

Second-Party Opinion

Royal Bank of Canada Green Bond

Evaluation Summary

Sustainalytics is of the opinion that the RBC Green Bond Framework is credible and impactful, and aligns with the four core components of the Green Bond Principles 2018. This assessment is based on the following:



USE OF PROCEEDS The seven eligible categories for the use of proceeds are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that loans to finance projects related to renewable energy, energy efficiency, pollution prevention and control, sustainable resource management and land use, clean transportation, sustainable water and wastewater management, and green buildings will lead to positive environmental impacts and advance the UN Sustainable Development Goals.



PROJECT EVALUATION / SELECTION RBC has established a Green Bond Working Group to oversee the RBC green bond programme, which will include senior representatives from a variety of departments, including Corporate Treasury, Sustainable Finance, Environmental Affairs, and Corporate Banking. The Group will review the eligible portfolio on at least a quarterly basis. In addition, the Bank is a signatory to the Equator Principles. This is in line with market best practice.



MANAGEMENT OF PROCEEDS RBC will tag eligible assets in its existing global credit management system. The Green Bond Working Group will ensure that the portfolio balance meets or exceeds the amount of outstanding green bonds. Unallocated proceeds will be held in money market instruments, as part of the Bank's liquidity portfolio. This is in line with market practice.



REPORTING RBC will report annually, on any outstanding green bonds, information regarding allocation and impacts. Allocation information will include amounts aggregated at the category level, while impact reporting will include key performance indicators at the category level. In Sustainalytics' view, reporting on these metrics is in line with market practice.

Evaluation date	March 2019
Issuer Location	Toronto, Canada

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Introduction

Royal Bank of Canada ("Royal Bank", "RBC", the "Issuer", or the "Bank") is a diversified financial services company, and the largest bank in Canada by market capitalization. Founded in 1864, Royal Bank serves 16 million clients in 36 countries, providing personal and commercial banking, insurance, wealth management, and investment products and services.

RBC has developed the RBC Green Bond Framework (the "framework") under which it is planning to issue green bonds and use the proceeds to finance or refinance, in whole or in part, loans to eligible companies or projects that provide environmental benefits. The framework defines eligibility criteria in seven areas:

1. Renewable Energy
2. Energy Efficiency
3. Pollution Prevention and Control
4. Environmentally Sustainable Management of Living Natural Resources and Land Use
5. Clean Transportation
6. Sustainable Water and Wastewater Management
7. Green Buildings

RBC engaged Sustainalytics to review the RBC Green Bond Framework, dated March 2019, and provide a second-party opinion on the alignment of the green bond with the Green Bond Principles 2018 (the "GBP"), as administered by the International Capital Market Association (the "ICMA"),¹ and the framework's environmental credentials. This framework has been published in a separate document.²

As part of this engagement, Sustainalytics held conversations with various members of RBC's management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Bank's green bond. Sustainalytics also reviewed relevant public documents and non-public information.

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

¹ ICMA's Green Bond Principles 2018 <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

² The RBC Green Bond Framework will be made available on the Investor Relations section of [rbc.com](https://www.rbc.com)

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the RBC Green Bond Framework

Summary

Sustainalytics is of the opinion that the RBC Green Bond Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2018. Sustainalytics highlights the following elements of RBC's green bond framework:

