a number of podcasts and participated in events focused on growth opportunities tied to responsible investment, in addition to publishing informational content on its website.

For more information, consult nbinvestments.ca.

Green loans, sustainable loans, transition loans and sustainability-linked loans

The Bank is committed to supporting its clients in achieving a fair, inclusive and equitable transition. As at October 31, 2022, the volume of authorized sustainability-linked loans was $5.8 billion.

The Bank offers a full range of sustainable financing products through its loan and underwriting activities, with support from a dedicated team of professionals whose mission is to design solutions tailored to the needs of various clients and sectors. This makes it possible for clients to finance strategies and projects linked to sustainable development, ranging from renewable energy and carbon neutral buildings to clean transportation, while complying with the latest standards for the sector established by the International Capital Markets Association (ICMA), the Loan Syndications and Trading Association (LSTA) and globally recognized classification systems.

There are two classes of sustainable financing products. The more established category, end-use financing, involves financing sustainable development projects that meet predefined eligibility criteria, including green or blue loans, social loans and transition loans. The second category, which is rapidly expanding, involves sustainability-linked loans, also called behaviour- or results-based loans. They involve integrating major ESG objectives into the financing terms and conditions. Once these ESG objectives have been achieved, clients can benefit from advantageous financing terms and conditions.

Real Estate sector

The Bank is one of Canada's largest lenders for real estate projects that involve affordable housing, energy efficiency and accessible buildings. In 2022, real estate teams pursued our ESG strategy by implementing processes and tools to integrate ESG criteria into the Bank's real estate activities. We plan to accelerate this process over the coming years, gradually reducing the carbon footprint of our financed emissions. We've also developed training for account managers on risks, opportunities and trends related to the energy and social transition.

To support real estate sector clients in their transition, the Bank has adopted targets for issuing green loans and bonds. In 2022, it granted a Net-Zero Transition Loan to Quo Vadis Capital for a comprehensive revitalization of Complexe du Canal Lachine in Montreal. The loan proceeds are earmarked for investment in technology to retrofit Complexe du Canal Lachine in order to obtain a net-zero greenhouse gas emissions profile. Projects will include energy-efficient HVAC and innovative renewable energy systems. This loan also includes a social aspect, as Quo Vadis Capital has committed to exceeding a pre-defined threshold of leasing exposure to select minority groups such as artists, green SMEs, the self-employed, and B-Corp certified businesses, in return for advantageous financing terms and conditions.

Cleantech companies

Over the past fiscal year, the Bank's Technology and Innovation Group has continued to offer advice, support and financial services tailored to the needs of rapidly growing tech companies across Canada. Furthermore, the Group actively encourages networking between various players in the entrepreneurial ecosystem to promote more sustainable business models.

In 2022, the Group supported a number of cleantech companies, including:

- **FLO**
  A major electric vehicle charging network operator and a leading provider of smart charging software and equipment in North America.

- **GreenMantra Technologies**
  A global leader in advanced recycling. The company uses its technology to transform waste plastic into novel materials to enhance construction and infrastructure applications.
- **dcbel**
  A company that aims to provide clean, efficient, sustainable energy that is accessible to all. Among the solutions offered, a Home Energy Station that gives everyone ownership over their energy supply by using solar power to charge their electric vehicle and home, unlocking their electric vehicle's battery for backup power, and optimizing the energy flow between their solar panels, electric vehicle, backup battery and the grid.
- **Sollum Technologies**
  A company inspired by nature that offers greenhouse producers a smart LED lighting solution that dynamically recreates, perfects and modulates the full spectrum of natural sunlight. By providing value in terms of energy savings, productivity, and superior produce quality, it helps meet the growing demand for a more local, ethical and sustainable approach to agriculture.

Strategy (cont.)

Renewable energy

As the global energy and infrastructure landscape evolves to reduce the impact our energy supply and consumption have on the environment, National Bank Financial Markets (NBFM) is evolving to better serve the needs of its clients and ensure the depth and quality of coverage of the global energy transition.

In 2022, the Energy & Infrastructure Sustainability Impact Group (EiSiG) continued its work to help NBFM maintain its position as a proven leader in offering financing, merger and acquisition and risk management solutions for the clean technology, transport electrification, renewable energy and carbon capture sectors across North America. EiSiG aims to leverage our expertise to prioritize the energy transition.

As at October 31, 2022, the Bank had disbursed $10 billion in capital for renewable energy projects in North America since 2019.

Also as at October 31, 2022, we had provided nearly $7.2 billion[1] in financing for projects in the wind, solar, battery and hydro electricity sectors, accounting for 78.6% of our total authorized financing portfolio for projects related to the energy sector (project finance).

Sustainable finance

Sustainable bonds	$3.2B	Sustainable bonds issued to finance sustainable development projects, as at December 31, 2022.
Green loans, sustainable loans, transition loans and sustainability-linked loans	$5.8B	Volume of authorized sustainability-linked loans, as at October 31, 2022.
Renewable energy	$10B	Capital made available for renewable energy projects in North America since 2019, as at October 31, 2022.
	$7.2B[1]	Financing provided for projects in the wind, solar, battery and hydro electricity sectors, as at October 31, 2022.

A rewards program that promotes eco-friendly behaviour

Under the Bank's credit card rewards program, holders of certain cards can now get even more rewards for adopting eco-friendly habits. Since September 2022, they can earn twice the points when they recharge an electric vehicle.

Cardholders can use their points on the *Eco-Friendly* section of the rewards site. Among other things, they can offset their GHG emissions by purchasing CO_2 offset units via Coop Carbone. By choosing this option, our individual and business clients contribute to Quebec's Electrification and Climate Change Fund, which provides the resources needed to implement Quebec's provincial climate change plan.

For more information on these initiatives, consult the **Eco-Friendly** section on the rewards website for holders of National Bank credit cards at **rewards.bnc.ca**.

1 Including the amount of authorized derivative financial instruments. Derivative financial instruments are financial contracts whose value is derived from an underlying interest rate, exchange rate or equity, commodity or credit instrument or index. Examples of derivatives include swaps, options, forward rate agreements, and futures. The notional amount of the derivative is the contract amount used as a reference point to calculate the payments to be exchanged between the two parties, and the notional amount itself is generally not exchanged by the parties.

Loans for electric and hybrid vehicles

The Bank offers an additional discount on financing for electric and hybrid vehicles to help clients reduce their carbon footprint and promote the transition to electric vehicles.

Preparing our clients for the transition to electric vehicles

In January 2022, the Bank presented a webinar on installing and managing charging stations in co-owned properties. The presentation was intended for syndicates of co-owners, condo managers and co-owners. It aimed to raise awareness of the upcoming transition to electric vehicles and changing needs in terms of charging stations.

Working together to build a sustainable future

In line with its commitment to the environment, the Bank participates in a number of collaborative climate-related initiatives, including:

- The Partnership for Carbon Accounting Financials (PCAF)
- The United Nations Net-Zero Banking Alliance (NZBA)
- The United Nations Environment Programme – Finance Initiative (UNEP FI)
- The Statement by the Quebec Financial Centre for a Sustainable Finance
- The Risk Management Association (RMA) Climate Risk Consortium
- The United Nations Principles for Responsible Banking (PRB)
- The Canadian Bankers Association (CBA)

The Bank's involvement in national and international initiatives includes:

- Public consultations with the regulatory agencies for various industries
- Analyzing climate scenarios
- Integrating climate-related concepts into risk management
- Monitoring key developments and best practices
- Standardizing calculation methodologies
- Peer-to-peer comparison exercises

The Bank also participates in various industry events to streamline the energy transition and encourage people to adopt environmentally conscious behaviours. Furthermore, it continues to promote sound governance and the overall alignment of climate disclosures, complemented by industry-specific measures.

Increasing the efficiency of our operations

The Bank's eco-friendly practices are reflected in the features of its buildings. It has rolled out standards inspired by LEED assessment criteria, which are automatically applied to its major investment projects. For example, the Bank purchases low-flow plumbing fixtures, LED lighting, and finishing products, furniture and equipment from local or Canadian suppliers. This practice applies to all of its buildings in Canada.

Since a large portion of our emissions come from electricity and fuel consumption, energy efficiency is a top priority. When we drew up our action plan to reduce GHG emissions from our operations by 25% by 2025, we focused on various objectives and initiatives centred on the transition efficiency and energy efficiency.

In order to achieve our reduction target, each year we analyze emission rates and the availability of various energy sources and promote the use of renewable energy. For instance, in Quebec, Ontario and Manitoba, we are gradually retiring HVAC equipment that uses natural gas and replacing it with fully electric systems.

The measures already in place have demonstrated their effectiveness for a number of years. We've implemented a continuous energy improvement and remote management approach at over 260 branches across Canada, using building control systems and a web interface. This enables us to target the buildings with the highest energy use so we can upgrade or restore their systems. By using remote access to diagnose issues in branches, we can increase comfort for their occupants and minimize travel for maintenance teams. We aim to extend this approach to all National Bank buildings in Canada over the next few years.

Our GHG emissions for fiscal 2022 have been estimated at 17,994 tonnes of CO_2e, a 29% increase over 2021. This increase was mainly due to business recovery and the resumption of business travel. The Bank has renewed its commitment to carbon neutrality by buying Verified Carbon Units to offset emissions that can't be eliminated.

In 2020, the Bank set a target to reduce its GHG emissions by 25% by the end of 2025, with 2019 as the reference year. This absolute, science-based target aims to help limit global warming to 1.5°C. For more information, consult the *GHG Emissions From Our Operations* section on page 25 of this report.

27%

In line with our target, our GHG emissions from our operations for 2022 have been estimated at 8,996 tonnes of CO_2e—down 27% compared to 2019.

Responsible sourcing

In line with our commitment to reduce our negative environmental and social impact and seize opportunities related to sustainable development, the Bank is continuing to implement a responsible sourcing strategy.

In 2022, we established an action plan that resulted in the following achievements:

- Creation of a network of responsible sourcing ambassadors at the Bank.
- Publication of a new **Supplier Code of Conduct** that integrates ESG considerations to specify the Bank's expectations of its suppliers. This new code will gradually be integrated into agreements with suppliers.
- Update of the **Suppliers** section on nbc.ca: Two supplier selection criteria linked to ESG principles and the Bank's values have been added.
- Consultation with business lines to measure their knowledge of responsible sourcing and evaluate their processes to prepare for the integration of additional ESG criteria into the supplier selection process.
- Identification of all Bank stakeholders associated with responsible sourcing and assessment of their level of interest and impact to refine our responsible sourcing strategy.
- Rollout of responsible sourcing training for advisors who negotiate with suppliers.
- Implementation of follow-up indicators associated with the action plan.

Guided by LEED and WELL certification criteria, we continued the construction of our new head office. As at October 31, 2022, 80% of furnishings and interior design components were acquired from local suppliers in Quebec or elsewhere in Canada.

In light of the Bank's ESG principles, our responsible sourcing strategy aims to:

- Maintain an ongoing dialogue with our suppliers.
- Work with them to transition towards a more sustainable approach.

