Second-Party Opinion

Government of Canada Green Bond Framework

Evaluation Summary

Sustainalytics is of the opinion that the Government of Canada Green Bond Framework is credible and impactful and aligns to the four core components of the Green Bond Principles 2021. This assessment is based on the following:

USE OF PROCEEDS The eligible categories for the use of proceeds – Clean Transportation, Living Natural Resources & Land Use, Energy Efficiency, Terrestrial & Aquatic Biodiversity, Renewable Energy, Climate Change Adaptation, Sustainable Water & Wastewater Management, Circular Economy Adapted Products, Production, Technologies and Processes, Pollution Prevention & Control – are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 6, 7, 9, 11, 12, 13, 14 and 15.

PROJECT EVALUATION / SELECTION The Government of Canada's Interdepartmental Green Bonds Committee will be responsible for identifying and evaluating eligible projects to be financed under the Framework. Canada has processes in place to identify and mitigate common environmental and social risks associated with the eligible projects. Sustainalytics considers the risk management system and project selection process to be in line with market practice.

MANAGEMENT OF PROCEEDS The Department of Finance will oversee the allocation and ongoing monitoring of proceeds under the Framework via a virtual register. Canada intends to allocate at least 50% of net green bond proceeds to expenditures related to the fiscal year of issuance or future fiscal years, subject to expenditure availability, target issuance size, and other considerations. Pending full allocation, proceeds will be managed according to the Government's cash management policy outlined in the Funds Management Governance Framework. This is in line with market practice.

REPORTING The Government of Canada intends to report on allocation of proceeds annually until full allocation via a report on its website. Allocation reporting may include breakdown of proceeds according to project category and by type of expenditure. In addition, Canada is committed to reporting on relevant impact metrics. Sustainalytics views the allocation and impact reporting as aligned with market practice.

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Issuer Location	Ottawa, Canada

Report Sections

For inquiries, contact the Sustainable Finance Solutions project team:

Jonathan Laski (Toronto)
Project Manager
jonathan.laski@sustainalytics.com
(+1) 647 264 6640

Ijeoma Madueke (Toronto)
Project Support

Nadia Djinnit (Toronto)
Project Support

Guilherme Grunthal (Toronto)
Client Relations
susfinance.americas@sustainalytics.com
(+1) 646 518 9623

Introduction

Canada, a country located in North America, has ten provinces and three territories and land that extends from the Atlantic Ocean to the Pacific Ocean and northward into the Arctic Ocean. The total area of Canada is 9.98 million km^2 and the current population is 38.1 million people.

The Government of Canada ("Canada", the "Government" or the "Issuer") has developed the Government of Canada Green Bond Framework (the "Framework") under which it intends to issue green bonds and use the proceeds to finance and/or refinance, in whole or in part, existing and/or future government expenditures in the form of transfer payments (such as grants, contribution, loans, subsidies, fiscal measures (such as tax credits and tax expenditures) as well as capital and operational expenditures for the federal government purposes and/or extended to departments, agencies and select Crown corporations. Eligible projects are expected to facilitate the transition to a low-carbon economy and contribute to the climate-related, biodiversity protection and environmental goals set out by the Government.

The Framework defines eligibility criteria in the following nine areas:

1. Clean Transportation
2. Living Natural Resources & Land Use
3. Energy Efficiency
4. Terrestrial & Aquatic Biodiversity
5. Renewable Energy
6. Climate Change Adaptation
7. Sustainable Water & Wastewater Management
8. Circular Economy Adapted Products, Production, Technologies and Processes
9. Pollution Prevention & Control

The Issuer engaged Sustainalytics to review the Government of Canada Green Bond Framework, dated January 2022, and provide a Second-Party Opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles 2021 (GBP).[1] This Framework will be published in a separate document.[2]

Scope of work and limitations of Sustainalytics' Second-Party Opinion

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent[3] opinion on the alignment of the reviewed Framework with the current market standards and the extent to which the eligible project categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework's alignment with the Green Bond Principles 2021, as administered by ICMA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- The alignment of the issuer's sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.11, which is informed by market practice and Sustainalytics' expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of the Government to understand the sustainability impact of their processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Framework. The Issuer's representatives have confirmed (1) they understand it is the sole responsibility of the Issuer to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any

[1] The Green Bond Principles are administered by the International Capital Market Association and are available at https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/.
[2] The Government of Canada Green Bond Framework is available on Government of Canada's website at: English - https://www.canada.ca/en/department-finance/programs/financial-sector-policy/securities/debt-program/canadas-green-bond-program.html and French - https://www.canada.ca/fr/ministere-finances/programmes/politique-secteur-financier/titres/programme-dette/programme-obligations-vertes-canada.html
[3] When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics' hallmarks is integrity, another is transparency.

provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and the Issuer.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner.

In addition, the Second-Party Opinion opines on the potential allocation of proceeds but does not guarantee the realized allocation of the bond proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument, either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that the Issuer has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Government of Canada Green Bond Framework

Sustainalytics is of the opinion that the Government of Canada Green Bond Framework is credible and impactful and aligns to the four core components of the GBP. Sustainalytics highlights the following elements of Canada's Green Bond Framework:

- The eligible categories – Clean Transportation, Living Natural Resources & Land Use, Energy Efficiency, Terrestrial & Aquatic Biodiversity, Renewable Energy, Climate Change Adaptation, Sustainable Water & Wastewater Management, Circular Economy Adapted Products, Production, Technologies and Processes, Pollution Prevention & Control – are aligned with those recognized by the GBP.
- The Government has defined a lookback period of 24 months for refinancing activities, which Sustainalytics considers to be in line with market practice.
- Use of Proceeds:
  - Within the Clean Transportation category, the Government may finance expenditures to support low-carbon mobility, including the following:
    - Financing the development and deployment of zero-emission vehicles and low-emission vehicles with emissions below 50 grams of CO_2/km for passenger vehicles and 50 grams of CO_2/pkm for public transit vehicles; and
    - Financing projects supporting upgraded transportation infrastructure including public transit, rail, charging stations and active transportation that promote a shift to lower emission modes of transportation.
    - Example expenditures could include programs to finance charging and refueling stations for zero-emission vehicles as well as incentive programs for Canadian residents and businesses to purchase or lease zero-emission vehicles. The Government confirms that only vehicles meeting the specified emissions thresholds will be supported via green bond proceeds across applicable vehicle incentive programs.
    - Sustainalytics notes that financing zero emission projects, as well as vehicles operating below the threshold of 50 grams of CO_2/pkm, is considered aligned with market practice.