- The eligible use of proceeds categories are recognized by the Green Bond Principles 2018 as having clear environmental benefits, and Sustainalytics views these projects as having a positive environmental impact (for additional information on impact see Section 3).
 - Sustainalytics views positively the alignment of the framework with credible third-party standards in applicable areas such as green buildings (LEED) and forestry (Forest Stewardship Council, Programme for the Endorsement of Forest Certification, Sustainable Forestry Initiative). Please see Appendix 2 for more information about forestry certifications.
 - Sustainalytics recognizes that the GBP require project-based lending and financing, and that there is, in general, less transparency with non-project-based lending. While RBC's framework includes project-based lending, it also provides for general corporate financing. By placing a quantitative threshold of 90% of revenue that a company must derive from eligible areas, Sustainalytics believes that RBC has ensured that proceeds of the green bond will be directed to environmental beneficial activities.
 - RBC's Green Bond Framework defines both new and existing loans to businesses and projects as eligible for financing and refinancing. The Bank does not specify a lookback period for existing loans. Where practical, Sustainalytics encourages the Bank to report on the proportion of net proceeds used to finance new versus existing loans.
- RBC will maintain a single pool of green eligible assets, the Green Bond Asset Portfolio, which have been screened against the eligibility criteria by the Environmental Affairs and Corporate Finance teams. A Green Bond Working Group has been established to oversee the RBC green bond programme, including senior representatives from Corporate Treasury, Sustainable Finance, Corporate Banking, and Environmental Affairs, which will review RBC's Green Bond Asset Portfolio on a quarterly basis and remove assets which no longer qualify. Furthermore, RBC is a signatory to the Equator Principles, demonstrating the Bank's commitment to funding environmentally and socially responsible projects. Sustainalytics therefore considers RBC's project selection process to be aligned with market best practice.
- RBC will tag all assets in the Green Bond Asset Portfolio as "green bond eligible" within its global credit management system, which tracks the Bank's credit exposure on an ongoing basis. The Green Bond Working Group will ensure, on a quarterly basis, that the aggregate value of eligible assets in the portfolio meets or exceeds the amount of outstanding green bonds. Should an unallocated balance remain, this amount will be held in cash or liquid securities in accordance with RBC's liquidity management policy. This is aligned with market practice.
- RBC will report annually until full allocation, on its investor relations website, information regarding allocation and impacts. Sustainalytics considers these reporting commitments to be in line with market practice.
 - Allocation information will include the amount directed to each eligible category, a description of the types of projects funded, and the balance of unallocated funds.
 - Impact reporting will include key performance indicators at the portfolio level, as well as additional details where feasible, subject to confidentiality agreements.

Alignment with Green Bond Principles 2018

Sustainalytics has determined that RBC's green bond framework aligns to the four core components of the Green Bond Principles 2018. For detailed information please refer to Appendix 3: Green Bond/Green Bond Programme External Review Form.

Section 2: Sustainability Performance of the Issuer

Contribution of framework to RBC's sustainability strategy

RBC's Environmental Blueprint³ lays out the company's priority environmental issues: Climate Change, Water, and Sustainable Communities. Considering these thematic areas, the document provides four priority environmental objectives and 12 associated goals, each with a number of quantitative and qualitative targets.

The priority environmental objectives are:

- Reduce environmental footprint
- Manage environmental and social risks
- Offer environmental products, services and advice
- Promote environmental sustainability

The Bank's annual Corporate Citizenship Report⁴ provides progress information on these objectives. RBC has achieved the majority of the goals set for its internal operations, including reducing greenhouse gas emissions intensity by 20%, reducing paper use by 20%, and doubling the amount of LEED-certified office space occupied. The targets related to the bank's lending activities are generally more qualitative, and include ambitions such as supporting the "growth of renewable energy and clean technology sectors through financing and advice," participating in "market-based initiatives that focus on reducing environmental impacts," and supporting "transactions and business activities of qualified parties intending to reduce emissions of greenhouse gases, improve water quality and availability, improve urban environmental sustainability or facilitate adaptation to climate change".

Furthermore, RBC strives to take a leadership role with regards to the assessment and disclosure of climate-related risks and opportunities and was a member of the 2017 United Nations Environment Programme - Finance Initiative (UNEP FI) led pilot project on implementing the recommendations of the Financial Stability Board's (FSB) Task Force on Climate Related Financial Disclosures (TCFD). In its 2017 Climate Change Position & Disclosure Statement,⁵ the Bank affirms its support for the principles of the Paris Agreement, and recognizes the role that financial institutions can play in addressing climate change, through both their internal operations and provision of products and services.