Risk Management

Our risk management teams are responsible for the four main Bank-wide risk dimensions of material risks the organization is exposed to: identification and assessment, quantification, management and disclosure. We're continuing to update our risk management framework to include climate risk and seize every opportunity to improve how we monitor the channels through which climate risk factors affect the top risks in our risk taxonomy.[1] The assessment of climate risks related to our various portfolios and the results of our scenario analyses guide us in prioritizing the integration of climate risks into our overall risk management policies and processes.

Climate risk involves the possibility that climate-related issues could lead to a loss of financial value for the Bank or affect its activities over the short (less than three years), medium (three to ten years) or long (more than ten years) term. The impact of climate risk could also increase exposure to strategic, reputation, and regulatory compliance risks if the Bank's response is deemed inadequate or non-compliant with commitments. The Bank is directly exposed to these risks through its own activities and indirectly through the activities of its clients.

Assessing and mitigating climate risk is integral to the Bank's risk management framework. This framework accounts for the four main Bank-wide risk dimensions. Climate issues are part of our decision-making process and are now integrated into our strategy. Addressing such risk may even prove to be a considerable asset in certain financing or investment transactions, and doing so contributes to promoting exemplary practices to the Bank's stakeholders.

Changes to the climate risk management framework

	How	Progress update
Identification and assessment **Climate-related physical and transition risks are identified and integrated into the Bank's risk identification process**	› Assess the relative importance of impacts	› Rolled out and disclosed › Ongoing improvement
	› Map impacts	› Rolled out and disclosed › Ongoing improvement
Quantification **Quantification of exposure to climate risks is carried out and communicated in order to define our risk appetite**	› Develop analyses of climate scenarios and relevant stress tests	› Rolled out and integrated into our processes › Ongoing improvement
	› Integrate climate risks into our risk assessment models	› To be developed
	› Define climate risk indicators	› Rolled out and disclosed › Ongoing improvement
	› Define climate risk appetite indicators	› Rolled out and disclosed › Ongoing improvement
Management **Management and control processes ensure material climate risks are identified, measured, monitored and reported at the appropriate time**	› Develop capacity and expertise across all of the Bank's lines of defence	› Ongoing improvement
	› Implement control measures	› To be developed
Disclosure **The main considerations related to climate risks are included in internal and external reports**	› Internal disclosure	› Rolled out › Ongoing improvement
	› External disclosure	› Rolled out › Ongoing improvement

1 In the normal course of business, the Bank is exposed to a number of material risks, financial and non-financial, including credit, market, liquidity and funding, operational, compliance, reputation and strategic risks. For more information, consult the Risk Management section on page 70 of the Bank's 2022 Annual Report.

Identifying and Assessing Climate-related Risks

There are two categories of climate risk. **Physical risks** include the potential impacts of more frequent and more intense extreme weather events or sustained changes in weather conditions on physical assets, infrastructure, value chains, etc. Physical risks can be acute (an extreme weather event) or chronic (a change in the environment). They lead to an increase in the frequency and severity of forest fires, flooding, high winds, rising sea levels, etc. **Transition risks** arise from the potential impact of moving toward a low-carbon economy. These risks include technological changes and political or public policy shifts aimed at reducing greenhouse gas emissions through taxes or incentives, as well as regulatory changes intended to define and promote a low-carbon economy. These measures affect the economy as a whole, as well as specific sectors and portfolios.

Some of these risks are expected to have a more significant impact over a longer timeframe (e.g., changes in market preferences, rising global temperatures). Other risks (e.g., carbon taxes, extreme weather events) could have a strong short-term impact and unknown effects over the long term. Although most of our financing and investment activities are short or mid term, some also take place over the longer term. We therefore believe that it's important to identify, assess and manage physical and transition risks over different timeframes.

Risk Management (cont.)

The Bank is aware that it needs to take on a leadership role in terms of climate change, given the impact it will have on clients, our activities and society. Therefore, we have adopted a framework to assess, mitigate and manage related risks for portfolios and individual transactions.

Here are some examples of how climate risk has been incorporated into the main risks set out in our risk management framework.

Credit risk

Credit risk is the main risk incurred by financial institutions. It is largely dependent on the quality of the loan portfolio and clients' capacity to make their payments. The Bank is mainly exposed to this type of risk through its activities as a lender.

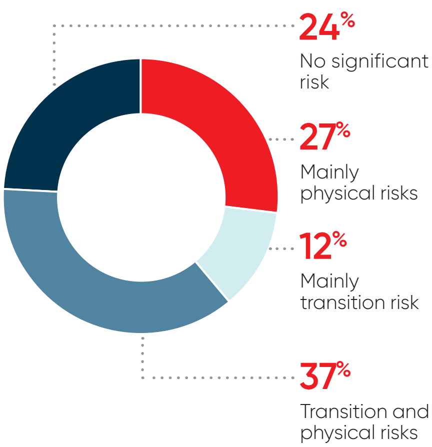
The impact of climate risks on credit risk can be summarized as follows:

- Physical risks – decrease in repayment capacity or in the value of assets taken as security.
- Transition risks – financial impact of changes involving legislation and policies, technology and markets, such as lower revenues, higher operating costs, changes in consumer preferences, development of new technology and taxes on carbon emissions.

The Bank's exposure to climate-related credit risk is assessed through various control and oversight mechanisms. For example, we carry out analyses of the vulnerability of the loan portfolio to physical and transition risks for all our financing activities to achieve a better understanding of our exposure to these risks. Concentration risk for the loan portfolio is also assessed periodically to ensure that there is no significant climate-related impact. A matrix that cross-references physical and transition risk by sector and by industry has been in use for several years now. It allows the Risk Management team to understand which sectors of the loan portfolio are most affected by climate-related risks.

These initiatives have enabled us to align our priorities and take concrete action as part of the sector limit review process. An ESG section detailing climate risks (including an assessment of physical and transition risks) is now available for each sector or industry. The Risk Management sector closely monitors changing trends and calculation methodologies and actively participates in various industry discussion groups.

Vulnerability of the loan portfolio to climate risks as at October 31, 2022[1]



No significant risk	
Other retail loans	7%
Other	5%
Qualifying revolving retail	3%
Other services	3%
Retail Trade	2%
Wholesale Trade	1%
Education & Health Care	1%
Communications	1%
Professional Services	1%
Total	**24%**

Mainly physical risks	
Residential Mortgages	27%
Total	**27%**

Mainly transition risks	
Government	8%
Pipelines	2%
Oil & Gas	1%
Construction Non-Real Estate	1%
Total	**12%**

Transition and physical risks	
Financial services	17%
Real Estate and Construction	8%
Utilities (excluding pipelines)	4%
Manufacturing	3%
Agriculture	3%
Transportation	1%
Mines	1%
Total	**37%**

1 Exposure is calculated as the total exposure to credit risk and includes amounts drawn, undrawn commitments and other off-balance-sheet items as presented on page 83 of the 2022 Annual Report. The distribution by industry is identical to that presented on page 21 of our Supplementary Regulatory Capital and Pillar 3 Disclosure.

For more information on portfolio management by sector, see the section on *Managing the loan portfolio* on page 24.

Risk Management (cont.)

Market risk

Market risk is the risk of losses arising from movements in market prices. Market risk comes from a number of factors, particularly changes to market variables such as interest rates, credit spreads, exchange rates, equity prices, commodity prices, and implied volatilities.

The impact of climate risks on market risk can be summarized as follows:

- Physical risks – significant weather events causing production variability in the primary business sector that could lead to commodity price volatility.
- Transition risks – due to increased regulation, fluctuations in demand for products or services in carbon-intensive sectors of activity, which can impact market variables, such as stock and commodity prices.

As part of the existing market risk management process, the Bank uses a number of risk measurements to estimate the size of potential losses under more or less severe scenarios and using both short term and long-term time horizons. For example, the stress testing framework is comprised of a large set of scenarios designed to be forward-looking in the face of potential market stresses, or that are specific to asset classes such as increases or decreases in commodity prices.

The Bank will continue to monitor and adapt its risk measurements in order to ensure that they reflect volatility and other changes to market dynamics that may arise as a result of climate risks.

Operational risk

Operational risk represents the risk of loss resulting from an inadequacy or failure ascribable to human and material resources, processes, technology, or external events. Operational risk exists in all of the Bank's activities.

The impact of climate risks on operational risk can be summarized as follows:

- Physical risks – impact of climate events on capital assets, employees and third parties, potentially affecting business continuity.
- Transition risks – impact of changes resulting from the introduction of a carbon tax.

The introduction or increase of carbon taxes will likely lead to higher energy costs in certain regions where we exercise our activities. These taxes could increase operating expenses related to energy use on Bank premises and business travel by Bank employees.

Reputation risk

Reputation risk represents the possibility that a Bank activity or practice will be judged negatively by the public—whether that judgment is with or without basis—thereby adversely affecting the Bank's reputation, image or trademarks, leading to potential lawsuits and losses of income.

The impact of climate risks on reputation risk can be summarized as follows:

- Physical risks – impact of negative perceptions of how the Bank manages the climate risks related to its activities.
- Transition risks – impact of negative perceptions related to financing certain industries, the Bank's degree of commitment to fighting climate change and the progress of its strategy.

The Bank acknowledges that the way it addresses climate change could affect its reputation and have an impact on its activities. As stakeholders' awareness of and concern over climate-related risks continue to grow, the Bank needs to respond in a thoughtful and deliberate manner.

We need to understand and address the potential impact of climate change on our clients and activities, remain transparent in our practices and examine the sustainable business practices of third parties we work with. We want to apply the most rigorous corporate responsibility standards while having a positive impact on our stakeholders, who have constantly changing interests and concerns when it comes to climate change and other environmental issues. Our goal is to be more proactive and strategic in our communications and our actions.

As such, for many years now, reputation risk as it pertains to our sustainable development commitments (including climate) has been monitored, measured and disclosed quarterly. Results are presented in the reputation risk dashboard intended for senior management and the Risk Management Committee of the Board.

For the other broad risk categories identified, climate risks will be gradually analyzed and integrated as set out in our deployment plan.

Quantifying Climate-related Risks

The Bank recognizes the importance of quantifying climate-related risks. It proactively monitors all risks and the exposure of sectors to climate-related risks and compares them to its risk appetite and the limits established. Top and emerging risks could have a significant negative impact on the Bank's financial results, reputation, business model and long-term strategy. These risks include credit, market, liquidity, operational and ESG risks, including climate-related risks. We therefore analyze various climate scenarios and carry out relevant stress tests to help quantify the impact of climate risk on material risks.

Analyzing Climate Scenarios

Climate scenario analysis is a key tool used to assess the impact of potentially severe events on the Bank's activities. It helps the Bank define its risk appetite and exposure limits and plan its activities. More specifically, it provides a better understanding of the Bank's risk profile, informs decision-making and helps us draw up mitigation strategies.