- Under the Living Natural Resources & Land Use category, the Framework contemplates projects which support reforestation and afforestation, restoration of natural areas as well as climate smart farming and agriculture, and projects to reduce the negative environmental impacts of fisheries, aquaculture and forestry.
    - Investments related to restoration and agriculture include activities such as improving nitrogen management and cover cropping practice that store carbon in agricultural land as well as adopting management practices towards soil management. Financed projects may support the restoration of wetlands, peatlands, and grasslands through land management activities. Sustainalytics is of the opinion that allocating proceeds to agricultural operations with industrial-scale livestock production is not aligned with green bond market expectations.
    - Forestry projects will include financing afforestation and reforestation activities, and may include those under the 2 Billion Trees program which is aimed at supporting new tree planting projects across Canada. Sustainalytics recognizes that the program does not require certification by third-party schemes and notes that there are eligibility guidelines to maintain the ecological diversity of existing ecosystems. Furthermore, all projects are required to comply with provincial, territorial and federal laws that have authority over the management of most forested land in their respective jurisdictions. In view of these measures, Sustainalytics considers financing of these projects to be in line with market expectation.
    - Regarding aquaculture and fisheries, the Issuer has communicated that financed projects will focus on conservation as opposed to resource exploitation. This may include research and development expenditures for capacity building on techniques and aquaculture management; financing technology to minimize the environmental impact of harvesting as well as regulatory development to improve management practices. Sustainalytics recognizes that various Government programs, plans and initiatives have robust methods of measuring and evaluating success and also notes that these activities represent a small amount of the current asset pool.
- Under the Energy Efficiency category, the Government contemplates investments in a range of projects, components and technologies aimed at promoting energy efficiency in buildings and fuel switching.
    - Example technologies contemplated may include the installation of ground or air-source electric heat pumps, building insulation, air-sealing as well as heat metering and thermostatic controls such as smart thermostats.
    - As part of this category, the Government may also finance building retrofits and new buildings. Sustainalytics notes that market practice is for retrofit projects to achieve a minimum 20% energy efficiency improvement. For new buildings, Canada will finance buildings that are designed to be net-zero carbon, net-zero carbon ready or, in northern/remote communities, buildings built to the next highest applicable standard. Sustainalytics considers the exemption offered for new buildings in northern/remote communities to be a deviation from market practice but acknowledges the logistical constraints of building in such communities and also recognizes the social and environmental benefits of improving the availability and condition of community buildings that will be subject to this exemption under the Green and Inclusive Community Buildings Program.
- For the Terrestrial & Aquatic Biodiversity category, the Framework contemplates investments to support the protection and restoration of terrestrial and marine ecosystems.
    - Sustainalytics recognizes the importance of such ecosystems and biodiversity contained within and views such expenditures as aligned with market expectations.
- Renewable Energy expenditures under the Framework may include financing and/or refinancing the development, deployment, and distribution of renewable energy projects including from solar, wind, hydropower projects, geothermal, hydrogen, marine, clean fuels, and bioenergy sources.
    - Hydropower projects contemplated under the Framework will be limited to those that meet one of the following conditions: (i) projects with a capacity below 25 MW; or (ii) projects greater than 25 MW that meet specified thresholds, including:

    - Projects will have a power density of over 5 W/m^2 or lifecycle emissions below 100g CO_2e/kWh if operational prior to 2020. Projects becoming operational after 2020 will have a power density of over 10 W/m^2 or lifecycle emissions below 50g CO_2e/kWh.
    - In addition, the Framework specifies that all hydropower projects will be required to undertake assessments of environmental and social risks with no controversies identified.
    - For refurbishments that increase the capacity of the projects, the Government will require that these meet the above-mentioned emissions thresholds and that new assessments of social and environmental risks be carried out prior to being eligible for green bond proceeds.
    - Based on the thresholds specified as well as the environmental and social impact assessments to be undertaken, Sustainalytics considers investments in hydropower under the Framework to be aligned with market expectations.
- Geothermal projects will be limited to those with direct emissions below 100gCO_2e/kWh, which is in line with market practice.
- For hydrogen, the Framework specifies a threshold carbon intensity of 36.4 gCO_2e/MJ, which is approximately 60% below the carbon intensity of hydrogen produced from natural gas.[4] Sustainalytics views positively the establishment of a threshold[5] while noting that this threshold leaves open the possibility of hydrogen production using fossil fuels employing carbon capture and storage, commonly referred to as "blue hydrogen". Sustainalytics recognizes that blue hydrogen can play a role in scaling up hydrogen production while also noting that the deep decarbonization of hydrogen production will require a shift away from reliance on fossil fuels. Sustainalytics therefore encourages the Government to help facilitate this shift and to favour projects involving the production of "green" hydrogen, i.e. production that relies only on renewable energy sources.
- As part of marine renewables, the Government may finance and/or refinance generation projects powered by offshore wind, tidal, and wave energy. Sustainalytics considers activities that increase renewable energy capacity as aligned with market expectation.
- Investments in clean fuels relate to R&D and manufacturing of advanced biofuels sourced from various types of non-food biomass. The Government intends to support projects aiming to develop cellulosic ethanol, synthetic fuels, renewable diesel and sustainable aviation fuels as well as gaseous fuels such as blue/green hydrogen and green ammonia.
    - Eligible feedstocks may include forestry and agricultural residues, non-recyclable municipal solid waste and non-fossil fuel based waste oils. The Issuer has communicated that it will not finance projects using waste from non-RSPO certified palm oil operations. Sustainalytics views positively the development of second-generation biofuels that rely on waste feedstock and do not compete with food production and/or consumption.
    - Sustainalytics encourages the Issuer to support projects which prioritize forestry and agricultural residues over livestock residues due to the carbon, land and water footprint typically associated with livestock operations.
    - Sustainalytics notes that the Government has indicated that it does not intend to allocate proceeds towards projects that support the conversion of plastic to fuel.
- Bioenergy projects contemplated under the Framework will rely on waste sources as feedstock. Sustainalytics considers the use of waste for energy generation as aligned with market practice and views positively activities that divert waste from landfills.

[4] For an explanation of the basis of this threshold, refer to "CertifHy– Developing a European Framework for the generation of guarantees of origin for green hydrogen" at: https://ec.europa.eu/jrc/sites/default/files/Vanhoudt%20Definition%20of%20Green%20Hydrogen%20SFEM.pdf.
[5] This threshold is incorporated into the Government's Hydrogen Strategy for Canada. See Natural Resources Canada, "Hydrogen Strategy for Canada: Seizing the Opportunities for Hydrogen", (2020) at: https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/environment/hydrogen/NRCan_Hydrogen-Strategy-Canada-na-en-v3.pdf