Sustainalytics is of the opinion that the issuance of green bonds and the provision of loans to eligible green projects and companies supports Royal Bank's Environmental Blueprint and its overall environmental and climate strategy.

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

Sustainalytics recognizes that proceeds from RBC's green bond will be directed towards eligible projects that generally provide environmental benefits. However, by offering lending and financial services, banks are exposed to risks associated with controversial companies and/or projects they may finance, and as such, may inadvertently finance activities that have negative social or environmental impacts. These risks include, but are not limited to, pollution and impacts on biodiversity from construction, and impacts on local communities. To mitigate these risks, RBC has procedures in place to assess and address various risks, including:

- An Environmental and Social Risk Management (ESRM) process, which ensures that an appropriate level of due diligence is carried out.⁶ According to RBC, the due diligence requirements are informed by international best practices from organizations such as the IFC, Canadian Standards Association, and ASTM.
- Commitment to the Equator Principles, an international framework to identify and manage environmental and social risks.⁷ RBC has been a signatory to this agreement since 2003, and was the first Canadian bank to do so.
- An ongoing commitment to reviewing and updating risk management policies and reporting on this information. In fiscal year 2017, three policies were updated.⁸

³ http://www.rbc.com/community-sustainability/_assets-custom/pdf/RBC-Environmental-Blueprint.pdf

⁴ http://www.rbc.com/community-sustainability/_assets-custom/pdf/RBC-CCR-Report-2017-e.pdf

⁵ http://www.rbc.com/community-sustainability/_assets-custom/pdf/RBC_ClimateChangePosition_Disclosure_Statement_2017.pdf

⁶ <http://www.rbc.com/community-sustainability/environment/responsible-financing.html>

⁷ <http://www.rbc.com/community-sustainability/environment/equator-principles-projects-FY-2017.pdf>

⁸ http://www.rbc.com/community-sustainability/_assets-custom/pdf/RBC-CCR-Report-2017-e.pdf

- An ongoing commitment to review credit risk assessments from an E&S risk perspective. In 2017, 1,942 assessments were carried out in this manner.⁹

Sustainalytics is of the opinion that Royal Bank's internal processes and mechanisms to mitigate risks associated with its financing activities are in line with market practice, ensuring that the Bank is well-positioned to address common environmental and social risks.

Section 3: Impact of Use of Proceeds

All seven use of proceeds categories are recognized as impactful by the Green Bond Principles 2018. Sustainalytics has focused below on use of proceeds where the impact is specifically relevant in the local context.

The role of financial institutions in supporting a transition to a low-carbon economy

The financial sector is both particularly susceptible to climate change risk, and uniquely positioned to take actions which will have a positive impact.¹⁰ According to a report from the, World Energy Agency, in order to achieve the 2°C trajectory envisioned by the Paris Agreement, the amount of annual investment in clean energy and energy efficiency must double from 2014 levels by 2020, reaching US\$790 billion, and increase almost six times by 2035.¹¹ The United Nations Environment Programme Finance Initiative (UNEP FI) states that "bank loans are the most important source of external finance for companies and will play a crucial role in steering businesses towards lower emission activities".¹² RBC's own Climate Change Position Statement echoes these perspectives, affirming that the Bank "[w]ill have an important role to play in supporting an orderly and socially inclusive transition to a low carbon economy" and "seek to accelerate the flow of capital to clients engaged in efforts to mitigate and adapt to climate change, and to those providing products and services that enable others to do so".¹³

The proceeds of the green bond will be directed towards financing for companies and projects in a number of thematic areas, including renewable energy projects, energy efficiency improvements, clean transportation, green buildings, waste-to-energy, and sustainable forestry. Sustainalytics is of the opinion that the use of proceeds will enable companies to develop projects that support the ongoing decarbonization of the economy.

