

ASSESSMENT

22 December 2022



Contacts

Shahdiya Kureshi
 Associate Lead Analyst-SF
 shahdiya.kureshi@moodys.com

Donovan Hotz
 Associate Analyst
 donovan.hotz@moodys.com

Gonzalo Marambio
 Sustainable Finance Analyst
 gonzalo.marambio@moodys.com

Matthew Kuchtyak
 VP-Sustainable Finance
 matthew.kuchtyak@moodys.com

National Bank of Canada

Second Party Opinion – Sustainability Bond Framework Assigned SQS2 Sustainability Quality Score

Summary

We have assigned an SQS2 sustainability quality score (very good) to National Bank of Canada's (NBC) sustainability bond framework dated December 2022. NBC has established its use-of-proceeds framework with the aim of financing projects across six eligible green categories and three eligible social categories. The framework is aligned with the four core components of the International Capital Market Association's (ICMA) Green Bond Principles 2021 (including June 2022 Appendix 1) and Social Bond Principles 2021 (including June 2022 Appendix 1), and the framework demonstrates a significant contribution to sustainability.

Sustainability quality score

SQS2

SQS5 Weak SQS4 Intermediate SQS3 Good **SQS2 Very good** SQS1 Excellent

Alignment with principles USE OF PROCEEDS

Overall alignment

Not aligned Partially aligned **Aligned** Best practices

FACTORS

Factor	Alignment
Use of proceeds	Aligned
Evaluation and selection	Aligned
Management of proceeds	Aligned
Reporting	Aligned

Contribution to sustainability

Overall contribution

Poor Limited Moderate **Significant** High

Expected impact
 Relevance and magnitude

ADJUSTMENTS

ESG risk management No adjustment
 Coherence No adjustment

Scope

We have provided a Second Party Opinion (SPO) on the sustainability credentials of National Bank of Canada's (NBC) sustainability bond framework, including the framework's alignment with the ICMA's Green Bond Principles (GBP) 2021 (including June 2022 Appendix 1) and Social Bond Principles (SBP) 2021 (including June 2022 Appendix 1). Under its framework, NBC plans to issue use-of-proceeds green, social or sustainability bonds with the aim of financing projects comprising six green categories and three social categories, as outlined in Appendix 2 of this report. Our assessment is based on the last updated version of the framework dated 22 December 2022, and our opinion reflects our point-in-time assessment of the details contained in this version of the framework, as well as other public and non-public information provided by the bank.

We produced this SPO based on our [Framework to Provide Second Party Opinions on Sustainable Debt](#), published in October 2022.

Issuer profile

NBC, the sixth largest bank in Canada, offers personal and commercial banking, wealth management and capital markets products, predominantly in Canada. In 2022, the bank reported assets of CAD387 billion (\$288 billion) and had more than 28,000 full-time employees globally.

Sustainability challenges are primarily related to the impact of the bank's loan portfolio. In 2021, NBC reported that approximately 75% of its portfolio was exposed to climate risk (i.e., physical risks and transition risks). Specifically, carbon-related assets, as defined by the Task Force on Climate-Related Financial Disclosures, represented 17% of the bank's total credit risk exposure. As capital providers, banks face mounting pressure from investors and regulators to provide meaningful disclosures on climate-related financial risks across their investment portfolios and meet broad CO₂ reduction goals by channeling investments toward less carbon-intensive activities. These issues are reflected in NBC's moderately negative credit exposure to carbon transition risk. To address these issues, NBC has been developing its climate risk and portfolio management capabilities. It has also committed to the Partnership for Carbon Accounting Financials and intends to disclose the scope 3 greenhouse gas (GHG) emissions from its loan portfolio in 2022.

Strengths

- » Several of the eligible categories intend to finance activities that could make significant reductions in GHG emissions and accelerate Canada's energy transition
- » Clearly defined and relevant environmental and social objectives associated with all eligible categories
- » Rigorous environmental and social risk management process, including screening for potential controversies associated with projects
- » Demonstrated history of timely annual post-issuance reporting for previously issued sustainability bonds

Challenges

- » Some eligible categories lack granular details on sectors, thresholds or specific assets to be financed
- » No independent impact assessment of environmental and social benefits and externalities associated with the financed projects
- » Absence of specific exclusion criteria for temporary placements of unallocated proceeds
- » Although the framework is in line with current market practices, the inclusion of general corporate purpose loans through pure-play means constitutes a non-standard use of proceeds susceptible to specific challenges in terms of asset level adherence to sustainability objectives, allocation and traceability, impact reporting, and an increased risk of double counting

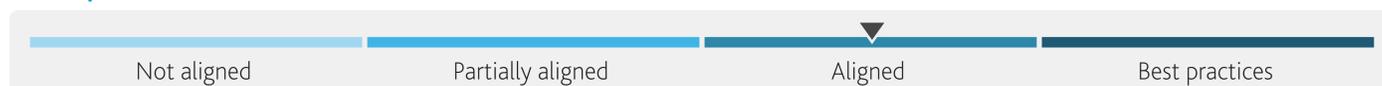
This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody's.com> for the most updated credit rating action information and rating history.