    - As part of this category, Canada intends to finance grid modernization projects including investments in supporting assets dedicated to renewable energy such as transmission and distribution infrastructure, demand management solutions, micro-grids as well as virtual power plants.[6] Sustainalytics views positively investments that are designed to improve grid efficiency and encourages the Government to select projects that are clearly anticipated to deliver tangible benefits.
- As it relates to Climate Change Adaptation, Canada may finance measures for climate resiliency and monitoring, such as through the Disaster Mitigation and Adaptation Fund.
    - The Framework cites specific climate risks, including flooding, wildfires, and drought. Sustainalytics recognizes that these hazards may be associated with climate change and considers it market expectation that these projects have robust climate vulnerability assessment and adaptation plans in place.
    - Expenditures for improved climate monitoring and assessment is viewed as aligned with market practice.
- Under the category of Sustainable Water & Wastewater Management, the Government may finance initiatives supporting the treatment and management of water or wastewater. Sustainalytics generally considers these activities to be aligned with market expectations, noting the wide variety of activities which may be undertaken under this criterion.
    - Expenditures may include infrastructure investments in treatment plants, sewer systems and stormwater management projects under, for example, the Government's Investing in Canada Infrastructure Program.[7]
    - Sustainalytics notes that the Framework's overarching exclusionary criteria apply to this category and activities will not include the treatment of water from fossil fuel extraction and processing. This is aligned with market practice.
- Within the category of Circular Economy Adapted Products, Production, Technologies and Processes, the Framework considers expenditures related to extending the life span of products and ensuring proper end-of-life recycling and reuse.
    - As part of this category, proceeds may be directed, for example, towards various forest programs which focus on R&D to facilitate the reuse of wood-based products as well as to support the development of biochemicals and biomaterials. Recycling of many materials and products, including forest products such as pulp and paper, is viewed as aligned with market expectations.
    - The Framework defines "value retention" as including reuse, repair, refurbishment and remanufacturing. The adaptive reuse of materials and components may result in extended lifespans and therefore deliver environmental benefits by avoiding the need to manufacture new items. Noting the Framework's overall exclusion on activities which support the production of fossil fuels, Sustainalytics considers these projects to be aligned with market expectation.
- Within the category of Pollution Prevention & Control, Canada may finance activities related to pollution mitigation, GHG mitigation and waste management.
    - Subject to the Framework's exclusion of projects dedicated to fossil fuel production, Sustainalytics views efforts to reduce non-GHG pollutants to be aligned with market practice.
    - Sustainalytics views financing the purchase, installation, and maintenance of carbon capture and storage (CCS) technology specifically for companies involved in hard-to-abate activities (excluding fossil fuel production) as transition expenditures. The Government of Canada has stated that providing support for CCS technology to hard-to-abate sectors, such as cement and steel, would support the decarbonization of these activities. Sustainalytics further notes that assurance of the credible transition of these activities lies with the entities carrying out the activity and therefore encourages the Issuer to have clear processes in place to engage with recipients of such support to ensure that they have a credible transition strategy and pathway in place.

[6] Virtual power plants relate to hardware and software upgrades and/or retrofits to infrastructure for grid monitoring and automation. For more information, refer to Smart Renewables and Electrification Pathways Program (SREPs) at https://www.nrcan.gc.ca/sites/nrcan/files/energy/pdf/NRCan%20ENG%20Final%20-%20SREPs%20Applicant%20Guide_accessible_E_final.pdf
[7] For more information on the Investing in Canada Infrastructure Program, see: https://www.infrastructure.gc.ca/plan/icp-pic-INFC-eng.html

        - Waste management activities financed may include prevention, reduction, and recycling. Sustainalytics views the financing of waste prevention and recycling programs to be aligned with market expectations. Sustainalytics notes that Canada may finance landfilling which will only be considered in northern and remote communities to improve waste management practices in those communities. Notwithstanding potential improvements in waste management, Sustainalytics views the allocation of green bond proceeds to conventional waste collection and engineered landfills in northern and remote communities as a deviation from market expectations.
    - The Government specifies Framework-level exclusionary criteria which include the following areas: fossil fuel transportation, exploration and production; nuclear energy; arms manufacturing; gambling; manufacture and production of tobacco and alcoholic beverages. Sustainalytics is of the opinion that these exclusions strengthen the Framework.
- Project Evaluation and Selection:
    - The Government of Canada has established an Interdepartmental Green Bonds Committee (the "IGBC") which will be responsible for identifying and evaluating eligible projects ("Eligible Green Expenditures") to be financed under the Framework. The IGBC is comprised of representatives across various departments and will be co-chaired by the Department of Finance as well as Environment and Climate Change Canada. The committee intends to meet at least twice annually to review the Framework and support reporting on Eligible Green Expenditures.
    - Canada has processes in place to identify and mitigate common environmental and social risks potentially associated with the eligible projects. Policy, plan and program proposals that are submitted to a Minister or Cabinet are subject to strategic environmental assessment requirements as per Canada's Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals, to identify the likely environmental effects, and develop mitigation strategies to reduce or eliminate adverse effects. Such policies and programs are also informed by gender and diversity analysis (including through Gender-based Analysis Plus) to ensure that decisions are undertaken with an understanding of how diverse groups of Canadians would be affected, and that initiatives are responsive to Canada's long-term sustainable and inclusive growth. Identity factors considered could include gender, age, sexual orientation, disability, education, language, geography, culture and income, amongst others.
    - Based on the presence of a dedicated committee with cross-functional expertise and the presence of risk management systems, Sustainalytics considers this process to be in line with market practice.
- Management of Proceeds:
    - The Department of Finance will oversee the allocation and ongoing monitoring of net proceeds under the Framework via a virtual register.
    - Proceeds will be deposited in the Government of Canada's general purpose revenue account, the Consolidated Revenue Fund, and will accordingly be comingled with funds from other sources. The requisition and expenditure of money from the Consolidated Revenue Fund is subject to the approval of the Parliament of Canada.
    - Canada intends to allocate at least 50% of any Green Bond net proceeds to expenditures related to the fiscal year of issuance or future fiscal years, subject to expenditure availability, target issuance size, and other considerations. The Government intends to allocate bond proceeds within two fiscal years following the fiscal year of issuance. Pending full allocation, net proceeds will be managed in accordance with the Government's cash management policy outlined in the Funds Management Governance Framework.
    - Based on the established process for monitoring and disclosure around temporary use of proceeds, Sustainalytics considers this process to be in line with market practice.
- Reporting:
    - The Government of Canada intends to report on allocation of proceeds annually until full allocation via a report published on its website. Allocation reporting will include the breakdown of proceeds according to project category, amount of allocated proceeds, as well as details around the type of expenditure utilized. Furthermore, the Issuer intends to engage a third-party to provide verification on the allocation of proceeds.
    - In addition, the Issuer is committed to reporting on relevant impact metrics per category. Example metrics could include, the number of clean vehicles deployed, annual greenhouse gas (GHG) emissions avoided/reduced (tCO2e), annual energy savings (MWh), renewable energy

generated (MWh), number of conservation areas developed, and annual volume of water managed/saved.
- Based on the commitment to both impact and allocation reporting, Sustainalytics considers this process to be in line with market practice.

Alignment with Green Bond Principles 2021

Sustainalytics has determined that the Government of Canada Green Bond Framework aligns to the four core components of the GBP. For detailed information please refer to Appendix 1: Green Bond/Green Bond Programme External Review Form.