Contribution to the achievement of national greenhouse gas reduction targets

Canada is a signatory to the Paris Agreement, and has committed to reducing its greenhouse gas emissions by 30% below 2005 levels by 2030, as well as decreasing the emission of black carbon, a particulate pollutant which, while short-lived, causes disproportionate climate impacts in the arctic.¹⁴ The Pan-Canadian Framework on Clean Growth and Climate Change lays out four main pillars which will enable Canada to achieve the targets which have been set; one pillar is to accelerate investment in clean technology, innovation, and jobs.¹⁵ Sustainalytics is of the opinion that the eligible projects enumerated by the green bond framework will support the achievement of Canada's international greenhouse gas reduction commitments, and are in line with the Pan-Canadian Framework on Clean Growth and Climate Change.

Green buildings in Canada

In 2016, buildings in Canada emitted 81.4 megatonnes of CO₂ equivalent (Mt CO_{2e}), the third largest emitting sector, trailing only oil & gas and transportation.¹⁶ The American Council for an Energy Efficient Economy ranked Canada 14th amongst the world's 25 largest energy consuming countries in 2018 for its level of energy efficiency in buildings.¹⁷ In this context, investment in green buildings technology, as well as building energy efficiency, can provide substantial environmental benefits.

⁹ *ibid*

¹⁰ <https://globalriskinstitute.org/publications/climate-change-why-financial-institutions-should-take-note/>

¹¹ <https://www.iea.org/publications/freepublications/publication/WEIO2014.pdf>

¹² <http://www.unepfi.org/fileadmin/documents/FinancialInstitutionsTakingActionOnClimateChange.pdf>

¹³ http://www.rbc.com/community-sustainability/assets-custom/pdf/RBC_ClimateChangePosition_Disclosure_Statement_2017.pdf

¹⁴ <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Canada%20First/Canada%20First%20NDC-Revised%20submission%202017-05-11.pdf>

¹⁵ <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/introduction.html>

¹⁶ <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html>

¹⁷ <http://aceee.org/sites/default/files/publications/researchreports/i1801.pdf>

RBC's green buildings criteria encompasses both commercial and residential buildings that either have demonstrated GHG emissions performance in the top 15% of their city, state, province, or country or that have achieved a green building certification from a reputable third party. The "top 15%" criterion is in line with that provided by the Climate Bond Initiative for residential buildings.¹⁸ While there is, at this time, limited data on the Canadian residential buildings market that would support certification under this criterion, its inclusion in the framework allows for future inclusion of assets in this category, notably residential mortgages, as has been done in other jurisdictions, such as Australia¹⁹ and Norway²⁰. The certified green buildings criterion allows the inclusion of buildings which have attained LEED Gold or Platinum; Sustainalytics considers the inclusion of only these top two levels as representative of best practice in the green bonds market. The framework also considers the use of "equivalent certification schemes", and specifically lists BOMA BEST, BREEAM, and Energy Star. Sustainalytics views BOMA and BREEAM as reputable certification agencies, with BOMA Gold and Platinum and BREEAM Excellent and Outstanding or higher as equivalent to LEED's top two levels. Energy Star ratings assess only energy, instead of viewing buildings from a holistic perspective; Sustainalytics encourages RBC to consider other sustainability factors where possible, such as water usage or construction materials, and considers Energy Star rated buildings with a score of 85 or higher as representative the highest levels of performance. For more information on varying green building standards, please see Appendix 1.