The Bank carries out stress testing to evaluate its sensitivity to crisis situations in certain activity sectors and key portfolios. However, the use of scenarios to evaluate climate risk associated with loan portfolios is a fairly recent application, and the usual use of these tools differs in a number of ways. In-depth analysis is therefore required to translate changes involving climate risk into the macro-economic and financial results generally used for stress testing and scenario analysis.

To refine its strategy and improve its climate resilience, for the past two years the Bank has carried out analyses of the impact of physical and transition risks on its loan portfolio, based on various climate scenarios. These analyses also enable us to determine how the economy will be affected and identify financial risks that could impact our assets under each scenario. For instance, in the case of our loan portfolio, these financial impacts may be used to estimate expected losses (EL) for portfolios, probability of default (PD) and loss given default (LGD) for each scenario.

For our second year of climate scenario analysis, the Bank has improved its testing program and is once again using the climate scenarios recommended by the Network for Greening the Financial System (NGFS).[1]

For the 2022 assessment, we opted to test the same three transition risk scenarios as we used the previous year. We also included a separate analysis based on the three integrated assessment models (IAMs) used by the NGFS. This allowed us to test the limits of our results and determine which model to use to test the scenarios. Once again this year, we believe that the selected scenarios represent the situations most likely to occur. We had the macro-economic assumptions behind these scenarios reviewed by our economic research team. To guide our work, we also monitored regulatory exercises on the international level.

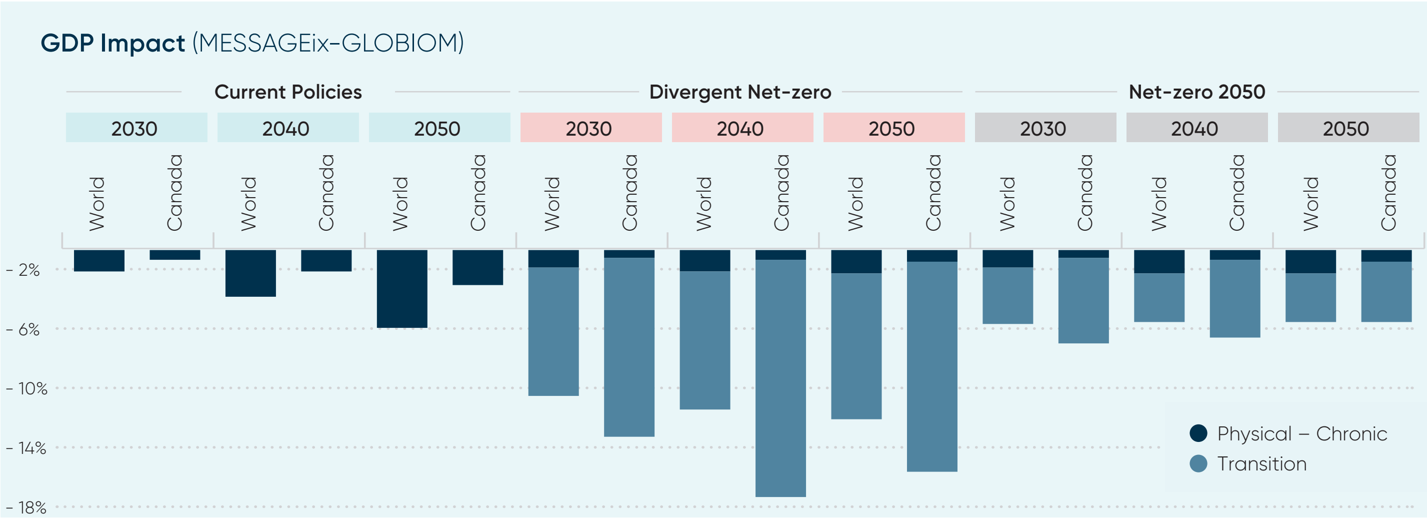
Analysis of the three integrated assessment models (IAMs)

We noted that gross domestic product (GDP) has a disproportionate impact in the various integrated assessment models used by the NGFS. According to these models, the energy transition will have a much larger economic impact on Canada than on the rest of the world; conversely, the Canadian economy is less exposed to physical risk.

Although we also plan to periodically test the impacts of physical risk as part of our climate risk assessments, we believe we should prioritize efforts to better understand how transition risk could impact the Bank's assets in the coming years, given the fact that most of our assets are held in Canada.

1 https://www.ngfs.net/ngfs-scenarios-portal/explore

For the 2022 exercise, we selected the MESSAGEix-GLOBIOM model (IAM), which appeared to use the most conservative assumptions. The chart below presents percentage variations in GDP under three different scenarios, compared to a reference scenario that doesn't account for climate risks.



Details of scenarios used and 2022 results

Scenario	Target	Physical risk	Transition risk	Policy ambition	Policy reaction	Technology change	CDR	Regional policy variation	Estimated price of carbon in 2050	Financial impact on provisions for credit losses[1] linked to transition risk
Orderly transition – Net-zero 2050	0°C in 2050	Low	Methods	1.4°C	Immediate and smooth	Fast change	Medium use	Medium variation	822 USD/t CO_2e	Low financial impact No material credit losses
Disorderly transition – Divergent Net-zero	0°C in 2050	Low	High	1.4°C	Immediate but divergent	Fast change	Low use	Medium variation	2,227 USD/t CO_2e	Moderate financial impact
Hot house world – Current Policies	None	High	Low	3.0°C	None – current policies	Slow change	Low use	Low variation	115 USD/t CO_2e	Very low financial impact

Further to our first two scenario analysis exercises, we found that, although the transition to a net-zero economy offers opportunities for certain segments of our portfolio, these are not sufficient to make up for the negative impact on provisions for credit losses in segments with high transition risk.

1 Based on the assumption of a static loan portfolio with impact projections over a 25-year horizon.

Methodology and results

Based on the macro-economic indicators for the three NGFS scenarios selected, we again applied our existing assessment process to quantify the impact on expected credit losses. We also categorized the impact of climate risk on risk parameters such as the probability of default by applying the matrix used to determine the vulnerability of the loan portfolio to climate risk on page 19.

The results of these analyses will be presented regularly to the main risk governance committees, including the Model Oversight Committee and the Enterprise-Wide Risk Management Committee, as well as to the ESG working group. The results will be used to determine our potential exposure to climate risk and could be included in the risk management process as well as used to prepare for upcoming regulatory requirements.

Over the coming years, we will continue to develop and enhance our expertise in analyzing climate risk scenarios by combining analyses of the sector (by asset class) with analyses of the portfolio (by loan type). To cover a wider range of risks and business opportunities, we plan to keep using a range of climate change scenarios. This will also help Bank executives better understand the potential impact when selecting strategic orientations. For now, we plan to prioritize industries that have the greatest exposure to greenhouse gas emissions or are more likely to be affected by transitional measures: oil and gas, utilities, transportation, real estate and construction, heavy industry, etc.

The Bank acknowledges that climate change may have an impact on its financial planning process. As a result, it will continue to reinforce its scenario analysis program to account for how climate issues may affect analyses of income and operating expenses, investments, capital distribution, potential acquisitions or divestitures and access to capital, among other factors. The results obtained will also be used to enhance the Bank's risk appetite framework.

The Bank is committed to pursuing its efforts to develop a more robust simulation process so it can better understand and measure climate risk based on TCFD recommendations, industry best practices and changing regulatory requirements. It is also continuing to encourage its stakeholders to adopt measures to reduce the potential impact of climate change.

To build on its commitment to the TCFD to better integrate climate risk into its risk management structure, adequately mitigate climate risk and develop its strategy, the Bank continues to assess the following elements:

- Addition of climate-centric economic scenarios to existing stress testing platforms
- Integration of climate factors into existing risk models
- Optimization of existing programs:
  - Business continuity plans
  - Operational risk management program
  - Disaster risk management program

In 2022, in line with the operational risk management framework and the business continuity plan, the Integrated Risk Management team piloted a risk analysis exercise based on a disaster scenario.

The scenario involved sudden, intense flooding in the Greater Montreal area (including Laval, the South Shore and the North Shore). This scenario analysis allowed the Bank to integrate climate risks into its management approach for risks inherent in its business.

The Bank analyzed the scenario and estimated its impact on risks related to its activities. Operational risk was quantified first, given the nature of the disaster. The mitigation strategies adopted by the Bank in the course of its business (insurance coverage, business continuity plan, crisis management framework) were also considered. A sudden climate event of this nature would trigger the Bank's business continuity and crisis management plans. The following aspects of the business continuity plan were therefore tested:

- Availability of and access to activity and continuity sites (branches and corporate sites)
- Risk that human resources would be unavailable over a long period (key continuity resources)
- Risk related to the continuity of the activities of third parties (resilience of third parties responsible for key processes)
- Technology risk (availability of essential IT services and key systems)

The Bank also assessed the credit risk resulting from this scenario. It estimated the direct and indirect impact, considering the areas where it would be most vulnerable to this type of natural disaster. Based on the geographical profile of this scenario, the analysis covered around 28% of the Bank's total loan portfolio, of which only 9% faced the possibility of flooding. Credit losses in the most vulnerable areas were estimated. The Bank also considered the impact on liquidity and market risks as well as on its income.

In conclusion, the results presented to management demonstrated the Bank's resilience. Our crisis management plans and framework allowed us to be agile in reacting to large-scale flooding, which had a limited impact on the Bank's capitalization (mainly resulting from credit losses).

Managing Climate-related Risks

We are taking action to roll out strategies and policies that account for climate risk. We strive to keep up with best practices, while supporting and advising clients as they transition to a low-carbon economy. We are therefore continuing to offer climate risk management training throughout the organization, in particular for client-facing employees.

Over the past few years, the Bank has enhanced its environmental commitments and made an official commitment not to offer or grant new financing related to oil and gas exploration, exploitation or production in the Arctic, given the fragility of this environment and the fact that it is likely to become more attractive to investors over the coming decades. The Bank has also confirmed its commitment not to finance new thermal coal mining and processing activities.

The rapidly changing economic, regulatory, technological and market environments could also affect certain activities or the Bank as a whole. While the Bank is committed to doing everything it can to mitigate climate-related risks and support the transition to a low-carbon economy, it cannot predict the effectiveness of government-led climate strategies and proposed regulatory changes or assume responsibility for achieving objectives set as part of such strategies and changes. The Bank will continue to closely monitor related developments and implement its climate-related risk management framework.

Managing the loan portfolio

Climate risk reflects the impact of the energy transition and extreme weather events on credit risk. It could ultimately lead to higher probabilities of default and higher credit losses in the event a counterparty defaults. The risk management framework has therefore been expanded to include new measures intended to identify, assess, control and monitor climate risk. The Bank has developed and is gradually implementing a process to assess and quantify the impact of climate change on its portfolios, strategy and results.

This involves carrying out due diligence, in particular when granting credit. Over the past two years, we have prioritized the sectors that generate the most greenhouse gas emissions and considered the amounts made available to them. The industries targeted include oil and gas, utilities, transportation, real estate and heavy industry. The ESG risk analysis framework calls for the collection of information on the carbon footprint and includes a classification of climate risks (transition and physical risks) based on the sector and industry as well as the scores assigned by ESG rating agencies. For clients in these industries, we discuss their strategic positioning and the existence of an energy transition plan (commitments, reduction targets, diversification of activities) at least once a year as part of the credit origination or renewal process. Numerous other criteria are also considered, including waste management practices, labour standards, corporate governance, responsibility for products and human rights policies.