Alignment with principles

NBC's sustainability bond framework is aligned with the four core components of the ICMA's Green Bond Principles 2021 (including June 2022 Appendix 1) and Social Bond Principles 2021 (including June 2022 Appendix 1):

- Green Bond Principles (GBP)
- Social Bond Principles (SBP)
- Green Loan Principles (GLP)
- Social Loan Principles (SLP)
- Sustainability-Linked Bond Principles (SLBP)
- Sustainability Linked Loan Principles (SLLP)

Use of proceeds



Clarity of the eligible categories – ALIGNED

The bank has communicated the nature of the expenditures, as well as the eligibility and exclusion criteria for financed projects, and the target populations for the three social categories are clear. The bank has identified the location of eligible projects as mostly in Canada with a higher concentration in Quebec, and that the renewable energy projects will also include the United States. The bank has articulated descriptions for a selection of projects to be financed and, for most of the project categories, the general definition includes references to the technical thresholds upon which the bank has defined project eligibility. Exclusion criteria are clear for many of the environmental and social categories, however, these criteria are not exhaustive.

The cornerstone of the ICMA's Green Bond Principles and Social Bond Principles is the full utilization of net bond proceeds to eligible projects with clear environmental or social benefits. NBC's framework includes a limited allocation of proceeds towards general corporate purpose loans to pure-play companies that derive at least 90% of their revenue from activities that adhere to the eligibility criteria in the framework. In the selection process for loans to such businesses, the bank will apply the exclusion criteria defined in the framework, with loans going to businesses whose primary operations focus on eligible activities as defined in the framework. The bank anticipates that the following categories may include such general corporate purposes loans: renewable energy, pollution prevention and control, sustainable water and wastewater management, affordable housing, access to basic and essential services, and loans to small- and medium-sized enterprises.

In our view this represents a non-standard use of proceeds that introduces certain challenges in terms of asset-level adherence to sustainability objectives, allocation and traceability, impact reporting, as well as an increased risk of double counting. The bank has provided information that demonstrates suitable measures to identify, select and allocate net proceeds to pure-play companies that adhere to the sustainability objectives and benefits targeted in the framework, and also to track and report on the associated sustainability benefits. With these mitigants in place, coupled with the expected limited allocation of proceeds to such loans and the 90% revenue threshold, we consider the structure to be in line with current market practices.

Clarity of the environmental or social objectives – BEST PRACTICES

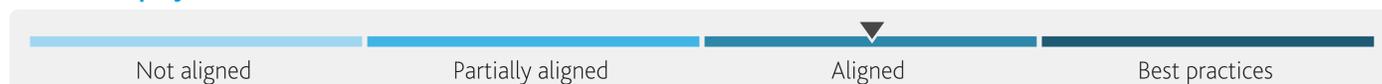
The bank has clearly outlined the environmental and social objectives associated with all nine eligible categories. These objectives include climate change mitigation, pollution prevention and control, access to affordable housing, access to essential services and socioeconomic development. All eligible categories are relevant to the respective environmental or social objectives to which they are aiming to contribute. The bank has referenced the UN Sustainable Development Goals (SDGs) in articulating the objectives of the eligible categories, and the objectives are coherent with these recognized international standards.

Clarity of expected benefits – ALIGNED

The bank has identified clear expected environmental or social benefits for all of the nine eligible categories and these are relevant based on the projects likely to be financed under each category. The benefits are measurable for all nine project categories and the bank will report on these quantitative benefits in its annual reporting. The bank has not defined a maximum share of refinancing and will not communicate the estimated share of refinancing to investors before each issuance. The bank has also not committed to share the look-back period for project eligibility.