Alignment with and contribution to the Sustainable Development Goals

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This green bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Renewable energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Energy efficiency	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency
Pollution prevention and control	12. Responsible Consumption and Production	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
Environmentally sustainable management of living natural resources and land use	15. Life on Land	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.
Clean transportation	9. Industry, Innovation and Infrastructure	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
Sustainable water and 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
Green buildings	11. Sustainable Cities and Communities	11.B By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters

¹⁸ <https://www.climatebonds.net/standard/buildings/residential/>

¹⁹ https://capital.nab.com.au/docs/NAB_-2018_1_Green-Tranche_Pre-Issuance-Verification.pdf

²⁰ [https://spabol.sparebank1.no/uploads/20180112_Spabol_Green_Bond_Framework_\(final\).pdf](https://spabol.sparebank1.no/uploads/20180112_Spabol_Green_Bond_Framework_(final).pdf)

Conclusion

RBC has developed a framework, under which it will issue green bonds, with the proceeds being used to fund loans to companies or projects with environmental benefits, in the areas of renewable energy, energy efficiency, pollution prevention and control, environmentally sustainable management of living natural resources and land use, clean transportation, sustainable water and wastewater management, and green buildings. Sustainalytics is of the opinion that the assets described by the framework will support RBC's commitment to low-carbon financing and activities, while providing positive environmental impacts.





All of the use of proceeds categories specified in the framework are aligned with those of the Green Bond Principles 2018; RBC has formed a Green Bond Working Group to oversee its green bond program; transparent procedures have been put in place for the management and tracking of funds; and, commitments have been made to report on allocation and impacts. Furthermore, Sustainalytics believes that the initiatives funded by the green bond will contribute to the advancement of six of the UN Sustainable Development Goals.

Based on the above, Sustainalytics is confident that RBC is well-positioned to issue green bonds, and that the RBC Green Bond Framework is robust, transparent, and in alignment with the Green Bond Principles 2018.

Appendices

Appendix 1: Comparison of Green Building Certification Schemes

	LEED	Energy Star	BOMA BEST	BREEAM
Background	Leadership in Energy and Environmental Design (LEED) is a US Certification System for residential and commercial buildings used worldwide. LEED was developed by the non-profit U.S. Green Building Council (USGBC) and covers the design, construction, maintenance and operation of buildings.	ENERGY STAR is a U.S Environmental Protection Agency voluntary program that provides independently certified energy efficiency ratings for products, homes, buildings, and industrial plants. Certification is given on an annual basis, so a building must maintain its high performance to be certified year to year.	BOMA BEST, administered by the Building Owners and Managers Association (BOMA) of Canada, is a certification program for existing buildings. The assessment considers performance and operation of buildings in a wide range of performance and operations categories.	BREEAM (Building Research Establishment Environmental Assessment Method) was first published by the Building Research Establishment (BRE) in 1990. Based in the UK, this scheme can be used for new, refurbished and extension of existing buildings.
Certification levels	<ul style="list-style-type: none"> • Certified • Silver • Gold • Platinum 	<ul style="list-style-type: none"> • 1-100 score, 75 is minimum for certification 	<ul style="list-style-type: none"> • Certified • Bronze • Silver • Gold • Platinum 	<ul style="list-style-type: none"> • Pass • Good • Very Good • Excellent • Outstanding
Areas of assessment	<ul style="list-style-type: none"> • Energy and atmosphere • Sustainable Sites • Location and Transportation • Materials and resources • Water efficiency • Indoor environmental quality • Innovation in Design • Regional Priority 	<ul style="list-style-type: none"> • Energy use 	<ul style="list-style-type: none"> • Energy • Water • Air • Comfort • Health and Wellness • Custodial • Purchasing • Waste • Site • Stakeholder Engagement 	<ul style="list-style-type: none"> • Management • Energy • Land Use and Ecology • Pollution • Transport • Materials • Water • Waste • Health and Wellbeing • Innovation
Requirements	Minimum requirements independent of level of certification; point-based scoring system weighted by category to	1-100 score based on energy use, as calculated through the Portfolio Manager tool. Raw score is adjusted based on location, operating conditions, and other factors. The	Minimum requirements independent of level of certification; score based on checklist to determine certification level. The minimum best practices and	Minimum requirements depending on the level of certification; scoring system weighted by category, producing a percentage-based overall score. The majority of BREEAM