Starting in spring 2023, in line with the execution of our ESG risk deployment plan, we will integrate systematic collection of ESG data into the entire corporate banking portfolio (including project finance). This will enable us to have an even greater impact and effectively support our clients in their energy transition, while enhancing our climate risk analysis capacities (scenarios, vulnerabilities and modelling).

To ensure sound credit risk management, separate parties in the Risk Management and management teams (independent from the business lines) are responsible for each credit origination decision, depending on the size and degree of risk associated with the credit transaction in question. Decision-making powers in this area are delegated as set out in the credit risk management policy. Large credits and credits that involve higher risk for the Bank are approved by a higher line level. The Global Risk Committee, which is made up of members of senior management, approves and monitors all large credits (including in terms of climate risk). Credit applications that exceed management latitudes are submitted to the Risk Management Committee of the Board for approval.

The Bank also works with various industry partners to identify and implement sound management practices that promote the transition to a low-carbon economy.

Disclosing Climate-related Risks

The identification, quantification and management of climate risks are part of our internal and external disclosure requirements. The information included in internal reports is presented to senior management, executive committees and the Risk Management Committee of the Board, in accordance with established governance practices. We also produce external reports to inform our stakeholders of the progress of our climate risk management efforts.

Metrics and Targets

To better understand and continue to reduce the environmental impact of its activities, the Bank has voluntarily implemented various metrics and targets to reduce its GHG emissions.

Metrics	Data as at October 31, 2022	Targets
Linked to operational activities		
Achieve carbon neutrality	Achieved	Maintain carbon neutrality
GHG emissions from our operations	8,996 tonnes of CO_2e	Reduce by 25% by the end of 2025[1]
Linked to financing and investment activities		
GHG emissions from our financing and investment activities	Interim reduction target for the Oil & Gas Producers sub-sector	Net-zero emissions by 2050
Grow the portfolio of loans related to renewable energy at a faster pace than the portfolio of loans related to non-renewable energy	Since January 31, 2019, the portfolio of loans related to renewable energy grew by 26%, while the portfolio of loans related to non-renewable energy decreased by 29%	Grow the portfolio of loans related to renewable energy at a faster pace than the portfolio of loans related to non-renewable energy over the medium and long term
Sustainable bonds	Around 70% of the $3.2 billion issued has been allocated to renewable energy projects[2]	Watch for business opportunities

1 This absolute target includes Scope 1, 2 and 3 emissions (Scope 3 includes employee business travel and paper consumption as part of the supply chain) and uses 2019 as the reference year. This target includes our activities in Canada and the United States, as well as our subsidiary in Dublin, our branch in London and our representative offices abroad.
2 As at December 31, 2022.

GHG Emissions From Our Operations

Since 2008, the Bank has calculated and disclosed its carbon footprint each year as part of the CDP.

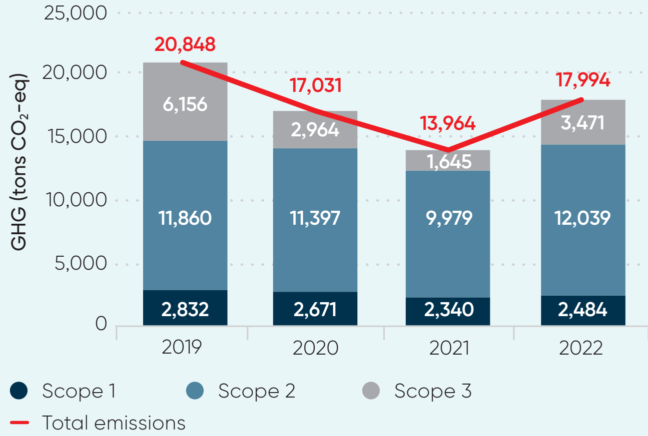
Over the past few years, the Bank has rolled out a number of initiatives to improve energy efficiency and reduce waste in its buildings. Here are a few examples:

- Electric vehicle charging stations at branches and at the head office under construction
- Innovative energy use management system rolled out to over 260 branches across Canada
- LEED assessment system criteria applied to many existing buildings
- Construction of a new head office designed to meet LEED v4 Gold criteria and optimization of existing office spaces
- End of purchases of single-use water bottles from our suppliers

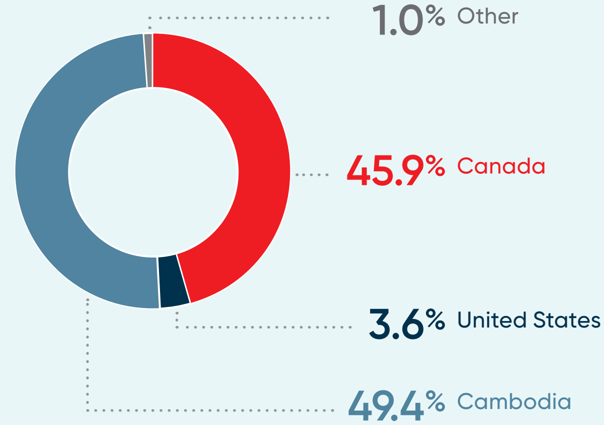
With help from its employees, the Bank has launched a number of internal awareness campaigns to encourage the adoption of green behaviours.

In 2022, the Bank's footprint increased by 29% compared to 2021. This was mainly due to business recovery, the growth of ABA Bank and renewed business travel. We observed a 14% reduction in the carbon footprint between the post-pandemic level of 2022 and the pre-pandemic level of 2019. We have made efforts to obtain accurate data. Thanks to a series of initiatives, including those set out above, the Bank was able to reduce its net carbon emissions despite an increase in its activities.

The Bank's total footprint



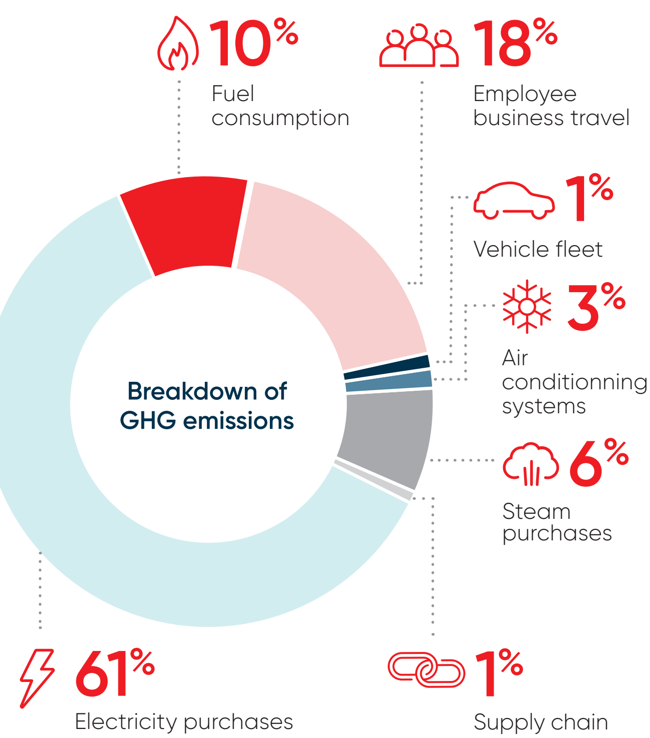
Geographic breakdown of GHG emissions



To calculate its carbon footprint, the Bank uses the methodology described in the Greenhouse Gas Protocol Initiative (GHG Protocol) (WRI and WBCSD, 2015; 2011; 2004). In fiscal 2022, the Bank's GHG emissions were estimated at 17,994 tonnes of CO_2e. This includes emissions from all our activities in Canada and the United States (including the Credigy subsidiary), as well as our subsidiaries in Dublin, Thailand and Cambodia, our branch in London and our representative offices abroad. For the first time, we obtained data to measure the carbon footprint of our representative offices in Hong Kong and Cuba as well as that of our subsidiary ATA IT in Thailand.

The growing scope of ESG processes is leading us to refine emissions assumptions and calculation and assessment methodologies. This resulted in adjustments to the data from previous years. These adjustments will enable stakeholders to better assess the Bank's progress over time.

In 2023, the Bank purchased 18,000 Verified Carbon Units to offset its 2022 emissions and achieve carbon neutrality from Will Solutions, a B Corp certified company that adheres to the principles of a sharing economy and secondly monetizes the climate-related actions of Quebec SMEs to the benefit of the local community.

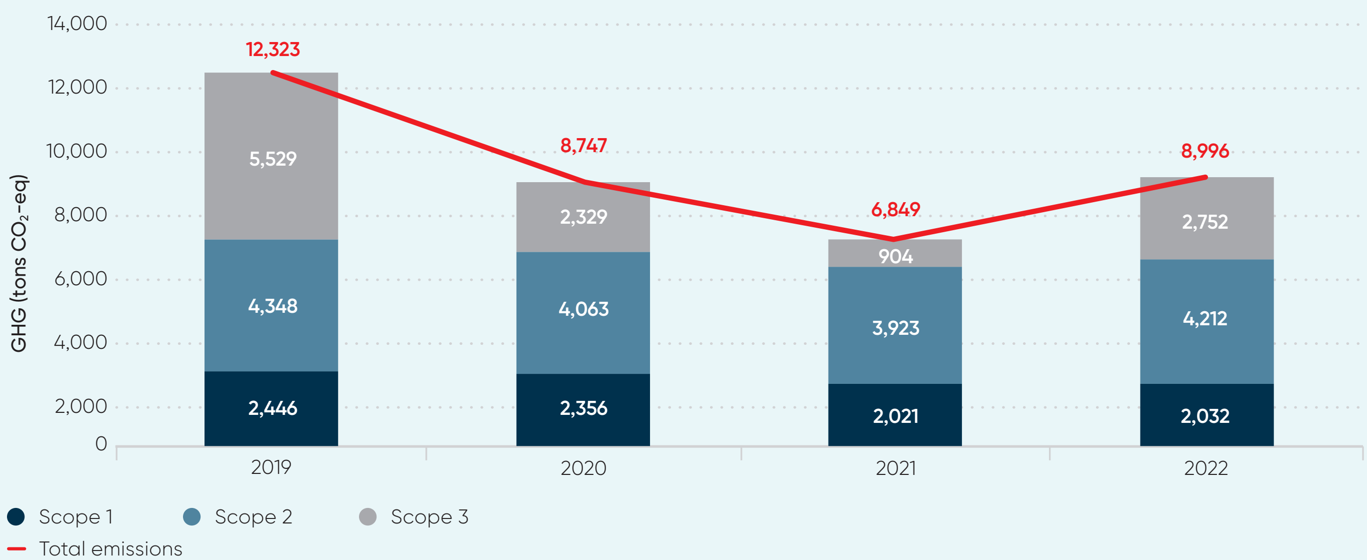


Reduction Target For Our Operations

Each year, we aim to reduce our carbon footprint. We have therefore set a target to reduce GHG emissions from our own operations by 25% by the end of 2025, compared to 2019. This absolute, science-based target aims to help limit global warming to 1.5°C. It includes Scope 1, Scope 2 and Scope 3 emissions (Scope 3 includes employee business travel and paper consumption as part of the supply chain). The scope of the target was reviewed in 2022 to cover the activities of the Bank in Canada and the United States (including the Credigy subsidiary), as well as the activities of our subsidiary in Dublin and our offices in Europe, Hong Kong and Cuba. We have excluded the portion of the carbon footprint attributable to the Bank's activities in Cambodia and in Thailand, due to the limited renewable energy options available in these countries. However, we are pursuing our commitment to leveraging our economic and social impact to promote sustainable development in Cambodia. For more information, consult the ESG Report, available in the Corporate responsibility section of **nbc.ca**.