Best practices identified

- » Objectives set are defined, relevant and coherent for all project categories
- » Relevant benefits are identified for all project categories
- » Benefits are measurable and quantified for most projects, either ex-ante with clear baselines or with a commitment to do so in future reporting

Process for project evaluation and selection**Transparency and quality of process for defining eligible projects – ALIGNED**

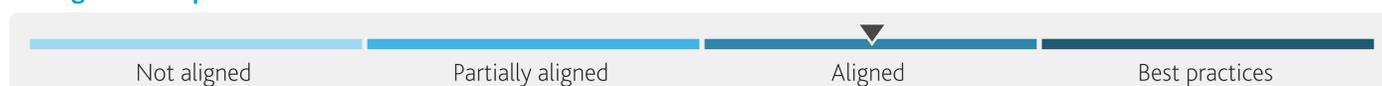
The bank has established a structured decision-making process for the selection and evaluation of projects, which is outlined in its framework. Potential projects are reviewed by each business unit's ESG program officer, who evaluates and validates the projects' alignment with the bank's framework. In addition, the bank has established a sustainability bond committee (SBC), which conducts a final review of the portfolio of loans and investments that qualify under the eligible categories. The SBC is comprised of one of the National Bank Financial Inc.'s copresidents and co-CEOs, and senior representatives from different sectors of the banks such as treasury, risk management, corporate & investment banking, personal & commercial banking, debt capital markets, National Bank Investments, public affairs, ESG operations, legal affairs and governance.

Environmental and social risk mitigation process – BEST PRACTICES

The bank has established an environmental and social risk identification and mitigation process to manage the risks related to the projects financed by the bank. The process has been formalized in the environmental policy for financing activities, the reputation and risk management policy and the human rights policy, among others. The bank's internal due diligence processes cover the relevant ESG risks associated with the eligible categories. Responsibilities for environmental and social issues are detailed in each policy.

Best practices identified

- » The roles and responsibilities for project evaluation and selection are clearly defined and include relevant expertise
- » The process for project evaluation and selection is traceable
- » Material environmental and social risks for most project categories are identified
- » Presence of corrective measures to address environmental and social risks across projects
- » ESG controversies are monitored

Management of proceeds**Allocation and tracking of proceeds – BEST PRACTICES**

The bank has set a clear and detailed process for the management and allocation of bond proceeds in its framework. The bank uses a sustainability bond register, which will contain relevant information of the proceeds and the eligible businesses and projects financed. The bank will deposit the bond proceeds in a general funds account and the proceeds will be earmarked in the sustainability bond

register, which is maintained and updated by the treasury team. There will be periodic tracking of how funds have been matched to eligible projects and businesses, and this will be adjusted at least biannually to match allocations. The bank aims to allocate the proceeds within 18 months from each issuance.

Management of unallocated proceeds – ALIGNED

Unallocated proceeds will be held in liquid short-term investments, in accordance with NBC's normal liquidity management activities. In the event that a project or business becomes ineligible, the bank has formalized in its framework that it will replace them with eligible projects or businesses, or the amounts will be invested in liquid instruments for future allocation. No formal exclusion criteria for temporary permitted investments have been established in the bank's framework.

Best practices identified

- » Broad disclosure of a clearly articulated and comprehensive management of proceeds policy to external stakeholders; bondholders or lenders at a minimum
- » Short allocation period, for example typically less than 24 months
- » Commitment to reallocate proceeds to projects that are compliant with the framework

Reporting



Transparency of reporting – ALIGNED

The bank will report annually on the use of proceeds allocation and impact reporting until the full allocation of the funds and in case of new developments. The report will be publicly available on NBC's website and will include the amounts allocated at the eligible category level and the expected sustainable benefits of the eligible categories. It will also include impact reporting indicators, examples of eligible businesses or projects and their descriptions, as well as the methodologies and key assumptions used to measure the sustainable impacts.

The bank has identified relevant potential indicators in the framework for most of the eligible categories. The bank will request a limited assurance report of the tracking and allocation of proceeds and key performance indicators on an annual basis. However, there will not be an independent impact assessment of the environmental and social benefits and externalities associated with the financed projects.

NBC has been issuing sustainability bonds since launching its initial framework in 2018. Since this time, the bank has demonstrated timely annual post-issuance reporting in line with the commitments in framework, suggesting a high likelihood that this timely and consistent reporting will continue as the bank issues future sustainability bonds.

Best practices identified

- » Reporting covers material developments and issues related to the projects or assets
- » Reporting on allocation of proceeds and benefits done at least at eligible category level
- » Disclosure of reporting methodology and calculation assumptions to bondholders or lenders at a minimum
- » Independent audit of the tracking and allocation of funds at least until full allocation and in case of material changes

Contribution to sustainability

The framework demonstrates a significant overall contribution to sustainability.



Expected impact

The expected impact of the eligible projects on environmental and social objectives is considered significant. Based on information provided by the bank, we expect proceeds from forthcoming issuances to represent a higher proportion for the renewable energy, access to basic and essential services, and affordable housing categories. We have therefore assigned a higher weight to those categories in our assessment of the overall framework's contribution to sustainability. A detailed assessment by eligible category is provided below.

