

REVIEW¹

OF THE MANAGEMENT OF THE NATIONAL BANK OF CANADA'S SUSTAINABILITY BONDS ISSUED IN 2019

February 2020

SCOPE

In 2018, Vigeo Eiris was commissioned to provide an independent opinion (hereafter "Second Party Opinion" or "SPO") on the sustainability credentials and management of the Sustainability Bond Framework² (the "Framework") created by the National Bank of Canada (the "Issuer" or "NBC"). We issued our SPO in October 2018.

As of today, Vigeo Eiris has been commissioned by the NBC to provide an independent opinion (or "Review") on the management of its 2019 Sustainability Bonds issuances, based on the review of its 2019 Sustainability Bond Report.

Our opinion is established according to our Environmental, Social and Governance ("ESG") exclusive assessment methodology and to the ICMA's Green Bond Principles ("GBP") and Social Bond Principles ("SBP") voluntary guidelines (referred together as the "GBP & SBP"), both edited in June 2018.

Our opinion is built on the review of the NBC's 2019 Sustainability Bond Report for the following elements:

1. Eligible Businesses and Projects: evaluation of the Issuer's capacity to use the Bonds' proceeds to (re)finance Businesses and Projects with sustainability benefits, in line with its initial commitments, and to report on the Businesses and Projects results; analysis of the Businesses and Projects results.
2. Bonds: evaluation of the Issuer's capacity to implement the Bonds' processes, in line with its initial commitments (evaluation and selection process and allocation process) and to report on the Bonds' results; analysis of the aggregated Bonds' results.

Our sources of information are multichanneled, combining data from (i) public information gathered from public sources, press content providers and stakeholders, (ii) information from Vigeo Eiris' exclusive ESG rating database, and (iii) information provided by the Issuer through documents.

We carried out our due diligence assessment from January 8th, 2020 to February 07th, 2020. We consider that we were provided with access to all the appropriate documents we solicited. We consider that the information made available enables us to establish our opinion with a reasonable level of assurance on its completeness, precision and reliability.

VIGEO EIRIS' OPINION

Vigeo Eiris is of the opinion that the Sustainability Bonds issued in 2019 by the National Bank of Canada remain aligned with the GBP & SBP 2018.

- ▶ We express a reasonable³ assurance on the Issuer's capacity to use the Bonds' proceeds to finance and/or refinance Eligible Businesses and Projects, in line with its initial commitments.
- ▶ We express a reasonable assurance on the Issuer's capacity to implement the evaluation and selection process, in line with its initial commitments.
- ▶ We express a reasonable assurance on the Issuer's capacity to implement the allocation process, in line with its initial commitments.
- ▶ We express a reasonable assurance on the Issuer's capacity to implement the reporting process, in line with its initial commitments:
 - First, we express a reasonable assurance on the Issuer's capacity to report on the fund allocation, in line with its initial commitments. The indicators used for the allocation reporting are complete and relevant, at category level.
 - We express a reasonable assurance on the Issuer's capacity to report on environmental and social benefits of the financed Eligible Businesses and Projects, in line with its initial commitments. The indicators used for the environmental and social benefits reporting (outputs, outcomes and impacts) are relevant and in line with the Issuer's initial commitments.

¹ This Review is to be considered as the "Consultant review" described by the International Capital Market Association (www.icmagroup.org).

² The "Sustainability Bond" is to be considered as the bond issued, subject to the discretion of the Issuer. The name "Sustainability Bond" has been decided by the Issuer: it does not imply any opinion from Vigeo Eiris.

³ Definition of Vigeo Eiris' scales of assessment (scale is detailed in the Methodology section)

Summary: level of assurance on the Issuer's capacity to:				
Use the proceeds to finance Eligible Businesses and Projects	Allocation of proceeds	Management of proceeds	Report on the allocation of proceeds	Report on the environmental and social benefits
Reasonable	Reasonable	Reasonable	Reasonable	Reasonable
Moderate	Moderate	Moderate	Moderate	Moderate
Weak	Weak	Weak	Weak	Weak

This Review of the Issuer's 2019 Sustainability Bond Report has been performed according to our exclusive assessment methodology and to the GBP & SBP voluntary guidelines (June 2018)

Paris, February 07th, 2020

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Disclaimer

Transparency on the relation between Vigeo Eiris and the Issuer: Vigeo Eiris has executed one audit mission for the NBC until so far (one Second Party Opinion in 2018). No established relation (financial or commercial) exists between Vigeo Eiris and the Issuer.

This opinion aims at providing a post-issuance independent review on the sustainability credentials and management of the Bonds based on the information which has been made available to Vigeo Eiris. Vigeo Eiris has neither interviewed stakeholders out of the Issuer's employees, nor performed an on-site audit nor other test to check the accuracy of the information provided by the Issuer. The accuracy, comprehensiveness and trustworthiness of the information collected are a responsibility of the Issuer. Providing this review does not mean that Vigeo Eiris certifies the effectiveness, the excellence or the irreversibility of the assets financed by the Bonds. The Issuer is fully responsible for attesting the compliance with its commitments defined in its policies, for their implementation and their monitoring. The opinion delivered by Vigeo Eiris neither focuses on the financial performance of the Bonds, nor on the effective allocation of its proceeds. Vigeo Eiris is not liable for the induced consequences when third parties use this opinion either to make investments decisions or to make any kind of business transaction.