In line with our target, we have reduced the carbon footprint of our operations by 27% since 2019. Our carbon footprint increased by 31% in 2022 compared to 2021, mainly as a result of business recovery and renewed business travel over the second half of the year. In the coming year, we will continue to roll out initiatives aimed at achieving our reduction target.

Tracking the target



This absolute target includes Scope 1, 2 and 3 emissions (Scope 3 includes employee business travel and paper consumption as part of the supply chain) and uses 2019 as the reference year. This target includes our activities in Canada and the United States, as well as our subsidiary in Dublin, our branch in London and our representative offices abroad.

Here are a few examples:

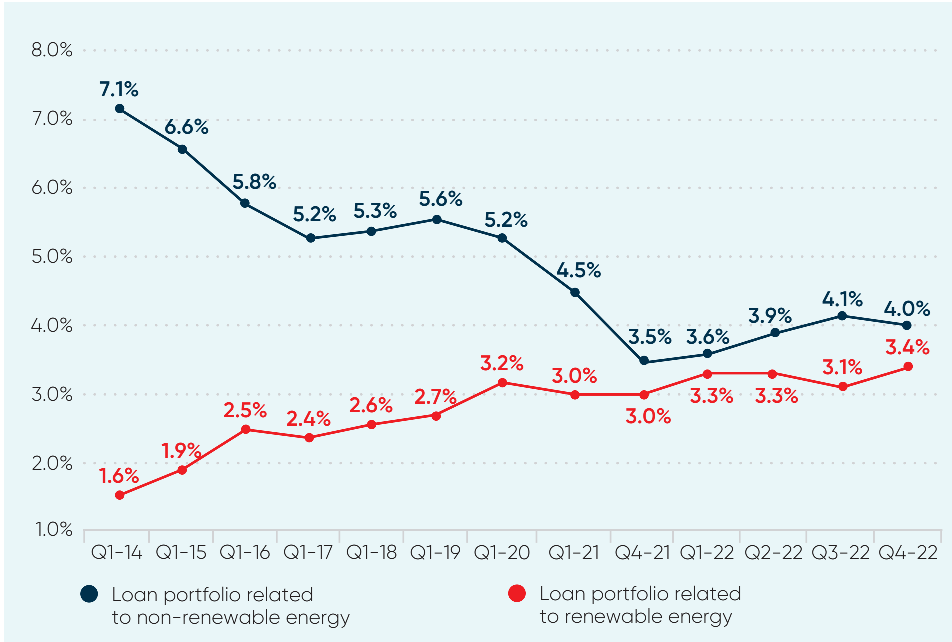
- Reducing employee business travel by promoting virtual meetings, such as video conferencing and teleconferencing
- Continuing to focus on energy efficiency and applying LEED assessment system criteria to our buildings
- Moving to the new head office and centralizing teams from various buildings in Montreal
- Gradually retiring Heating, Ventilating and Air Conditioning (HVAC) equipment that uses natural gas at sites in Quebec, Ontario and Manitoba and replacing it with fully electric systems

74% of the energy used by the Bank comes from renewable sources, mainly hydroelectricity, in line with the target.

Metrics Used to Assess Climate-related Risks and Opportunities

Financing activities

Exposure to non-renewable energy is an important metric when it comes to identifying climate-related risks and opportunities. As at October 31, 2022, the loan portfolio's exposure to non-renewable energy had increased slightly compared to the previous year as a result of the macro-economic context. Most of this annual increase originates from the Pipelines component of the indicator. Furthermore, as at October 31, 2022, the credit risk exposure of the portfolio of loans related to renewable energy had increased by 26% since January 31, 2019, while the portfolio of loans related to non-renewable energy had decreased by 29% over the same period.



The Bank remains committed to reducing the carbon footprint of its loan portfolio through its support for Canadian businesses in the renewable energy sector, sound management of its energy portfolio and increased investments in green energy. The chart above represents the loan portfolio's exposure to renewable and non-renewable energy as a percentage of total credit risk exposure.[1]

In accordance with the 2017 TCFD recommendations, loans associated with non-renewable energy have been defined as carbon-related assets. These include assets tied to the energy and utilities sectors (Global Industry Classification Standard) and exclude water utilities as well as independent and renewable power generators.

Based on the segmentation of the Bank's industry sectors, loans associated with non-renewable energy include borrowers in the utilities sector (including pipelines and loans linked to the production, transport and distribution of electricity and natural gas), the oil and gas sector and the metals and mining sector (coal only). Loans associated with renewable energy include certain utilities, more specifically for activities related to water utilities and hydropower production.

To avoid too much concentration in higher-risk sectors, the Bank has been monitoring a climate-related indicator and presenting it as part of its risk appetite framework since the beginning of fiscal 2021.

1 Exposure is calculated as the total exposure to credit risk and includes amounts drawn, undrawn commitments and other off-balance-sheet items as presented on page 83 of the 2022 Annual Report. The distribution by industry is identical to that presented on page 21 of our Supplementary Regulatory Capital and Pillar 3 Disclosure.

Metrics and Targets (cont.)

Carbon-related assets

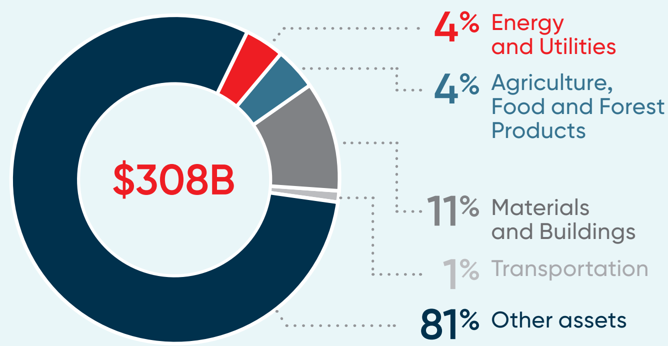
Carbon-related assets are defined in the TCFD recommendations[1] and are measured based on our total exposure to credit risk.[2]

Energy and Utilities	Transportation	Materials and Buildings	Agriculture, Food and Forest Products
Oil and Gas Coal Electric Utilities (excluding water utilities and independent power and renewable electricity producers) Pipelines	Air Freight Passenger Air Transportation Maritime Transportation Rail Transportation Trucking Services Automobiles and Components	Metals and Mining Chemicals Construction Materials Capital Goods Real Estate Management and Development	Beverages Agriculture Packaged Foods and Meats Paper and Forest Products

	2022	2021	2020[1]	2019[1]
Carbon-related assets in loan portfolio[2]	19%	17%	4,7%	5,2%

The year-over-year increase is mainly due to the materials and buildings sector, which includes commercial real estate loans and loans linked to mining and chemical manufacturing. For several years now, we have included this indicator in our concentration risk monitoring metrics and taken it into account as part of our sectoral limit management process.

Carbon-related assets
(% of the total credit exposure)[2]



1 In October 2021, the TCFD updated its definition of carbon-related assets to include the transportation, materials and buildings and agriculture, food and forest products sectors. Figures for years prior to 2021 only include assets tied to the energy and utilities sectors.

2 Exposure is calculated as the total exposure to credit risk and includes amounts drawn, undrawn commitments and other off-balance-sheet items as presented on page 83 of the 2022 Annual Report. The distribution by industry is identical to that presented on page 21 of our Supplementary Regulatory Capital and Pillar 3 Disclosure.

Financed Emissions – Sector Approach

Consistent with the goals of the Paris Agreement, the Bank is committed to aligning its financing activities with the target of net-zero emissions by 2050. The Bank recognizes the important role it can play in supporting clients in their energy transition and decarbonization strategies to achieve a low-carbon economy.

In 2021, the Bank joined the Partnership for Carbon Accounting Financials (PCAF), a global partnership of financial institutions that work together to develop an approach to assess and disclose the GHG emissions resulting from their financing and investment activities. The Bank also joined the Net-Zero Banking Alliance (NZBA) in 2021. This initiative furthers banks' efforts to address climate change by aligning financing activities with net-zero emissions by 2050.

In line with these commitments, the Bank began to quantify its financed emissions and set interim net-zero targets for carbon-intensive sectors. In 2022, the Bank released an initial interim target for its portfolio of loans in the Oil & Gas Producers sub-sector. In 2023, the Bank made progress towards net-zero emissions by setting two additional interim targets for the Power Generation and Commercial Real Estate sectors, in line with PCAF recommendations for these asset classes. In accordance with NZBA guidelines, the Bank plans to expand its coverage of other sectors and sub-sectors and define reduction targets while focusing on carbon-intensive sectors.[1]

The methodologies used are based on international and regional frameworks, including the GHG Protocol,[2] the PCAF Global GHG Accounting and Reporting Standard for the Financial Industry,[3] the International Energy Agency pathway to net-zero emissions by 2050,[4] the International Energy Agency World Energy Outlook 2021 report,[5] the Government of Canada's **2030 Emissions Reduction Plan** and the report **Canada's Energy Future 2020**. The Bank used the International Energy Agency (IEA) Net-zero Emissions (NZE) scenario pathway to set its interim targets for 2030.

1 According to the NZBA, the carbon-intensive sectors are: agriculture; aluminum; cement; coal; commercial and residential real estate; iron and steel; oil and gas; power generation; and transport.
2 GHG Protocol
3 The Global GHG Accounting & Reporting Standard for the Financial Industry
4 Net-zero by 2050: A Roadmap for the Global Energy Sector
5 World Energy Outlook 2021

Oil and Gas Producers

Financed emissions targets for the Oil and Gas Producers portfolio

In 2022, the Bank released its financed emissions, baseline intensities and interim targets for oil and gas producers. In line with its commitment to continuous improvement, the Bank has revised its methodology to align it with industry best practices and more precisely quantify its financed emissions. The Bank remains determined to achieve its interim reduction target of 31% by 2030 for the three scopes.

Scope 1 and 2 financed emissions

Minor adjustments to the quantification methodology and improvements in data quality[1] have been made since the Bank's previous disclosure, resulting in a negligible change in the 2019 Scope 1 and 2 baseline intensity from 0.915 to 0.90 tCO_2e/TJ.[2]

Scope 3 financed emissions

The Bank also improved its financed emissions quantification methodology for Scope 3 by defining a physical-intensity proxy by fuel type produced.[3] Emissions are determined by multiplying the company's production in TJ by the physical-intensity proxy for the fuel type produced.