Renewable energy



Under its framework, NBC intends to expand its investments in the renewable energy sector, which include solar, wind, geothermal, tidal, hydropower, waste biomass and renewable biofuel projects. Financing the energy transition is highly relevant for the banking sector given its role in channeling capital to green activities for climate action to cut emissions amid mounting scrutiny from stakeholders to decarbonize portfolios. In addition, increasing Canada's renewable energy capacity is essential for achieving the country's nationally determined contribution.

Overall, the proposed renewable energy projects could lead to long-lasting GHG emissions reductions and have a significant impact on mitigating climate change. Canada's share of renewables in power generation is about 67%, and projects in this category will make a significant contribution to expanding the country's share of renewables in the energy mix. Moreover, Canada's considerable potential to generate energy from hydropower, and abundant wind and biomass resources have yet to be fully tapped. NBC has clearly defined the criteria and life cycle emissions threshold for most of the renewable technologies. While hydropower projects do not have a defined power density threshold, capacity of the hydropower facilities will be limited to 25 MW or less for reservoirs. In addition, the bank has indicated that biofuel production will only use sustainable feedstock sources, in an effort to limit potential risks to food security.

Energy efficiency



According to the International Energy Agency (IEA), energy efficiency represents the cleanest and, in most cases, cheapest way to meet growing energy demand. Canada's nationally determined contribution includes various initiatives to gain efficiencies in energy

consumption across residential and industrial sectors, demonstrating that it is an integral part of the national strategy to reduce GHG emissions and meet the country's Paris agreement goals.

Investments in this category would have a moderate impact on reducing GHG emissions and advancing the energy transition. The eligible category includes projects that could improve energy efficiency by at least 30% as well as projects related to energy storage and investments in smart grids. Moreover, transmission lines will be exclusively used for renewable energy or low-carbon power plants. While these projects could help develop the renewable energy ecosystem, the framework lacks specific details on the types of projects and sectors that would be eligible for financing. Therefore, visibility on the extent to which a 30% reduction in energy consumption could promote the development of a low-carbon energy matrix is limited.

Pollution prevention and control



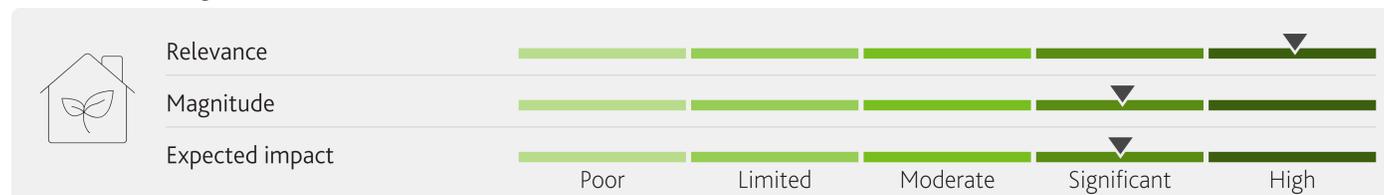
The financed projects in the eligible category would make a significant contribution in addressing environmental challenges by promoting the reduction, reuse and recycling of waste. In addition to reducing environmental pressures from pollution generated by waste, projects financed under this category will also include circular economy projects, which can help to achieve GHG emissions reductions targets. In Canada, the government has been implementing policies in this regard, including an action plan on zero-plastic waste. Moreover, circular economy and recycling initiatives are included in some of the pathways being considered by certain regions in Canada to meet the Paris agreement goals. In addition, the bank follows market standards for mitigation criteria related to landfill gas recovery, which consider at least 75% capture levels, the use of closed landfills no longer accepting waste, and the use of gas being limited to electricity generation, natural gas grids or vehicle fuel.

Sustainable water and wastewater management



Despite Canada's high access to freshwater and low levels of water stress relative to other countries, sustainable management and supply of water is still a relevant issue in the context of Canada's urban growth, industry expansion and climate change. Under this category, the bank's water collection, distribution, supply and wastewater treatment projects will highly contribute to the quality and efficiency of water infrastructure for local stakeholders and help prevent negative impacts to the population's health, environment and biodiversity. The bank has outlined sufficient eligibility criteria for the water collection, treatment and supply projects, which include a water efficiency threshold of 20% and net zero GHG emissions. Moreover, water and wastewater projects would follow the mitigation criteria of recognized market standards.

Sustainable buildings



Financing projects for energy efficient buildings is highly relevant in Canada, as the buildings and construction sector accounts for 13% of total GHG emissions, which rises to 18% with the inclusion of electricity use for cooling, lighting and appliances.¹ As electricity

demand is the major driver of increasing emissions from the buildings sector, advances in energy efficient technologies for the sector would contribute to Canada's pathway towards achieving net-zero emissions by 2050.