	<p>determine certification level.</p> <p>The rating system is adjusted to apply to specific sectors, such as: New Construction, Major Renovation, Core and Shell Development, Schools-/Retail-/Healthcare New Construction and Major Renovations, and Existing Buildings: Operation and Maintenance.</p>	<p>numerical score indicates performance better than at least 75 percent of similar buildings nationwide.</p>	<p>category scoring is adjusted for seven different asset classes: office, enclosed shopping centres, light industrial, open air retail, universal, MURB, and health care.</p>	<p>Issues are flexible, meaning that the client can choose which to comply with to build their performance score.</p> <p>BREAAM has two stages/ audit reports: a 'BREEAM Design Stage' and a 'Post Construction Stage', with different assessment criteria.</p>
Qualitative Considerations	<p>Widely accepted within the industry, both in North America and internationally, and considered a guarantee of strong performance.</p>	<p>Accounts only for energy use, not other measures of environmental performance. Is a key component of other green building certification systems.</p>	<p>Most commonly used certification for existing buildings in Canada, and considered less administratively burdensome for existing buildings.</p>	<p>Used in more than 70 countries: Good adaptation to the local normative context. Predominant environmental focus, lower levels are less strict than LEED.</p>
Performance display				

Appendix 2: Sustainalytics' Analysis of FSC and PEFC Certifications

Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC), including PEFC's North American implementation as the Sustainable Forestry Initiative (SFI), are both based on rigorous standards and on a multi-stakeholder structure. Both organizations are in line with international norms such as the International Labor Organization (ILO) conventions, the Convention on Biological Diversity (CBD), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In addition to compliance with laws in the country of certification, both schemes have a set of minimum requirements that companies are required to meet to obtain and maintain certifications. These requirements include compliance with standards around sustainable management of forests, management of environmental impacts of operations, preservation of biodiversity, management of socio-economic and community relations, and sourcing of sustainable wood (chain of custody). Furthermore, both FSC and PEFC require external annual audits to ensure compliance, and achieve and maintain certification. Despite these similarities, PEFC has faced certain criticisms from civil society actors. These are highlighted below:

- (i) *Type of organization:* Since the FSC is an international labelling and certification system, it sets its own global standards. The PEFC, in contrast, is not a standard setter, but a mutual recognition scheme. The PEFC sets sustainability benchmarks according to international norms and endorses national certification schemes that comply with these benchmarks. A common criticism of this model is that it allows for more flexibility in the interpretation of international PEFC benchmarks as per regional, cultural, and socio-economic context, and results in the endorsement of less rigorous national certification schemes. However, the process for being endorsed by the PEFC is thorough; any national certification system seeking to obtain PEFC endorsement must submit to a comprehensive assessment process, including independent evaluation and public consultation. This evaluation of compliance with international PEFC benchmarks is carried out by independent, accredited certification organizations.
- (ii) *Indigenous People's Rights:* FSC and PEFC both identify indigenous rights as an important standard in forest management. Both certification schemes require that forest management activities consider and do not infringe on indigenous people's rights, and the activities are carried out using frameworks ensuring their free and informed consent. A criticism of PEFC is that it requires only engagement with indigenous people in forest management decisions, while the FSC provides performance-oriented targets, and requires forest managers operating on indigenous lands to obtain indigenous people's consent through binding agreements.
- (iii) *Sourcing wood from non-certified sources:* Both FSC and the PEFC have established standards around sourcing wood from non-certified and controversial sources. FSC's standards direct forest managers to avoid wood harvested in violation of traditional and civil rights. A criticism of the comparable PEFC standard is that it limits identification of controversially sourced wood to situations where the local legislation is violated. However, PEFC standards explicitly reference the violation of local, national, and international legislation with regards to worker's and indigenous people's rights as being a controversial source of wood.