Physical-intensity proxies were developed taking into account the distribution of the different product end uses[4] (i.e., downstream refinement into specific fuels or petroleum based products), the country of end consumption based on statistical data[5] and fuel-specific emission factors.[6]

The new 2019 baseline Scope 3 financed emissions intensity moved from 5.716 to 7.69 tCO_2e/TJ and the PCAF data quality score now stands at 2.90 against 3.06 previously.

For more information on the calculation methodology, consult the *Financed Emissions* section of the **2021 TCFD Report** on **nbc.ca**.

1 Reported emissions reviewed and debt calculation updated further to the release of the second PCAF standard.
2 Tonnes of carbon dioxide equivalent (tCO_2e) and energy production in terajoules (TJ)
3 The types of fuel produced are natural gas and crude oil.
4 Sourced from the Canadian National Inventory Report (NIR) or the International Energy Agency (IEA).
5 Sourced from Statistics Canada.
6 Sourced from the Canadian National Inventory Report (NIR) or the United States Environmental Protection Agency (US EPA).

Metrics and Targets (cont.)

Progress compared to baseline (2019)

Absolute financed emissions for Scope 1, 2 and 3 reached 4.2 million tCO_2e as at October 31, 2022, a 63% decrease compared to the baseline (2019).

The combination of decreased financing granted to carbon-intensive clients, favourable market valuation for public companies and an atypical period of rapid de-leveraging in oil and gas were the main drivers of the decrease in weighted average intensity of financed emissions since 2019.

Results		2019 baseline year	As of October 31, 2022	Evolution since 2019
Financed emissions (in millions tCO_2e)	**Scope 1 and 2**	1.1	0.4	-64%
	Scope 3	10.2	3.8	-63%
Weighted average emission intensity (tCO_2e/TJ)	**Scope 1 and 2**	0.9	0.66	-27%
	Scope 3	7.69	6.18	-20%
Portofolio-wide intensity (tCO_2e/\$M)	**Scope 1 and 2**	0.47	0.31	-33%
	Scope 3	4.27	3.07	-28%

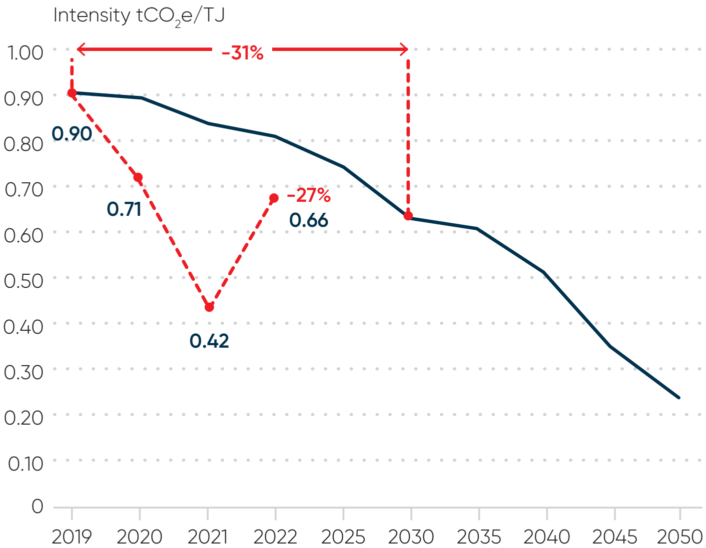
Additional Information	Unit	2019 baseline year	As of October 31, 2022
Gross loans to O&G producers[1]	Dollars (millions)	2,398	1,245
Financed energy production of O&G producers	Terajoules	160,760	58,943
Sector coverage[2]	Percentage	100	100
Public company concentration in the total loans	Percentage	68	61
PCAF data quality	Scope 1 and 2	2.54	2.06
	Scope 3	2.90	2.95

1 This amount is included in the Oil and gas category in Table 9 on page 119 of the 2022 Annual Report. This table presents the distribution of gross loans and acceptances by borrower category under Basel asset classes.
2 Sector coverage is the proportion of gross loans included in the reduction target compared to the total gross loans for the sector. In accordance with the PCAF standard, some exclusions were made due to limitations of available data.

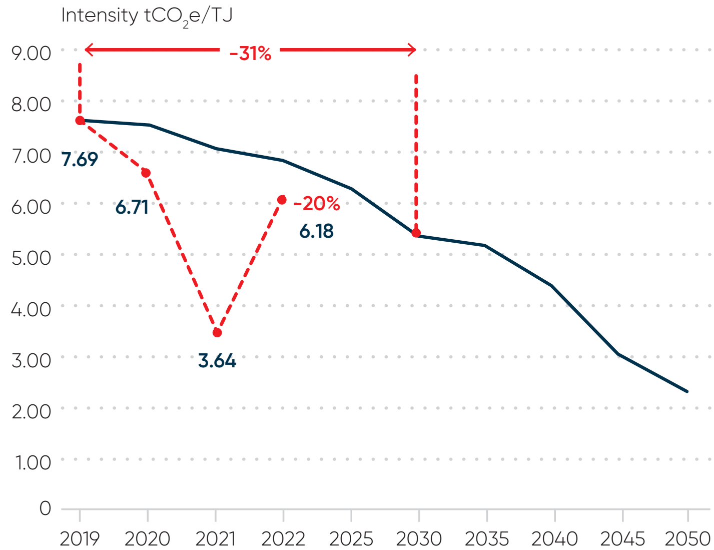
Metrics and Targets (cont.)

The Bank recognizes that, although efforts have been made to achieve the target set one year ago, uncertainty persists due to the macroeconomic context.

Scope 1 and 2 Pathway



Scope 3 Pathway



*Taking both the IEA NZE scenario and the Government of Canada's net-zero strategy into consideration

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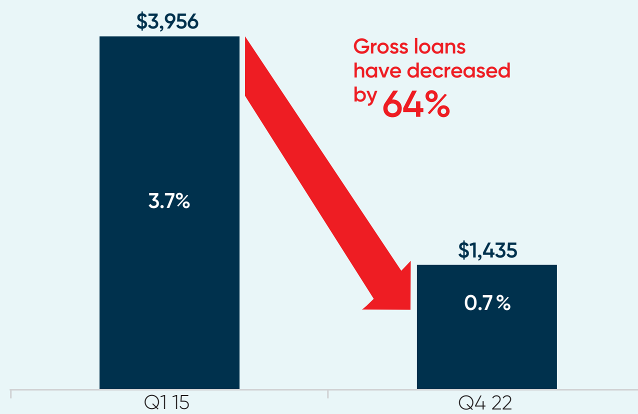
Since 2015, the Bank has reduced financing granted to oil and gas producers and services by 64%.

As at October 31, 2022, loans to oil and gas producers and services represented 0.7% of the total gross loan book. This decrease confirms the Bank's long-term commitment to reducing its exposure in this sector.

The Bank remains committed to pursuing its decarbonization strategy and continues to support its clients in their transition. We remain an active member of the NZBA and PCAF working groups, contributing with our peers to the advancement of the methodology and the improvement of climate data quality.

O&G Producers and Services Exposure

Gross loans in millions of dollars and as a percentage of total loans



Commercial Real Estate

The Bank's Commercial Real Estate portfolio is composed of loans for specific purposes related to the purchase or refinancing of buildings. The properties in the portfolio include buildings used for commercial purposes, such as retail stores, hotels, offices or multi-family housing, where the building owner rents out property for income-generating activities. For the moment, owner-occupied buildings and buildings deemed to be under construction have been excluded because of the unavailability of data needed to calculate GHG emissions.

The Bank measured its 2019 baseline in terms of the weighted average GHG emissions in tonnes of carbon dioxide equivalent (tCO_2e) and square footage for each counterparty in the portfolio that owned commercial property, as at October 31, 2019.

Methodology used to calculate financed emissions

The Bank calculated its financed emissions based on the gross loan amount, in accordance with the recommendations set out in the Commercial Real Estate section of the PCAF standard:[1]

Financed Emissions

$$\sum \frac{\text{Outstanding amount}_b}{\text{Property value at origination}_b} \times \text{Energy consumption} \times \text{Emissions factor}_e$$

(with b=building and e=energy source)

Emissions data are ranked based on their availability, using a ladder approach that involves various sources and statistics[2] to assess data accuracy, as defined in the table below.

PCAF data quality scoring

CERTAIN

Score 1	**Actual** building energy consumption and supplier-specific emission factors
Score 2	**Actual** building energy consumption and average emission factors
Score 3	**Estimated** building energy consumption per floor area based on the official building energy labels, the actual floor area and the average emission factors
Score 4	**Estimated** building energy consumption per floor area based on building type and location-specific statistical data, the actual floor area and the average emission factors
Score 5	**Estimated** building energy consumption per building based on building type and location-specific statistical data, the number of buildings and average emission factors specific

UNCERTAIN

Operating credits, public companies, owner-occupied buildings, real estate investment trusts and land corporations are excluded from the reduction target and from the results presented below, since the financing is not related to a property that generates rental income. To ensure transparency, their GHG emissions were calculated based on the commercial loan methodology suggested by the PCAF.[3]

1 In the Commercial Real Estate portfolio, the gross loan amount and total commitment are equivalent for mortgage products.
2 Data are sourced from Statistics Canada and the Canadian National Inventory Report (NIR).
3 In total, these assets represent $2B in gross loans; financed emissions reached 25,739 tCO_2e as at October 31, 2019.

2019 baseline financed emission results

In 2019, total financed emissions reached 88,359 tCO_2e for Scopes 1 and 2, with a data quality score of 4.85.

Scope 1 encompasses direct GHG emissions related to the building's energy use, whereas Scope 2 encompasses indirect GHG emissions related to the generation of purchased energy used by the building.