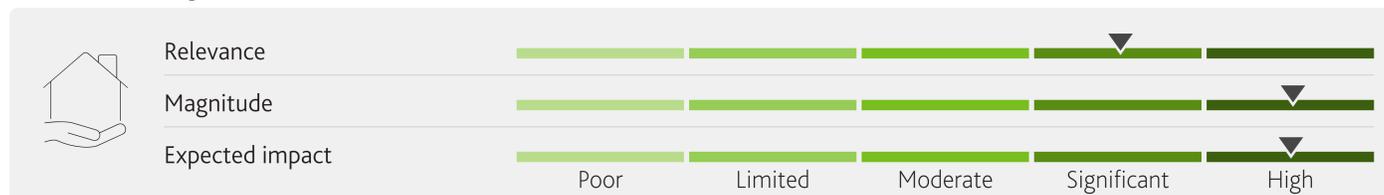
NBC's plans to finance the construction and renovation of energy efficient buildings could have a significant impact on reducing GHG emissions. The energy demand reduction criteria of 30% for building renovations is in line with industry standards. Moreover, this category leverages internationally recognized building certification standards for construction and acquisitions, which include LEED and BREEAM, as well as the Canadian certification BOMA BEST, strengthening the expected impact of projects to be financed under this category.

Low-carbon transportation



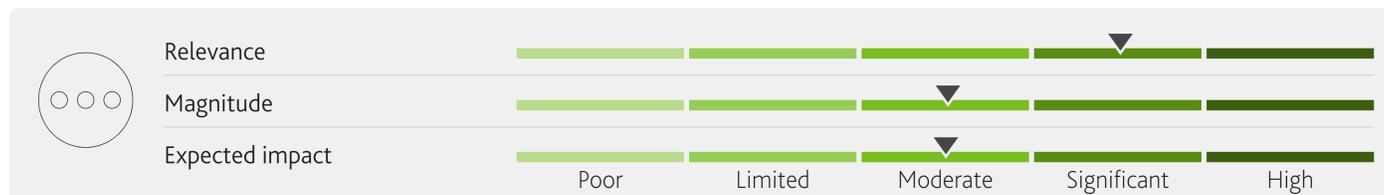
Transportation is the second largest source of GHG emissions in Canada, and decarbonizing the sector will be crucial for achieving the country's decarbonization goals. Investments in this project category will make a high contribution to Canada's transition towards clean transportation, which will have a far-reaching, long-term impact on mitigating climate change. Financing the development and operations of vehicles and rolling stock with zero tailpipe emissions could help curb Canada's rising GHG emissions from transportation, whose 32% growth over the last 30 years has been largely attributed to increases from freight trucks and passenger light trucks.² Moreover, NBC would finance electric and fuel cell-based non-motorized vehicles or transportation systems, whose impact on GHG emissions reduction would be substantial given that about 83% of the electricity in Canada is generated from low-carbon or renewable sources.³ However, there is no visibility on the types of projects that may be associated with infrastructure for low-carbon passenger and freight transportation, investments which may have a less direct impact on decarbonization efforts.

Affordable housing



While housing access and affordability are not a high social risk for Canada, there are areas in the country experiencing housing deficits that have constrained housing affordability for many residents. According to national statistics, one of five Canadian households live in unaffordable housing, defined as spending 30% or more of before-tax household income on shelter.⁴ Projects under this category will provide financing to develop and renovate social and community housing for public programs such as Accès-Logis Quebec, a social housing program administered by the Government of Quebec's housing authority. The project category will highly contribute to the government's endeavors in expanding the affordable housing stock for the program's target population, which comprises low- and modest-income households, seniors and people with special housing needs.

Access to basic and essential services



While Canada's access to high quality education, housing, healthcare and basic services is in line with other advanced economies, continued investments in the social infrastructure will be critical in maintaining quality services for the Canadian population to ensure future socioeconomic growth amid demographic shifts, most notably an aging population, and the evolving labor market. The projects

in this category will have a moderate impact on expanding access to basic services. Funding projects that provide low-cost, free or subsidized services would help maintain high quality access to health, education and housing. Moreover, expanding access to affordable childcare has macroeconomic benefits by increasing female labor participation rates and earned income potential among women, which could help narrow the gender income gap. However, the projects are intended to serve the broader Canadian population rather than concentrating funds towards underserved localities or vulnerable populations for whom inequities in access to essential services persist.