Section 2: Sustainability Strategy of the Government of Canada

Contribution of framework to the Government of Canada's sustainability strategy

On 9 December 2016, Canada's First Ministers adopted the Pan-Canadian Framework on Clean Growth and Climate Change[8] ("Pan-Canadian Framework" or "PCF"), the country's first national climate change plan, developed with provinces and territories, and in consultation with Indigenous peoples. The PCF outlines how Canada will achieve its Paris Agreement target and is built on four main pillars: (i) pricing carbon pollution; (ii) complementary measures to further reduce emissions; (iii) measures to adapt to the impacts of climate change and build resilience; and (iv) actions to accelerate innovation, support clean technology, and create jobs.

From 2017-2019 Canada conducted a national assessment on the impacts of climate change and produced *Canada's Changing Climate Report*[9], the first of a series to be released as part of *Canada in a Changing Climate: Advancing our Knowledge for Action (2019-2021)*. Furthermore, the annual Synthesis Report[10] on the Status of the Implementation of the PCF is published online annually to summarize the progress being made by all levels of government. The third annual Synthesis Report highlighted continued commitment in 2019 to develop new climate change resilience initiatives.

In December 2020, Canada released *A Healthy Environment and a Healthy Economy*[11] - the country's strengthened climate plan, which builds on the PCF. It includes approximately 60 strengthened and new federal policies and programs centered around the following five pillars: (i) making the places Canadians live and gather more affordable by cutting energy waste; (ii) making clean, affordable transportation and power available in every community; (iii) continuing to ensure that pollution isn't free and households get more money back; (iv) building Canada's clean industrial advantage, including support for the development/adoption of clean technologies and the decarbonization of heavy industry; and (v) embracing the power of nature to support healthier families and more resilient communities.

In June 2021, the *Canadian Net-Zero Emissions Accountability Act*[12] received Royal Assent, formalizing Canada's target to achieve Net-Zero Emissions by 2050, including establishing a process to set interim emissions reduction targets at five-year intervals.

As part of the strengthened climate plan, and along with growing climate change impacts across the country, the Government of Canada committed to developing Canada's first National Adaptation Strategy. In August 2021, Canada published a report entitled *Adapting to the Impacts of Climate Change in Canada: an update on the National Adaptation Strategy*[13], which identifies key practices, such as the inclusion of indigenous knowledge systems, practices and rights-based approaches. More broadly, Canada recognizes Indigenous Peoples as key partners and stewards of natural resources, and demonstrated commitment to "renewed, nation-to-nation, government-to-government, and Inuit-Crown relationship based on recognition of rights,

[8] Government of Canada, "The Pan-Canadian Framework on Clean Growth and Climate Change" (2016), at: https://publications.gc.ca/collections/collection_2017/eccc/En4-294-2016-eng.pdf
[9] Government of Canada, "Canada's Changing Climate Report" (2019), at: https://changingclimate.ca/CCCR2019/
[10] Government of Canada, "Annual synthesis report on the status of implementation of the Pan-Canadian Framework on Clean Growth and Climate Change", at: https://publications.gc.ca/site/eng/9.847802/publication.html
[11] Government of Canada, "A Healthy Environment and a Healthy Economy", (2020), at: https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/healthy-environment-healthy-economy.html
[12] Government of Canada, "Canadian Net-Zero Emissions Accountability Act", at: https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050/canadian-net-zero-emissions-accountability-act.html
[13] Government of Canada, "Adapting to the Impacts of Climate Change in Canada: an update on the National Adaptation Strategy", (2021), at: https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/national-adaptation-strategy/report-1.html

respect, co-operation, and partnership".[14] Furthermore, in conjunction with its enhanced Nationally Determined Contribution, Canada also submitted its first Adaptation Communication[15] to the United Nations Framework Convention on Climate Change (UNFCCC) on 12 July 2021.

In addition to progress on tracking and reducing GHG emissions over time, Canada has demonstrated efforts to protect and conserve nature. The Government of Canada has made significant investments in natural climate solutions, including committing to plant 2 billion trees over the next 10 years, and has committed to protecting 25 percent of Canada's lands and oceans by 2025, working toward 30 percent by 2030. To build awareness and capacity of nature-based solutions, federal, provincial and territorial governments have been working together under the Canadian Council of Ministers of the Environment and published in 2018, among other initiatives, *Best Practices and Resources on Climate Resilient Natural Infrastructure*.[16] Furthermore, Canada's initiatives to protect the environment from pollution and waste include the *Chemicals Management Plan*[17], the *Federal Leadership Towards Zero Plastic Waste in Canada initiative*[18] and the adoption of the *Oceans Plastics Charter* [19] as part of the *G7 Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities*. In September 2021, Canada hosted the World Circular Economy Forum[20] and demonstrated commitment to continue supporting the integration of circular economy solutions.

Sustainalytics is of the opinion that the Government of Canada Green Bond Framework is aligned with the *Canadian Net-Zero Emissions Accountability Act*, *A Healthy Environment and a Healthy Economy*, and efforts to adapt to climate change and protect the environment. The Framework can assist the country in financing projects which advance and support the above-referenced policy objectives and contribute to mitigating and adapting to climate change. Considering the above, Sustainalytics considers the Government of Canada to be well-positioned to issue green bonds.

Well-positioned to address common environmental and social risks associated with the projects

While Sustainalytics recognizes that the net proceeds from the bonds issued under the Framework will be directed towards eligible projects that are expected to have positive environmental impact, Sustainalytics is aware that such eligible projects could also lead to negative environmental and social outcomes. Some key environmental and social risks associated with the eligible green investments include, (i) biodiversity impact from large-scale infrastructure development, such as renewable energy facilities, or with natural resource management, (ii) indigenous rights and potential impact from land use on local communities, (iii) occupational health and safety, and (iv) administration of grant programs.

Sustainalytics is of the opinion that the Government of Canada is able to manage and/or mitigate potential risks through implementation of the following:

- Canada formally introduced its Environmental Impact Assessment ("EIA") process in 1973 through the federal Environmental Assessment and Review Process ("EARP"). The *Canadian Environmental Assessment Act* ("CEAA") replaced EARP in 1992 and came into force in 1995, requiring "federal departments, agencies, and Crown corporations to conduct environmental assessments for proposed projects where the federal government is the proponent or where the project involves federal funding, permits, or licensing". The CEAA was re-written in 2012. In 2019, the CEAA 2012 was repealed and replaced by the *Impact Assessment Act* ("IAA" or "The Act"), under which regulations establish the legislative basis for federal impact assessment in most regions in Canada. Under the IAA, Canada is committed to meeting the objective of "one project, one assessment" in its review of projects through the *Physical Activities Regulations*, known as the "Project List".[21] The rules governing Canada's impact assessment system are designed to (i) protect the environment, (ii) ensure sustainable projects can move forward safely, and (iii) instill public confidence in how the Government of Canada makes decisions about major projects, like mines, pipelines and hydro