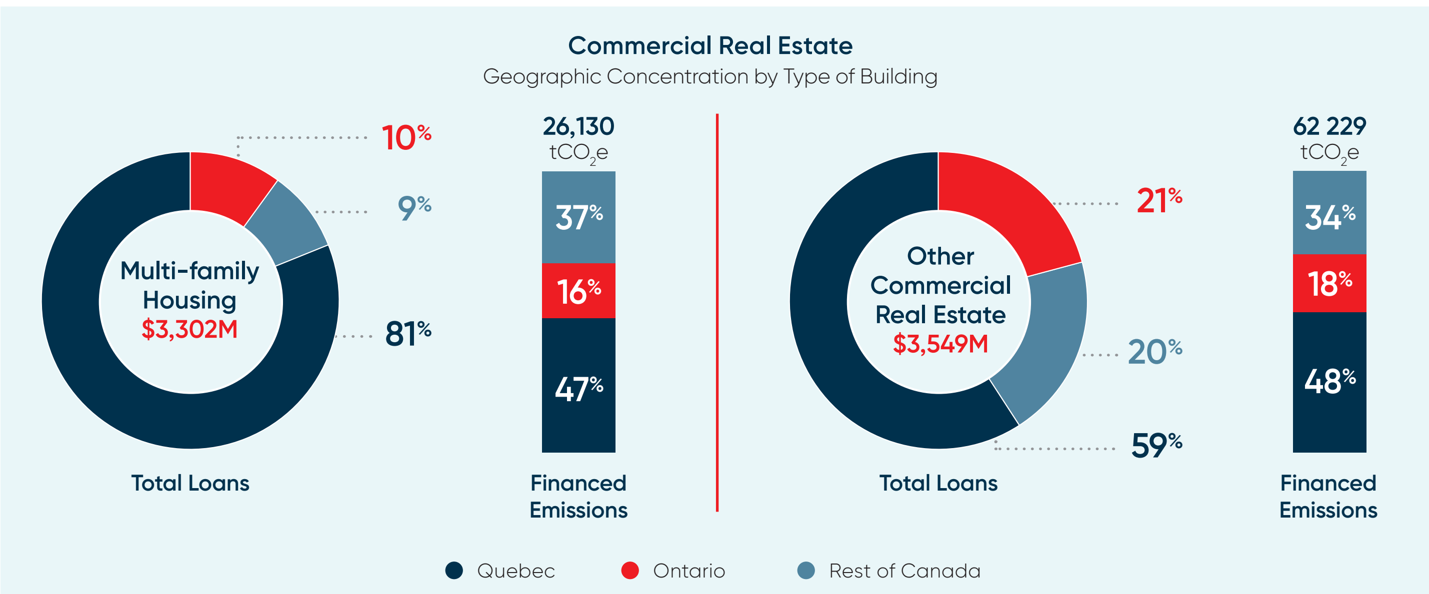
The Bank's Commercial Real Estate portfolio is characterized by a high concentration of buildings in Quebec. In fact, 81% of the multi-family housing segment and 59% of the other commercial real estate segment are concentrated in this province.

GHG emissions are particularly low in Quebec's multi-family housing sector due to high use of hydroelectricity in the province.

Improving data quality is a shared objective we want to achieve with our clients so we can provide an even more accurate portrait of the carbon footprint of this portfolio in the coming years.

Scope 1 and 2 emissions	Unit	Baseline 2019
Financed emissions	tCO_2e (thousands)	88.4
Weighted average emission intensity	tCO_2e/1,000 sq.ft	2.85
Portofolio-wide intensity	tCO_2e/\$M	12.90
Additional Information		
Gross loans to commercial real estate clients[1]	Dollars (millions)	6,851
Floor Area	Square footage (millions)	73.2
Sector coverage	Percentage	98
Public company concentration in the total loans	Percentage	0
PCAF data quality	Score	4.85

The Bank has therefore adopted an interim reduction target of 50% by 2030 for this sector, based on the approach detailed in the next section.



1 This amount is included in the Real estate and real-estate-construction category in Table 9 on page 119 of the 2022 Annual Report. This table presents the distribution of gross loans and acceptances by borrower category under Basel asset classes.

Methodology for calculating sector-specific intensity

The Bank calculated its weighted average financed emission intensity based on the emissions of each building (in carbon dioxide equivalent per square foot), taking into consideration the weighted average of their gross loan amounts.

The weighted intensity of the portfolio is calculated as follows:

Weighted average financed emissions intensity

$$\sum \frac{\text{Company's outstanding amount}}{\text{Total outstanding amount}} \times \frac{\text{Total building emissions } (tCO_2e)}{\text{Building floor area (1,000 sq.ft)}}$$

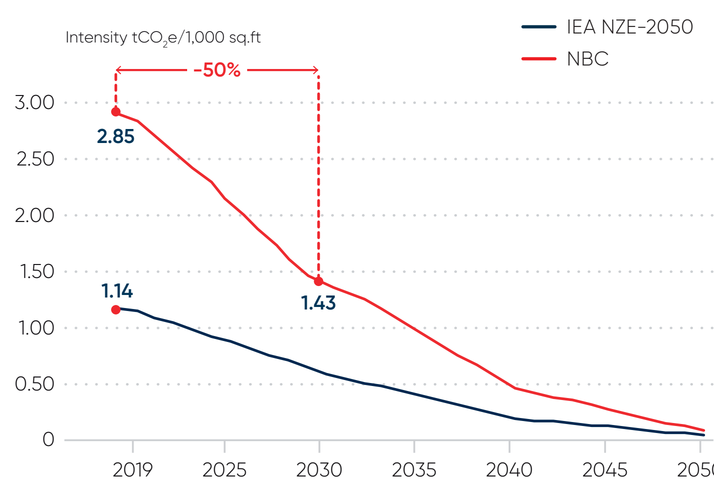
2030 reduction target

Emission scopes	Metric	2019 baseline intensity	2030 target
Scope 1 and 2 **Building energy consumption**	tCO_2e/1,000 sq.ft	2.85	50% reduction in portfolio intensity

Coverage of 98% of total financed emissions for this sector, due to certain data limitations.[1]

To achieve its target, the Bank will focus on partnering with its existing clients to support their energy transition and attracting new clients with ambitious decarbonization strategies.

Scope 1 and 2 Pathway



1 Information about the property, such as the address or value of the building at origination, was unavailable.

Power Generation

The Bank's Power Generation portfolio contains business loans to power generation companies and project financing for the operation or construction of power generation facilities. These include fossil-fuel power plants (natural gas and coal[1]) and renewable energy power plants (including nuclear, hydro, solar, wind and biogas).

The Bank measured its 2019 baseline in terms of weighted average GHG emissions in tonnes of carbon dioxide equivalent (tCO_2e) and energy production in megawatt-hours (MWh) for each company in its portfolio as at October 31, 2019.

The Bank remains committed to reducing the carbon footprint of its portfolio by supporting businesses in the renewable energy sector. For more information, consult the *Financing activities* section on page 28 of this report.

Methodology used to calculate financed emissions

The Bank measures its financed emissions based on the gross loan amount in accordance with PCAF standards for business loans, equity investments and project financing:

Business loans

$$\text{Financed emissions} = \sum \frac{\text{Company's Outstanding Amount}}{\text{EVIC* (public company) or Debt + Equity (private company)}} \times \text{Company Emissions}$$

*Enterprise Value Including Cash (EVIC) is the sum of market capitalisation plus total debt.

Project financing

$$\text{Financed emissions} = \sum \frac{\text{Company's Outstanding Amount}}{\text{Project (Debt + Equity)}} \times \text{Project Emissions}$$

Emissions data are ranked based on their availability, using a ladder approach that involves various sources and statistics to assess data accuracy, as defined in the table below.

PCAF data quality scoring

CERTAIN

Score 1	**Verified** company emissions
Score 2	**Unverified** company emissions
Score 3	Estimated emissions based on company/project electricity **production** amounts and a physical activity-based emission factor
Score 4	Estimated emissions based on company/project **revenue** amounts and an economic activity-based emission factor
Score 5	Estimated emissions based on company/project **asset** amounts and an economic activity-based emission factor

UNCERTAIN

1 As a secondary activity only.

2019 baseline financed emission results

Financed emissions were only calculated for Scope 1, as generation activities are the most carbon-intensive portion of the electricity production lifecycle, while Scope 2 emissions were deemed to be immaterial.

Scope 1 primarily relates to emissions from fuel combustion for electricity generation, but also includes emissions from fuel combustion for operational activities such as building heating, back-up generators and automobile fleets.

The Bank's 2019 financed emissions for this sector stood at 1.07 million tCO_2e, based on committed amount.

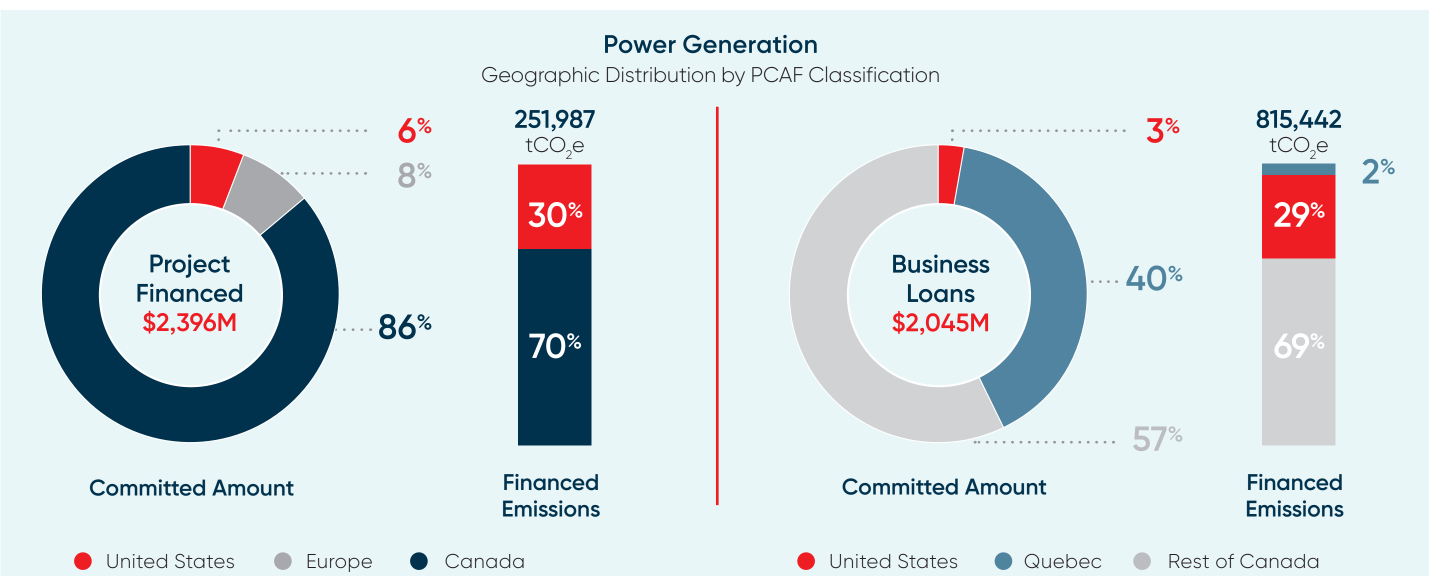
In accordance with the PCAF standard, the Bank also calculated its financed emissions using the total gross loan amount. The result stood at 0.56 million tCO_2e, with a data quality score of 3.00.

The Bank includes its financing for Canadian, American and European clients in its reduction target. The average weighted intensity of financed emissions for the portfolio in the baseline year (2019) was 0.11 tCO_2e/MWh (based on total commitments).

Scope 1 emissions	Metrics	Baseline 2019
Financed emissions based on committed amount[1]	tCO_2e (millions)	1.07
Financed emissions based on outstanding amount	tCO_2e (millions)	0.56
Weighted average emission intensity	tCO_2e/MWh	0.11
Portofolio-wide intensity	tCO_2e/$M	0.24
Other data inputs		
Committed amount to Power Generation	Dollars (millions)	4,441
Gross loans to Power Generation[2]	Dollars (millions)	2,822
Energy production of Power Generation	Megawatthour (millions)	585.8
Sector coverage	Percentage	86
Public company concentration in the total loans	Percentage	25
PCAF data quality	Score	3.00

This intensity covers 86% of the total financed emissions for the portfolio, due to certain data limitations and the exclusion of financed projects that are under construction[3] (power generation data not available because project not yet operational).