Loans to small and medium-sized enterprises (SMEs)



Access to financing for small and medium-sized enterprises (SMEs), defined as businesses with less than 500 employees and revenues below CAD25 million, is critical to the Canadian economy, and banks have an essential role in channeling capital to SMEs. Despite accounting for more than 99% of businesses and 88% of the private sector labor force in Canada, SMEs face higher barriers to accessing financing than large companies.⁵ Providing loans to SMEs operating in economically underserved areas will help support local business growth and job creation, as well as increase financial stability among households through income generation, which could bring structural socioeconomic advancement.

Investments under this project category would make a significant contribution to expanding access to financing for SMEs located in regions with either high levels of unemployment rates, prevalence of low-income households, or government transfers as a percentage of total household income, as defined by the most recent Canadian Census data. Moreover, the selection criteria defined by the bank's social economic loan selection methodology excludes businesses operating in sectors such as oil and gas, mining and gambling.

ESG risk management

We have not applied a negative adjustment for ESG risk management to the expected impact score. NBC has formalized an environmental risk management policy and a reputation risk management policy. These two policies aim at identifying and reducing potential environmental and social risks related to financed projects and businesses. Bank account managers conduct a due diligence risk assessment, which is then reviewed by the ESG officers. This due diligence process aims to assess a project's compliance with the framework's eligibility criteria. Any ESG considerations are raised and addressed as part of this analysis, as well as adherence to exclusion criteria. Moreover, environmental and social risks are monitored during the life of the assets. The bank has implemented a screening process for news and information related to counterparties, with which the bank has a lending relationship, to identify potential controversies associated with financed business and projects that could adversely impact the bank's reputation and diminish the impact of the financed activities.

Coherence

We have not applied a negative adjustment for coherence to the expected impact score. Projects to be financed under the sustainable bond framework align with the NBC's broader climate and sustainability priorities. Investments in renewable energy and energy efficiency technologies will help support the bank's interim target to reduce GHG emissions from its operations by 25% by the end of 2025 and its commitment to align operating and financing activities to support its transition to net-zero emissions by 2050. Furthermore, NBC has officially committed to cease new financing related to oil and gas exploration, exploitation or production in the Arctic, and thermal coal mining and processing activities. Projects to be financed also align with the bank's broader social priorities, such as its commitment to support over 300 community organizations across Canada and to create a CAD200 million SME growth fund to support business clients' success.

Appendix 1 - Mapping eligible categories to the United Nations' Sustainable Development Goals

The nine eligible categories included in National Bank of Canada's framework are likely to contribute to eleven of the United Nations' Sustainable Development Goals (SDGs), namely:

UN SDG 17 Goals	Eligible Category	SDG Targets
GOAL 1: No Poverty	Affordable housing	1.2: Reduce at least by half the share of people living in poverty according to national definitions 1.4: Ensure all have equal rights to economic resources, access to basic services, property ownership and finance
GOAL 3: Good Health and Well-being	Access to basic and essential services	3.8: Achieve universal health coverage with access to quality and affordable essential health-care services and medicines for all
GOAL 4: Quality Education	Access to basic and essential services	4.3: Ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education
GOAL 6: Clean Water and Sanitation	Sustainable water and wastewater management; Sustainable buildings	6.1: Achieve universal and equitable access to safe and affordable drinking water for all 6.3: Improve water quality by reducing pollution, eliminating dumping and minimizing hazardous chemicals and materials 6.4: Increase water-use efficiency across all sectors and ensure sustainable supply of freshwater to reduce water scarcity
GOAL 7: Affordable and Clean Energy	Renewable energy; Energy efficiency; Sustainable buildings	7.1: Ensure universal access to affordable, reliable and modern energy services 7.2: Increase substantially the share of renewable energy in the global energy mix 7.3: Double the global rate of improvement in energy efficiency
GOAL 8: Decent Work and Economic Growth	Loans to small and medium-sized enterprises (SMEs); Access to basic and essential services	8.3: Promote policies that support productivity, job creation, entrepreneurship, innovation, and encourage the growth of SMEs 8.6: Substantially reduce the proportion of youth not in employment, education or training
GOAL 9: Industry, Innovation and Infrastructure	Low-carbon transportation	9.4: Upgrade infrastructure and retrofit industries to make them sustainable, with all countries taking action
GOAL 10: Reduced Inequality	Access to basic and essential services	10.2: Empower and promote the social, economic and political inclusion of all
GOAL 11: Sustainable Cities and Communities	Affordable housing; Low-carbon transportation; Pollution prevention and control	11.1: Ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums 11.2: Provide access to safe, affordable, accessible and sustainable transport systems for all 11.6: Reduce the adverse per capita environmental impact of cities, with special attention to air quality and waste management

Appendix 1 (continued)