Appendix 3: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Royal Bank of Canada
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: <i>[specify as appropriate]</i>	RBC Green Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	February 27, 2019
Publication date of review publication: <i>[where appropriate, specify if it is an update and add reference to earlier relevant review]</i>	

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 GBPs:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---|--|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other <i>(please specify)</i> : | |

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 Executive 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 seven eligible categories for the use of proceeds are aligned with those recognized by the Green Bond Principles. Sustainalytics believes that loans to finance projects related to renewable energy, energy efficiency, pollution prevention and control, environmentally sustainable management of living natural resources and land use, clean transportation, sustainable water and wastewater management, and green buildings will lead to positive environmental impacts and advance the UN Sustainable Development Goals.

Use of proceeds categories as per GBP:

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

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

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section *(if applicable)*:

RBC has established a Green Bond Working Group to oversee the RBC green bond programme, which will include senior representatives from a variety of departments, including Corporate Treasury, Sustainable Finance, Environmental Affairs, and Corporate Banking. The Group will review the eligible portfolio on at least a quarterly basis. In addition, the Bank is a signatory to the Equator Principles. This is in line with market best practice.

Evaluation and selection

- | | |
|---|---|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability objectives | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories |
|---|---|

- | | |
|--|---|
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input type="checkbox"/> Summary criteria for project evaluation and selection publicly available | <input type="checkbox"/> Other <i>(please specify)</i> : |

Information on Responsibilities and Accountability

- | | |
|--|--|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other <i>(please specify)</i> : | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

RBC will tag eligible assets in its existing global credit management system. The Green Bond Working Group will ensure that the portfolio balance meets or exceeds the amount of outstanding green bonds. Unallocated proceeds will be held in money market instruments, as part of the Bank's liquidity portfolio. This is in line with market practice.

Tracking of proceeds:

- | |
|---|
| <input checked="" type="checkbox"/> Green Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other <i>(please specify)</i> : |

Additional disclosure:

- | | |
|---|--|
| <input type="checkbox"/> Allocations to future investments only | <input type="checkbox"/> Allocations to both existing and future investments |
| <input type="checkbox"/> Allocation to individual disbursements | <input checked="" type="checkbox"/> Allocation to a portfolio of disbursements |
| <input checked="" type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other <i>(please specify)</i> : |

4. REPORTING

Overall comment on section *(if applicable)*:

RBC will report annually, for the life of the bond, information regarding allocation and impacts. Allocation information will include amounts aggregated at the category level, while impact reporting will include key performance indicators at the category level. In Sustainalytics' view, reporting on these metrics is in line with market practice.

Use of proceeds reporting:

- | | |
|--|---|
| <input type="checkbox"/> Project-by-project | <input type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input checked="" type="checkbox"/> Other (<i>please specify</i>): category level |

Information reported:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Allocated amounts | <input type="checkbox"/> Green Bond financed share of total investment |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Frequency:

- | | |
|--|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (please specify): | |

Impact reporting:

- | | |
|--|--|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (please specify): |

Frequency:

- | | |
|--|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (please specify): | |

Information reported (expected or ex-post):

- | | |
|---|--|
| <input checked="" type="checkbox"/> GHG Emissions / Savings | <input checked="" type="checkbox"/> Energy Savings |
| <input checked="" type="checkbox"/> Decrease in water use | <input type="checkbox"/> Other ESG indicators (please specify): Various, depending on category |

Means of Disclosure

- | | |
|---|---|
| <input type="checkbox"/> Information published in financial report | <input type="checkbox"/> Information published in sustainability report |
| <input type="checkbox"/> Information published in ad hoc documents | <input checked="" type="checkbox"/> Other (please specify): Company website |
| <input type="checkbox"/> 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.)

Investor Relations www.rbc.com

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- | | |
|--|--|
| <input type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification / Audit | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

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.

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