For several years now, the Bank has supported clients in this sector in executing their transition plans. It has also adjusted its business model to emphasize renewable energy. The Bank has therefore adopted an interim reduction target of 33% by 2030, based on the approach detailed in the next section.



1 Committed amount reflects our total lending commitment and includes both drawn and undrawn loan balances. We also considered equity investments in the total.
2 This amount is included in the Utilities category in Table 9 on page 119 of the 2022 Annual Report. This table presents the distribution of gross loans and acceptances by borrower category under Basel asset classes.
3 Construction projects represent 9% of total commitments and their emissions stood at 1,818 tCO_2e as at October 31, 2019 (based on total commitments and production estimates).

Sector-specific baseline intensity

The weighted average intensity of the portfolio is calculated as follows:

Weighted average financed emissions intensity

$$\sum \frac{\text{Company's committed amount}}{\text{Total committed amount}} \times \frac{\text{Company's emissions } tCO_2e)}{\text{Company's production (MWh)}}$$

2030 interim reduction targets

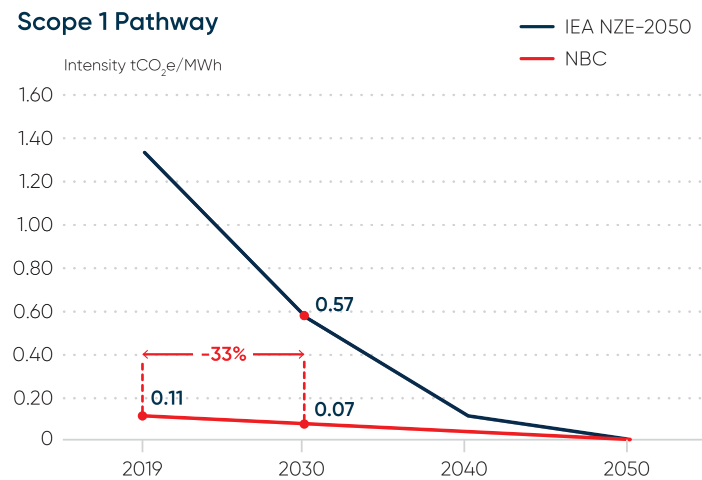
The Bank used the IEA NZE by 2050 scenario to inform its net-zero by 2050 target and set its interim target for the Power Generation sector.

Emissions scopes	Metric	2019 Baseline	2030 Target
Scope 1 **Fuel combustion for power generation**	tCO_2e/MWh	0.11	33% reduction in portfolio intensity

The low intensity level observed for the baseline year led us to use a convergence approach that remains aligned with the IEA NZE scenario.

The interim reduction target for 2030 was determined by establishing a linear trajectory to reach net-zero emissions by 2050 from the baseline intensity and interpolating the minimum reductions required to follow the linear trajectory for 2030.

As highlighted in the chart, the baseline intensity was significantly below the IEA NZE target for 2030. In addition, the linear trajectory established by the convergence approach indicates our intention to maintain an intensity below the IEA pathway at all times until 2050.



Metrics and Targets (cont.)

Next steps

The Bank recognizes the role it can play in advancing the transition to a net-zero economy by partnering with its clients on innovative financing solutions. Since joining the NZBA in 2021, the Bank has set three interim reduction targets for the Commercial Real Estate sector, the Power Generation sector, and the Oil & Gas Producers sub-sector, building on its efforts to develop a green economy.

We are committed to continuing to measure the footprint of our portfolio of loans and investments, while expanding the Bank's net-zero emissions targets to cover other carbon-intensive sectors, in accordance with the requirements of the NZBA and the PCAF. We will continue to refine and enhance the accuracy of emissions information as data and industry best practices evolve.

Through this process, the Bank will continue to engage with its clients and provide them with strategic advice and financing to support their transition plans, based on their geographical situation and economic environment.

Transparency related to our commitment to the NZBA will be provided through this annual TCFD disclosure, as well as through updates on the progress being made in terms of metrics and targets for the Bank's financed emissions.

The Bank joined the NZBA over a year ago, reinforcing its commitment to playing a significant role in financing the climate transition and supporting collaborative approaches between the public and private sectors to reach the goal of net-zero by 2050. This alliance also represents progress toward the shared Bank and NZBA goal of combatting climate change in an inclusive way. Considerable attention will be dedicated to helping clients develop and implement their own transitions to a low-carbon economy, recognizing the complex and interdependent efforts of many stakeholders across the economy.

Metrics and Targets (cont.)

Summary of the financed emissions methodology:

Checklist	Oil & Gas Producers	Commercial Real Estate	Power Generation
Emissions profile/footprinting			
Emissions profile Banks shall establish an emissions baseline and annually measure and report the emissions profile of their lending portfolios and investment activities following relevant international and national GHG emissions reporting protocols and guidelines.	See the respective sector sections above.		
Coverage Emissions profile shall cover a significant majority of a bank's Scope 3 emissions, including the set list of carbon-intensive sectors.[1]	See the respective sector sections above.		
Data quality In accordance with PCAF guidelines, data quality is measured on a scale from 1 to 5 (certain to uncertain) and represents the average weighted data quality for each loan, based on the gross loan amount.	See the respective sector sections above.		
Reporting of emissions Annual reporting of emissions where targets have been set: › absolute emissions, and › portfolio-wide emissions intensity (e.g., tCO_2e/$ lent or invested), and › sector-specific emissions intensity (e.g., CO_2e/metric).	See the respective sector sections above.		
Targets			
Long-term target Banks shall set a long-term target to align with pathways to net-zero by 2050 or sooner.	2050 reduction target set in alignment with IEA NZE by 2050 scenario.		
Interim target Banks shall set interim sector-specific and/or portfolio-wide targets for 2030 or sooner.	Target to reduce sector-specific intensity by 31% (tCO_2e/TJ) by 2030 for scope 1,2 and 3.	Target to reduce sector-specific intensity by 50% (tCO_2e/ft^2) by 2030 for scope 1 and 2.	Target to reduce sector-specific intensity by 33% (tCO_2e/MWh) by 2030 for scope 1.
Target types Interim and long-term targets shall be based on: › Absolute emissions; and/or › Sector-specific intensity.	Targets are based on sector-specific intensity in tCO_2e/TJ	Targets are based on sector-specific intensity in tCO_2e/ft^2	Targets are based on sector-specific intensity in tCO_2e/MWh

1 According to the NZBA, the carbon-intensive sectors are: agriculture; aluminum; cement; coal; commercial and residential real estate; iron and steel; oil and gas; power generation; and transport.

Metrics and Targets (cont.)

Checklist	Oil & Gas Producers	Commercial Real Estate	Power Generation
Reference year The reference year for the above targets shall be set to be no more than two full reporting years prior to the year when the target is set (barring exceptional economic circumstances).	An extension was provided due to the COVID-19 pandemic. The use of 2019 as a baseline was preferred, since 2020 and 2021 were affected by an exceptional macro-economic context.		
Scenarios Banks shall disclose which scenario their climate targets are based upon.	Targets are aligned with the IEA NZE by 2050 Scenario—an internationally recognized source that is also used by other financial institutions. The Canada's Energy Future 2020 report and the Canada Emission Reduction Plan's Economically Efficient Pathway were also considered in order to reflect the regional context, given that the Bank's O&G loan book is entirely within Canada.	Targets are aligned with the IEA NZE by 2050 Scenario—an internationally recognized source that is also used by other financial institutions	Targets are currently aligned with the IEA NZE by 2050 Scenario—an internationally recognized source that is also used by other financial institutions. The Bank's will continue to monitor the intensity associated with Power Generation clients to confirm the convergence scenario remains aligned with the IEA NZE by 2050 Scenario over time.
Target coverage			
Carbon-intensive sectors Banks shall prioritize carbon-intensive sectors.[1]	The Bank has prioritized the Commercial Real Estate and Power Generation sectors. Due to limitations of available data and the importance of extraction in the sector, the Bank has also prioritized the Oil & Gas Producers subsector.		
Sector selection Targets shall be set for all, or a substantial majority of, the carbon-intensive sectors listed above, where data and methodologies allow. Sub-sectoral targets may be set in the transport and agriculture sectors.	See the respective sector sections above.		
Sector definition Banks should disclose the sector definition according to internationally recognized sector classification codes, such as the NACE, SIC, GICS or NAICS codes used for the targets for comparability across the banking sector.	NAICS codes for oil and gas extraction are included.	The NAICS codes included in the Commercial Real Estate sector are 53- Real Estate and Rental and Leasing, 23- Construction and 72- Accommodation and Food Services.	NAICS codes beginning with 221 and engaged in power generation are included.
Emissions coverage of clients Targets shall include clients' Scope 1, Scope 2, and Scope 3 emissions, where significant and where data allow, and shall cover a significant majority of a bank's portfolio emissions where data and methodologies allow. The scope and boundary of the targets should account for a significant majority of the bank's portfolio emissions where data and methodologies allow. Scope coverage is expected to increase between each review period.	**Scope 1, 2 and 3** See methodology sections for details.	**Scope 1 and 2** See methodology sections for details.	**Scope 1** See methodology sections for details.

1 According to the NZBA, the carbon-intensive sectors are: agriculture; aluminum; cement; coal; commercial and residential real estate; iron and steel; oil and gas; power generation; and transport.

Metrics and Targets (cont.)

Checklist	Oil & Gas Producers	Commercial Real Estate	Power Generation
Scope of financial activities Targets shall include lending and on-balance sheet investment activities. Banks should be clear about which parts of the balance sheet the targets encompass and increase the scope to include capital market activities over time, as methodologies become available.	Lending activities.	Lending activities.	Lending and investment activities.
Automatic inclusion Clients with >5% revenues from thermal coal mining and electricity generation activities shall be included in the scope of targets.	No thermal coal mining or coal electricity generation activities are excluded. Note that the Bank has also confirmed its commitment not to finance new thermal coal mining and processing activities.		
Other considerations			
Governance Targets shall be approved by the highest executive level and reviewed by the highest-level governance body in the bank and should be part of the organization's broader strategic plan.	The Bank's targets are approved by management and reviewed by the Board of Directors.		
Revision of targets Targets shall be reviewed, and if necessary revised, at least every five years to ensure consistency with the latest climate science.	The Bank has put in place governance processes to review reduction targets regularly and, where relevant, revise targets at least every five years.		
Assurance UNEP FI Principles for Responsible Banking (PRB) signatory banks shall obtain third-party independent verification or assurance within four years of signing the Principles.	The Bank became a PRB signatory in 2019.		
Offsets In implementing and reaching targets for all scopes of emissions, offsets can play a role to supplement decarbonization in line with climate science.	Not applicable		

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