[14] Government of Canada, "Principles respecting the Government of Canada's relationship with Indigenous peoples", at: https://www.justice.gc.ca/eng/csj-sjc/principles-principes.html
[15] UNFCCC, "Adaptation Communications", at: https://unfccc.int/topics/adaptation-and-resilience/workstreams/adaptation-communications
[16] ICF for Canadian Council of Ministers of the Environment, "Best Practices and Resources on Climate Resilient Natural Infrastructure", (2018), at: https://ccme.ca/en/res/natural_infrastructure_report_en.pdf
[17] Government of Canada, "Chemicals Management Plan", at: https://www.canada.ca/en/health-canada/services/chemical-substances/chemicals-management-plan.html
[18] Government of Canada, "Federal Leadership Towards Zero Plastic Waste in Canada initiative", at: https://www.canada.ca/en/environment-climate-change/services/sustainable-development/strategic-environmental-assessment/public-statements/federal-leadership-towards-zero-plastic-waste.html
[19] Government of Canada, "Ocean Plastics Charter", at: https://www.canada.ca/en/environment-climate-change/corporate/international-affairs/partnerships-organizations/ocean-plastics-charter.html
[20] Government of Canada, "World Circular Economy Forum", at: https://www.canada.ca/en/services/environment/conservation/sustainability/circular-economy/world-forum-2021.html
[21] Government of Canada, "Physical Activities Regulations", (2019), at: https://laws.justice.gc.ca/eng/regulations/SOR-2019-285/page-1.html

dams.[22] The Act was informed by best practices recommended by the International Association of Impact Assessment[23] and federal impact assessments are led by the Impact Assessment Agency of Canada[24] – who would seek the views of the public to inform decisions taken during the impact assessment process.[25] Furthermore, all stakeholders are required to abide by other legislation and regulations, such as those outlined in the *Species at Risk Act*, and the *Canadian Environmental Protection Act, 1999* when implementing projects. Sustainalytics considers the existing IAA to create a favorable legal framework for environmental protection in Canada and notes that Canada has established Federal-Provincial/Territorial Impact Assessment Cooperation Agreements[26] to coordinate and align impact assessment mechanisms.

- Canada has formally recognized its unique relationship between the Government and Indigenous peoples, affirmed in section 35 of the *Constitution Act, 1982*. The IAA, referred to above, envisions tools to support Indigenous participation such as Indigenous Cooperation Regulations, Cooperation Agreements and an Indigenous Engagement and Partnership Plan to identify potential impacts of projects on Aboriginal and treaty rights[27], as affirmed in the *Constitution Act*. On 10 May 2016, Canada became a full supporter, without qualification,[28] of the Declaration on the Rights of Indigenous Peoples ("UNDRIP"), a legally non-binding resolution passed by the United Nations in 2007. The following year, Canada committed to implement the UNDRIP through the review of laws and policies guided by *Principles respecting the Government of Canada's Relationship with Indigenous peoples*.[29] While Canada introduced legislation in 2020, Bill C-15, the *United Nations Declaration on the Rights of Indigenous Peoples Act* received Royal Assent on 21 June 2021. In the decades leading to this new bill, the subject of indigenous rights and the development of natural resources and fisheries has arisen in Parliament and the legal system.
- Canada joined the International Labour Organization (ILO) in 1919 as one of the founding member States of the Organization.[30] The country has since then ratified numerous ILO Conventions, including all eight Fundamental Conventions. According to ILO, Canada has proven to be a key partner in the pursuit of decent work for all.[31] With regards to Occupational Safety and Health ("OSH") the Canada Labour Code, Part II and the Canada OSH Regulations made pursuant to that Code are the primary federal legislative tools protecting workers in "federal work, undertaking or business", including employees of the federal public service.[32] Provinces or Territories hold an act which applies to most workplaces in each jurisdiction. Furthermore, each provincial or territorial government is responsible for the administration and enforcement of its occupational health and safety act and regulations.[33]
- To ensure payments of public money, including grants programs referenced in the Framework, are administered responsibly, the Parliament of Canada has established the Office of the Auditor General of Canada. This office has published a Framework for Identifying Risk in Grant and Contribution Programs, with the purpose of providing Government staff with a tool to identify risk in grantmaking.[34] The Office of the Auditor General also maintains ongoing audit powers over the federal government, including approximately 100 departments and agencies. The office is able to

[22] Government of Canada, "Impact Assessments in Canada – Frequently Asked Questions", at: https://www.canada.ca/content/dam/iaac-acei/documents/policy-guidance/pg-gp/impact-assessments-in-canada-faq.pdf
[23] Ibid.
[24] Government of Canada, "Basics of Impact Assessments", at: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/basics-of-impact-assessments.html
[25] Government of Canada, "Framework: Public Participation Under the *Impact Assessment Act*", at: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/framework-public-participation.html
[26] Government of Canada, "Agreements related to assessments", at: https://www.canada.ca/en/impact-assessment-agency/corporate/acts-regulations/legislation-regulations/environmental-assessment-agreements.html
[27] Government of Canada, "Policy Context: Indigenous Participation in Impact Assessment", at: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/policy-indigenous-participation-ia.html
[28] Government of Canada, "Canada Becomes a Full Supporter of the United Nations Declaration on the Rights of Indigenous Peoples", (2016), at: https://www.canada.ca/en/indigenous-northern-affairs/news/2016/05/canada-becomes-a-full-supporter-of-the-united-nations-declaration-on-the-rights-of-indigenous-peoples.html
[29] Government of Canada, "Principles respecting the Government of Canada's relationship with Indigenous peoples", at: https://www.justice.gc.ca/eng/csj-sjc/principles-principes.html
[30] ILO, "Canada – ILO Cooperation", at: https://www.ilo.org/pardev/donors/canada/lang--en/index.htm
[31] Ibid.
[32] ILO, "Canada – 2013", at: https://www.ilo.org/dyn/legosh/en/f?p=14100:1100:0::NO::P1100_ISO_CODE3,P1100_YEAR:CAN,2013
[33] Canadian Centre for Occupational Health and Safety, "OSH Answers Fact Sheets", at: https://www.ccohs.ca/oshanswers/legisl/intro.html
[34] Office of the Auditor General of Canada, "Framework for identifying risk in grant and contribution programs", at: https://www.oag-bvg.gc.ca/internet/English/meth_gde_e_10223.html

conduct performance audits of various government programs to measure the effectiveness of such programs.[35]

Sustainalytics notes that the Government of Canada's activities in relation to the development of natural resource infrastructure, namely oil and gas pipelines, is subject to parliamentary and legislative deliberation in relation to Indigenous rights and environmental risks. Sustainalytics highlights that the exclusionary criteria set out in the Framework, which include exclusions for financing any activities that may be associated fossil fuel production, exploration and transportation, precludes any financing of oil and gas pipelines under the Framework.

Based on these policies, standards and assessments, Sustainalytics is of the opinion that the Issuer has implemented sufficient measures and is well positioned to manage and mitigate environmental and social risks commonly associated with the eligible categories.

Section 3: Impact of Use of Proceeds

All nine use of proceeds categories are aligned with those recognized by the GBP. Sustainalytics has focused below where the impact is specifically relevant in the context of Canada.