UN SDG 17 Goals	Eligible Category	SDG Targets
GOAL 12: Responsible Consumption and Production	Sustainable water and wastewater management;	12.2: Achieve the sustainable management and efficient use of natural resources
	Pollution prevention and control	12.4: Achieve environmental management of chemicals and all wastes, and reduce their release to air, water and soil
GOAL 13: Climate Action	Renewable energy; Energy efficiency; Sustainable water and wastewater management; Sustainable buildings; Low-carbon transportation	12.5: Substantially reduce waste generation through prevention, reduction, recycling and reuse
		13.2: Integrate climate change measures into national policies, strategies and planning

The United Nations' Sustainable Development Goals (SDGs) mapping in this SPO considers the eligible project categories and associated sustainability objectives and benefits documented in the bank's financing framework, as well as resources and guidelines from public institutions, such as the ICMA SDG Mapping Guidance and the UN SDG targets and indicators.

Appendix 2 - Summary of eligible categories in National Bank of Canada's framework

Eligible Categories	Description	Sustainability Objectives	Impact Reporting Metrics
Renewable energy	<p>Generation, transmission and distribution of energy from renewable sources, including investments for acquisition, operation, maintenance and improvements. Manufacturing of components and technologies supporting or required for renewable energy projects.</p> <p>Eligible types of renewable energy:</p> <ul style="list-style-type: none"> - Wind - Solar - Geothermal with direct emissions < 100gCO₂/kWh - Tidal - Hydropower: small scale hydro (<25 MW), run of river plants and upgrade of existing hydro assets - Waste biomass and renewable biofuels whose sources include sustainable feedstock. Sustainable feedstock may include nuisance plants, crop waste or biomass grown specifically for energy harvesting usually on land no longer suitable for crops that would become food. The only timber feedstock allowed is waste wood. Direct emissions <100g CO₂/kWh 	Climate change mitigation	<ul style="list-style-type: none"> - Energy saved and renewable energy generated - Energy saved (MWh) - GHG emissions reduction achieved (tCO₂e) - Number of buildings/infrastructures/units built - Number of communities/individuals benefiting from projects - Length of network installed (in km)
Energy efficiency	<p>Activities that reduce energy consumption or mitigate greenhouse gas (GHG) emissions by more than 30% or help manage and store energy. Management and storage activities must be related to energy sourced from eligible types of renewable energy or with direct emissions <100g CO₂/kWh:</p> <ul style="list-style-type: none"> - Energy storage systems (including electromechanical storage such as flywheel, thermal and pneumatic) - Energy efficient district heating and cooling systems - Smart grid investments for more efficient electricity transmission and distribution, and reduction of transmission losses. Transmission lines with a dedicated connection to a power production plant with energy sourced from eligible types of renewable energy or with direct emissions <100g CO₂/kWh. 	Climate change mitigation	<ul style="list-style-type: none"> - Expected energy savings per year (MWh) - GHG emissions avoided per year (tCO₂e)
Pollution prevention and control	<p>Construction, development, operation, acquisition and maintenance of land, facilities, systems or equipment used for activities that contribute to soil remediation, waste prevention and collection and waste reduction such as:</p> <ul style="list-style-type: none"> - Facilities, systems and equipment that are used to divert waste from landfills or reduce emissions - Collection, treatment/remediation, recycling or reuse of emissions, waste, or contaminated soil - Methane capture projects used for energy generation or captured from closed/decommissioned landfill with high gas capture efficiency of 75% or more where the landfill is not accepting further waste (with the exception of restoration materials) 	Pollution prevention and control	<ul style="list-style-type: none"> - Waste diverted from landfill (tonnes) - Emissions or pollutants reduced/avoided
Sustainable water and wastewater management	<p>Activities that improve water quality, efficiency and conservation such as:</p> <ul style="list-style-type: none"> - Water and/or wastewater collection, treatment and supply systems, where no net GHG emissions are expected - Improved water efficiency through reduced leakage by at least 20% - Plants and/or systems which are substituting more GHG-intensive treatment systems (such as septic tanks and anaerobic lagoons) - Other sustainable water and/or wastewater management measures including, water purification, water saving, water conservation and the re-use of water 	<ul style="list-style-type: none"> - Natural resource conservation - Pollution prevention and control 	<ul style="list-style-type: none"> - Volume of water saved/reduced/treated (m³) - Total population served by the system

Appendix 2 (continued)

Eligible Categories	Description	Sustainability Objectives	Impact Reporting Metrics
Sustainable buildings	<p>Construction, development, operation, acquisition and maintenance of buildings that either have recognized green/social third-party certifications and/or a specific track record in reducing GHG emissions:</p> <ul style="list-style-type: none"> - Certified green buildings that have received, or expect to receive based on their design, construction and operation plans, recognized environmental standards such as LEED – gold or platinum, BREEAM – excellent or outstanding, BOMA BEST - gold or platinum or equivalent - Buildings with GHG performance in the top 15% of their city based on third-party assessment - Energy efficient investments in new or refurbished buildings such as lighting, retrofit, building envelope, or upgrade of air conditioning subject to a minimum of 30% improvement threshold in the primary energy demand of the building. 	Climate change mitigation	<ul style="list-style-type: none"> - Energy saved (MWh) - Number of units of water saved and/or processed (m3) - GHG emissions reduction achieved (tCO2e) - Number of buildings/infrastructures/units built and associated certifications - Number of buildings/infrastructures/units renovated and associated certifications - Number of buildings/infrastructures/units acquired and associated certifications - Floor space of green real estate (ha)
Low-carbon transportation	<p>Manufacturing, construction, development, operation, acquisition and maintenance of vehicles, rolling stock and infrastructure for low-carbon passenger, goods and freight transport:</p> <ul style="list-style-type: none"> - Electric, fuel cell-based or non-motorized vehicles or transportation systems 	Climate change mitigation	<ul style="list-style-type: none"> - GHG emissions reduction achieved (tCO2e) - Number of buildings/infrastructures/units built - Number of communities/individuals benefiting from projects - Number of people with access to sustainable transport systems
Affordable housing	<p>Projects aimed at developing and renovating the social housing that promote social requirements and contribute to access to low-income residents.</p> <p>Promote the creation of affordable* community housing in Canada targeted to low- or modest-income households and/or for people with special housing needs, which increases access to safe, affordable and sustainable housing through public programs.</p> <p>*Based on applicable definitions within the jurisdiction in which it is built.</p>	Access to affordable housing	<ul style="list-style-type: none"> - Number of buildings/infrastructures/units built - Number of communities/individuals benefiting from projects - Number of people with access to safe, affordable and sustainable housing
Access to basic and essential services	<p>Projects intended for target population* that enhance access to essential services by enabling the provision of not-for-profit, free or subsidized services, including:</p> <ul style="list-style-type: none"> - Health services - Day care services - Childcare centers - Community welfare - Education - Social Housing - Training centers - Rehabilitation of parks and other public spaces <p>These programs aim to provide access to basic and essential quality services to the entire population. Universality and accessibility are pillars of our Canadian social system and fundamental in the preservation of life, health and social functioning of our communities.</p> <p>*The definition of target population can vary depending on local contexts and, in some cases, such target population(s) may also be served by addressing the general public.</p>	Access to essential services	<ul style="list-style-type: none"> - Number of buildings/infrastructures/units built - Number of communities/individuals benefiting from projects - Number of people reached with improved health care
Loans to small and medium-sized enterprises (SMEs)	<p>Small and medium-sized enterprises located in deprived economic zones, in Canada demonstrating weaknesses measurable by economic indicators locally.</p> <p>More specifically, support communities with an observable disadvantage in terms of employment, household income or with significant government transfers.</p>	Socioeconomic advancement and empowerment	<ul style="list-style-type: none"> - Number of loans granted to SMEs in the lowest quartile most economically disadvantaged areas - Aggregate amount of loans granted to SMEs

Moody's related publications

Second Party Opinion analytical framework:

» [Framework to Provide Second Party Opinions on Sustainable Debt](#), October 2022

Topic page:

» [ESG Credit and Sustainable Finance](#)

Endnotes

1 [Canada's climate plans and targets, Annex: Homes and buildings](#), Government of Canada.

2 [Greenhouse gas emissions by economic sector](#), Government of Canada.

3 See [data from the International Energy Agency](#). Low-carbon sources include biofuels, waste, nuclear, hydro, tidal, solar and wind.

4 [Housing costs and affordability key indicators](#), Government of Canada.

5 [Key Small Business Statistics — 2021](#), Government of Canada.

Moody's assigns SPOs in alignment with the main tenets of the ICMA Guidelines for Green, Social, Sustainability and Sustainability-Linked Bonds External Reviews and the LSTA/LMA/APLMA Guidance for Green, Social and Sustainability-Linked Loans External Reviews, as applicable; Moody's practices may however diverge in some respects from the practices recommended in those documents. Moody's approach to assigning SPOs is described in its Assessment Framework, and is subject to the ethical and professional principles set forth in the Moody's Investors Service Code of Professional Conduct.

Additional terms with respect to Second Party Opinions (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating". The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

© 2022 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJJK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJJK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJJK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000. MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER

1346255