Reduction of greenhouse gas emissions in Canada

Canada is the world's 10th largest emitter of GHGs with the majority of the country's emissions arising from the combustion of fossil fuels.[36,37] Although Canada's GHG emission levels have remained relatively consistent over the past decade, there has been a decline in emissions intensity over the same period, driven by fuel switching and modernization of industrial processes.[38] The Government forecasts reduction in GHG emissions resulting from supportive regulations as well as the development of a robust carbon pricing system and other measures.[39]

Following the Paris Agreement and release of the Pan-Canadian Framework on Clean Growth and Climate Chang, Canada submitted an updated Nationally Determined Contribution to the UNFCCC, and committed to reducing GHG emissions by 30% below 2005 levels, by 2030.[40] This plan was enhanced in 2020, with the release of the country's strengthened climate plan, *A Healthy Environment and a Healthy Economy,* which enabled Canada to commit to a strengthened 2030 target of 40 – 45% below 2005 levels.[41]

In addition, Canada has committed to net-zero emissions by 2050, and has enshrined GHG emission reduction targets in federal law, under the *Canadian Net-Zero Emissions Accountability Act*.[42] These climate action plans codify the Government's commitment to mitigating climate impact in line with national and global targets.

Projects funded under the Green Bond Framework, such as energy efficiency, clean transportation and renewable energy, are considered impactful. These projects are expected to reduce GHG emissions and will, therefore, support Canada to achieve its targets under the Paris Agreement.

Clean transportation

Transportation-related emissions represented the second-largest source of emissions in Canada, at approximately 25% of all emissions, in 2019.[43] Among those transportation-related emissions, road

[35] Office of the Auditor General of Canada, "About the OAG", at: https://www.oag-bvg.gc.ca/internet/English/au_fs_e_371.html
[36] Carbon Brief, "Country Profile: Canada", at: https://www.carbonbrief.org/the-carbon-brief-profile-canada
[37] Government of Canada, "Greenhouse gas sources and sinks: executive summary 2021", at: https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2021.html
[38] Government of Canada, "National Inventory Report 1990 – 2019: Greenhouse Gas Sources and Sinks in Canada", (2019), at: https://publications.gc.ca/collections/collection_2021/eccc/En81-4-1-2019-eng.pdf
[39] Government of Canada, "Government of Canada confirms ambitious new greenhouse gas emissions reduction target", at: https://www.canada.ca/en/environment-climate-change/news/2021/07/government-of-canada-confirms-ambitious-new-greenhouse-gas-emissions-reduction-target.html
[40] UNFCC, "Canada's 2017 Nationally Determined Contribution Submission to the United Nations Framework Convention on Climate Change", (2017), at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Canada%20First/Canada%20First%20NDC-Revised%20submission%202017-05-11.pdf
[41] Government of Canada, "Canada's Enhanced Nationally Determined Contribution" at: https://www.canada.ca/en/environment-climate-change/news/2021/04/canadas-enhanced-nationally-determined-contribution.html
[42] Government of Canada, "A Healthy Environment and a Healthy Economy" at: https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/healthy-environment-healthy-economy.html
[43] The report provides estimates for transport according to IPCC sector classification is 30% and by Canadian economic sector is 25% for transport. For more information see: Government of Canada, "Greenhouse gas sources and sinks: executive summary 2021", at:

transportation was responsible for 70% of all transportation-related emissions. Several factors contribute to this large percentage of transportation-related emissions. Canada's expansive geography, both cold and warm climates, vibrant natural resources sectors, and trade focus, mean that both passenger and freight transportation are significant sources of fuel consumption and GHG emissions.

The country's strategy for the transportation sector is articulated in the *Transportation 2030: A Strategic Plan for the Future of Transportation in Canada*.[44] This plan was developed in 2016 and contemplates initiatives such as increased electrification, infrastructure promoting a shift to lower-emission modes of transportation and use of alternative clean fuels. The framework's eligibility criteria targets investments in technologies and supporting infrastructure to finance these initiatives, and the Government of Canada has launched several programs eligible under the Green Bond Framework that will address transportation-related emissions. For example:

- The *Incentives for Zero-Emission Vehicles Program (iZEV)* is in place to support the purchase or lease of battery, plug-in hybrid and hydrogen fuel cell vehicles by individuals and businesses.[45]
- The Zero Emission Vehicle Infrastructure Program will address the lack of charging and refuelling stations in Canada, one of the key barriers to ZEV adoption, by increasing the availability of localized charging and hydrogen refuelling opportunities throughout the country.[46]
- The $2.75 billion Zero Emission Transit Fund offers support to public transit and school bus operators across Canada to plan for electrification, support the purchase of zero emissions buses, and build supporting infrastructure including charging and facility upgrades.[47]

Sustainalytics is of the opinion that financing and investments in low-carbon public and private passenger transportation, as well as low-carbon freight transportation under the Framework will help Canada to achieve the carbon emissions reductions in the sector.

The importance of developing energy efficient and clean technology solutions

New and innovative technologies are recognized as being a key part of addressing environmental challenges. The Paris Agreement states that "accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change". It has been estimated that the clean tech sector could lead to 65 million new jobs globally by 2030.[48] Canada is well-positioned to benefit from these trends, consistently ranking highly on the Global Cleantech Innovation Index.[49] In this regard, *Canada's Net Zero Future* report estimates that up to 14.5% of the net zero pathway for Canadian industry can be achieved through changes in production processes.[50] Additionally, the opportunity in supplying growing markets cleaner energy and materials is significant for the country's net zero pathway.

Recognizing these needs and opportunities, the Government has taken steps to promote Canadian clean technology. Under *A Healthy Environment and a Healthy Economy*, the Government outlines strategies to position Canada as a world leader in zero-emissions clean technology through various programs including $750 million in funding to Sustainable Development Technology Canada to support these efforts.[51] Under the oversight of Innovation, Science and Economic Development Canada, the Government has taken steps to support this mandate, including implementing a national data strategy to support the sector and centralizing funding opportunities.[52]

The Green Bond Framework's eligibility criteria allow for financing to accelerate energy efficiency solutions as well as fuel switching to reduce emissions. For instance, the Government is investing in new buildings that are considered as net-zero carbon, net-zero ready, or built to best standard in northern and remote

https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2021.html

[44] Government of Canada, "Transportation 2030: A Strategic Plan for the Future of Transportation in Canada", at: https://tc.canada.ca/en/initiatives/transportation-2030-strategic-plan-future-transportation-canada

[45] Government of Canada, "Zero-emission vehicles" at: https://tc.canada.ca/en/road-transportation/innovative-technologies/zero-emission-vehicles

[46] Government of Canada, "Zero Emission Vehicle Infrastructure Program", at: https://www.nrcan.gc.ca/energy-efficiency/transportation-alternative-fuels/zero-emission-vehicle-infrastructure-program/21876

[47] Government of Canada, "Zero Emission Transit Fund" at: https://www.infrastructure.gc.ca/zero-emissions-trans-zero-emissions/index-eng.html

[48] Cambridge Econometrics, "Unlocking the Inclusive Growth Story of the 21st Century: Accelerating Climate Action in Urgent Times", at: http://www.camecon.com/wp-content/uploads/2018/10/2020-11-03-NCE-2018-Technical-Modelling.pdf

[49] Cleantech Group, "The Global Cleantech Innovation Index", at: https://www.cleantech.com/indexes/the-global-cleantech-innovation-index/

[50] Canadian Institute for Climate Choices, "Canada's Net Zero Future", (2021) at: https://climatechoices.ca/wp-content/uploads/2021/02/Canadas-Net-Zero-Future_FINAL-2.pdf

[51] Government of Canada, "A Healthy Environment and a Healthy Economy", (2020), at: https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/healthy-environment-healthy-economy.html

[52] Government of Canada, "Clean Growth Hub", at: https://www.ic.gc.ca/eic/site/099.nsf/eng/home

communities under its Green and Inclusive Community Buildings program[53], and the Canada Greener Homes Grant[54] will support homeowners to make energy-efficient changes to their homes. The framework also allows for investments in Canadian manufacturing processes to improve life span and the circularity of materials, technologies and services, ultimately increasing resource efficiency.

Sustainalytics is of the opinion that expenditures financing projects to improve energy efficiency in all building types, to improve circularity of products and business models, and to reduce air pollutants, will complement and advance these objectives and increase the beneficial environmental impact of Canada's clean innovation sector.

Adaptation

Many regions, communities, and economic sectors in Canada have been recognized as vulnerable to the effects of climate change, especially changing climatic patterns such as increased precipitation and warmer average temperatures.[55,56] These impacts have become increasingly apparent in recent years, with 2021 alone showcasing extreme heat and wildfires, heavy rains and flooding in British Columbia, warm winter conditions across the North, inhibiting traditional activities and access to remote communities, and severe drought across the prairies. Furthermore, the effects of climate change are often felt most heavily by Indigenous and Northern communities.[57]

As the effects of climate change are anticipated to continue to increase, efforts to improve resiliency and promote climate adaptation represent key actions to protect the wellbeing of Canadians. Canada launched the development of a National Adaptation Strategy in 2021, to identify actions that can be taken across five areas: protecting and improving human health and well-being, supporting particularly vulnerable regions, reducing climate-related hazards and disaster risks, building climate resilience through infrastructure, and leveraging scientific information and Indigenous climate leadership. The activities to be financed under the Framework align with measures to enhance resiliency and climate risk management, and monitor weather conditions, and in the view of Sustainalytics have the potential to drive positive impacts and increase climate resiliency, in particular for vulnerable communities.

Impact of investments in renewable energy and power grids

Extreme seasonal temperatures, vast landscape and dispersed population all mean that Canadians and Canadian businesses use a substantial amount of energy for their electricity and heating and cooling needs. As a result, approximately 81% of the country's GHG emissions come from energy.[58] Canada has one of the cleanest electricity grids in the world as renewables play a key role in the country's electricity mix with 82% of energy generated from non-GHG emitting sources.[59] However, the second largest generation source is from combustible fuels.[60] There have been various efforts across the provinces, in Alberta and Ontario in particular, to phase out coal-powered generation, which have been backstopped by federal regulations released in 2018.[61] In addition, Canada has already begun implementation of a plan to phase out coal-fired electricity generation by 2030 and announced in 2021 a commitment to achieve a net-zero emissions electricity sector by 2035.[62] Towards this goal, the Government of Canada has committed to invest over CAD 1billion in the development of renewable energy and grid modernization projects,[63] through for example the Smart Renewables and Electrification Pathways Program. Sustainalytics is of the opinion that expenditures directed towards measures supporting the development, deployment, and distribution of renewable energies as well

[53] For more information on the program, see: https://www.infrastructure.gc.ca/gicb-bcvi/index-eng.html
[54] For more information on the program, see: https://www.nrcan.gc.ca/energy-efficiency/homes/canada-greener-homes-grant/23441
[55] Government of Canada, "A Data Strategy Roadmap for the Federal Public Service", at: https://www.canada.ca/content/dam/pco-bcp/documents/clk/Data_Strategy_Roadmap_ENG.pdf
[56] Government of Canada "Vulnerability", at: https://www.nrcan.gc.ca/changements-climatiques/impacts-adaptation/vulnerability/10421
[57] Furgal, C. and Seguin, J., "Climate Change, Health, and Vulnerability in Canadian Northern Aboriginal Communities", (2006), Environmental Health Perspectives, at: https://ehp.niehs.nih.gov/doi/full/10.1289/ehp.8433
[58] Natural Resources Canada, "Energy Factbook 2021-2022", accessed in January 2022 at: https://www.nrcan.gc.ca/sites/nrcan/files/energy/energy_fact/2021-2022/PDF/2021_Energy-factbook_december23_EN_accessible.pdf
[59] Canada Energy Regulatory, "Towards Net-Zero: Electricity Scenarios", at: https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2021/towards-net-zero.html
[60] Statistics Canada, "Electric Power Generation – Monthly Generation by Type of Electricity", accessed in November 2021", at: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=2510001501
[61] Clean Energy Canada, "Canada's power grid is pretty clean. Here's why it needs to be cleaner", (2019), at: https://cleanenergycanada.org/canadas-power-grid-is-pretty-clean-heres-why-it-needs-to-be-cleaner/
[62] Government of Canada, "Canada and the World Move Closer to Powering Past Coal with More Climate Ambition at COP26", at: https://www.canada.ca/en/environment-climate-change/news/2021/11/canada-and-the-world-move-closer-to-powering-past-coal-with-more-climate-ambition-at-cop26.html
[63] Newswire, "Canada Invests Over $960-Million in Renewable Energy and Grid Modernization Projects", (2020), at: https://www.newswire.ca/news-releases/canada-invests-over-960-million-in-renewable-energy-and-grid-modernization-projects-880196618.html

as supporting grid modernization will significantly contribute to the reduction in GHG emissions from energy production and transportation.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 by the United Nations General Assembly and form an agenda for achieving sustainable development by the year 2030. The bond(s) issued under the Government of Canada Green Bond Framework advances the following SDGs and targets:

Use of Proceeds Category	SDG	SDG target
Clean Transportation	11 Sustainable Cities and Communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
Living Natural Resources & Land Use	14. Life Below Water 15. Life on Land	14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems
Energy Efficiency	7. Affordable and Clean Energy 11. Sustainable Cities and Communities	7.3 By 2030, double the global rate of improvement in energy efficiency 11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
Terrestrial & Aquatic Biodiversity	14. Life Below Water 15. Life on Land	14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems
Renewable Energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Climate Change Adaptation	13. Climate Action	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Water & Wastewater Management	6. Clean Water and Sanitation	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials,

		halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
Circular Economy Adapted Products, Production, Technologies and Processes	12. Responsible consumption and production	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
Pollution Prevention & Control	9. Industry, Innovation, and Infrastructure 12. Responsible consumption and production	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities 12.2 By 2030, achieve the sustainable management and efficient use of natural resources

Conclusion

Canada has developed the Government of Canada Green Bond Framework under which it may issue bonds and use the proceeds to finance and/or refinance, in whole or in part, existing and/or future government expenditures to facilitate the transition to a low-carbon economy and contribute to the climate-related, biodiversity protection and environmental goals set out by the Government. Sustainalytics anticipates the projects funded by the green bond proceeds will provide positive environmental impacts.

The Framework outlines a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that the Government of Canada Green Bond Framework is aligned with the overall national strategy of the Government and that the use of proceeds categories will contribute to the advancement of the UN Sustainable Development Goals 6, 7, 9, 11, 12, 13, 14 and 15. Additionally, Sustainalytics is of the opinion that the Government has sufficient measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the use of proceeds.

Based on the above, Sustainalytics is confident that Canada is well-positioned to issue green bonds and that the Government of Canada Green Bond Framework is robust, transparent, and in alignment with the four core components of the Green Bond Principles (2021).

Appendix

Appendix 1: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Government of Canada
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:	Government of Canada Green Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	February 08, 2022
Publication date of review publication:	

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBP:

☒	Use of Proceeds	☒	Process for Project Evaluation and Selection
☒	Management of Proceeds	☒	Reporting

ROLE(S) OF REVIEW PROVIDER

☒	Consultancy (incl. 2nd opinion)	☐	Certification
☐	Verification	☐	Rating
☐	Other *(please specify)*:		

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW *(if applicable)*

Please refer to Evaluation Summary above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section *(if applicable)*:

The eligible categories for the use of proceeds – Clean Transportation, Living Natural Resources & Land Use, Energy Efficiency, Terrestrial & Aquatic Biodiversity, Renewable Energy, Climate Change Adaptation, Water & Wastewater Management, Circular Economy Adapted Products, Production, Technologies and Processes, Pollution Prevention & Control – are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 6, 7, 9, 11, 12, 13, 14 and 15.

Use of proceeds categories as per GBP:

☒	Renewable energy	☒	Energy efficiency
☒	Pollution prevention and control	☒	Environmentally sustainable management of living natural resources and land use
☒	Terrestrial and aquatic biodiversity conservation	☒	Clean transportation
☒	Sustainable water and wastewater management	☒	Climate change adaptation
☒	Eco-efficient and/or circular economy adapted products, production technologies and processes	☐	Green buildings
☐	Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBP	☐	Other *(please specify)*:

If applicable please specify the environmental taxonomy, if other than GBP:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

The Government of Canada's Interdepartmental Green Bonds Committee will be responsible for identifying and evaluating eligible projects to be financed under the Framework. Canada has processes in place to identify and mitigate common environmental and social risks associated with the eligible projects. Sustainalytics considers the risk management system and project selection process to be in line with market practice.

Evaluation and selection

☒	Credentials on the issuer's environmental sustainability objectives	☒	Documented process to determine that projects fit within defined categories
☐	Defined and transparent criteria for projects eligible for Green Bond proceeds	☒	Documented process to identify and manage potential ESG risks associated with the project

☐ Summary criteria for project evaluation and selection publicly available

☐ Other *(please specify):*

Information on Responsibilities and Accountability

☒ Evaluation / Selection criteria subject to external advice or verification

☐ In-house assessment

☐ Other (please specify):

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

The Department of Finance will oversee the allocation and ongoing monitoring of proceeds under the Framework via a virtual register. Canada intends to allocate at least 50% of any Green Bond net proceeds to expenditures related to the fiscal year of issuance or future fiscal years, subject to expenditure availability, target issuance size, and other considerations. The government intends to allocate bond proceeds within two fiscal years following the fiscal year of any issuance. Pending full allocation, proceeds will be managed according to the Government's cash management policy outlined in the Funds Management Governance Framework. This is in line with market practice.

Tracking of proceeds:

☒ Green Bond proceeds segregated or tracked by the issuer in an appropriate manner

☒ Disclosure of intended types of temporary investment instruments for unallocated proceeds

☐ Other *(please specify)*:

Additional disclosure:

☐ Allocations to future investments only

☒ Allocations to both existing and future investments

☐ Allocation to individual disbursements

☒ Allocation to a portfolio of disbursements

☐ Disclosure of portfolio balance of unallocated proceeds

☐ Other *(please specify)*:

4. REPORTING

Overall comment on section (if applicable):

The Government of Canada intends to report on allocation of proceeds via a Green Bond Report on its website annually until full allocation. Allocation reporting may include breakdown of proceeds according to project category and by type of expenditure. In addition, Canada is committed to reporting on relevant impact metrics. Sustainalytics views the allocation and impact reporting as aligned with market practice.

Use of proceeds reporting:

☐ Project-by-project
☒ On a project portfolio basis
☐ Linkage to individual bond(s)
☐ Other *(please specify):*

Information reported:

☒ Allocated amounts
☐ Green Bond financed share of total investment
☐ Other *(please specify):*

Frequency:

☒ Annual
☐ Semi-annual
☐ Other (please specify):

Impact reporting:

☐ Project-by-project
☒ On a project portfolio basis
☐ Linkage to individual bond(s)
☐ Other (please specify):

Information reported (expected or ex-post):

☒ GHG Emissions / Savings
☒ Energy Savings
☒ Decrease in water use
☐ Other ESG indicators (please specify): Number of clean vehicles deployed, renewable energy generated (MWh), volume, number of conservation areas developed, percent increase in materials that are reusable, recyclable and/or certified, amount of waste disposed/ recycled

Frequency

☒ Annual
☐ Semi-annual
☐ Other (please specify):

Means of Disclosure

☐ Information published in financial report
☐ Information published in sustainability report
☐ Information published in ad hoc documents
☐ Other (please specify):
☐ Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

☐ Consultancy (incl. 2nd opinion)
☐ Certification
☐ Verification / Audit
☐ Rating
☐ Other *(please specify):*

Review provider(s): **Date of publication:**

ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

i. Second-Party Opinion: An institution with environmental expertise, that is independent from the issuer may issue a Second-Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second-Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.

ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.

iii. Certification: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.

iv. Green Bond Scoring/Rating: An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

Disclaimer

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Sustainalytics, a Morningstar Company, is a leading ESG research, ratings and data firm that supports investors around the world with the development and implementation of responsible investment strategies. The firm works with hundreds of the world's leading asset managers and pension funds who incorporate ESG and corporate governance information and assessments into their investment processes. The world's foremost issuers, from multinational corporations to financial institutions to governments, also rely on Sustainalytics for credible second-party opinions on green, social and sustainable bond frameworks. In 2020, Climate Bonds Initiative named Sustainalytics the "Largest Approved Verifier for Certified Climate Bonds" for the third consecutive year. The firm was also recognized by Environmental Finance as the "Largest External Reviewer" in 2020 for the second consecutive year. For more information, visit www.sustainalytics.com.