Restriction on distribution and use of this opinion: the opinion is provided by Vigeo Eiris to the Issuer and can only be used by the Issuer. The distribution and publication are at the discretion of the Issuer, submitted to Vigeo Eiris approval.

DETAILED RESULTS

Use of Proceeds

We express a reasonable assurance on the Issuer's capacity to use the Bonds' proceeds to finance and/or refinance Eligible Businesses and Projects, in line with its initial commitments.

According to the information provided by the Issuer, 100% of the net proceeds of the issuances have been used to finance and refinance Eligible Businesses and Projects for a total amount of CAD 1,194,904,000 (EUR 820,740,017 million). Vigeo Eiris had access to the last updated version of the NBC's 2019 Sustainability Bond Report provided on February 5th, 2020. According to the Issuer, this report will be publicly available on February 20th, 2020.

In particular, the Bonds' proceeds have been reported by the Issuer as used to finance and refinance three (3) Eligible Categories of Eligible Businesses and Projects:

- Renewable Energy (63% of net proceeds):
 - o Wind farms (11)
 - o Solar farms (34)
 - o Small scale hydro projects (4)
- Affordable Housing (26% of net proceeds)
 - o Social and community housing for low- and moderate-income households
- Access to Basic and Essential Services (11% of net proceeds)
 - o Childcare centres

The reported financed and refinanced Eligible Businesses and Projects appear to be in line with three (3) out of five (5) Eligible Categories of projects initially defined by the Issuer in its Framework, namely: Renewable Energy, Affordable Housing and Access to Basic and Essential Services which represent 100% of the total proceeds of the Bonds.

The Eligible Businesses and Projects financed and refinanced effectively contribute to three (3) out of four (4) environmental and social objectives initially identified by the Issuer, namely: climate change mitigation, access to affordable housing and access to basic and essential services.

The Issuer had initially committed to assess the environmental and social benefits of the Bonds. We consider the environmental and social benefits to be clearly assessed.

We maintain our area for improvement which consists in reorganizing in the Framework the Social Categories, namely: Affordable Housing and Access to basic and essential services per social need and specifying target populations for each basic and essential services.

The Issuer has reported on the share of refinancing which is equal to 39% at Eligible Portfolio level. The NBC has also stated that a look-back period of 36 months prior to the date of issuance was applied, in line with its initial commitment.

We consider that the selected Eligible Businesses and Projects are likely to contribute to the following United Nations' Sustainable Development Goals, namely Goal 1: No Poverty, Goal 3: Good Health and Well-being, Goal 4: Quality Education, Goal 7: Affordable and Clean Energy, Goal 11: Sustainable Cities and Communities and Goal 13: Climate Action.



Eligible Categories	UN SDGs identified	UN SDGs targets
Renewable Energy	SDG 7 – Affordable and Clean Energy	7.2
	SDG 13 – Climate Action	N/A
Affordable Housing	SDG 1 – No Poverty	1.2, 1.4
	SDG 11. – Sustainable Cities and Communities	11.1
Access to Essential Services	SDG 1 – No Poverty	1.2, 1.4
	SDG 3 – Good Health and Well-being	3.8
	SDG 4 – Quality Education	4.5

Process for Project Evaluation and Selection

We express a reasonable assurance on the Issuer’s capacity to implement the evaluation and selection process, in line with its initial commitments.

The evaluation and selection process of the Eligible Businesses and Projects appears to be efficiently implemented. Vigeo Eiris (VE) had access to all the appropriate documents (see below).

- The process applied appears to be based on relevant internal and external expertise:
 - Following the NBC’s business as usual procedure, the Account Managers have conducted a due diligence process and performed a risk assessment of all businesses and/or projects to be financed, before presenting the necessary information to the Deals Committee for pre-approval. VE had access to an example of a Boardsheet which includes the due diligence and risk assessment performed.
 - The Deals Committee has ensured the compliance of businesses and/or projects to be financed with the NBC’s policies and regulations. This information is included in the Boardsheets.
 - The Credit Committee has then granted the final credit approval. VE had access to an example of approval form from the Committee.
 - In addition, the Account Managers have completed an ESG risk analysis through a Sustainability Bonds Program Evaluation Sheet (“Evaluation sheet”) allowing to carry out a review of an Eligible Business and/or Project and assess whether it qualifies for the purposes of the ESG Program. VE had access to an example of an Evaluation Sheet for a renewable energy project.
 - Finally, the Deals Committee has submitted for final approval each project to the Sustainability Bond Committee. The later has reviewed and selected the Eligible Projects and Businesses to be financed by the Bonds.
- Traceability of the selection and evaluation process was ensured through the Sustainability Bond Committee’s meetings which were subject to meeting minutes, to which VE had access.
- Internal verification of the compliance of the selected Businesses and Projects with the Framework and eligibility criteria is performed by ESG officers.
- The Issuer has not mandated an independent external reviewer to verify the compliance of the selected Businesses and Projects with the defined process and eligibility criteria, which is not in line with its initial commitment. Therefore, an area for improvement consists in mandating an external auditor for this purpose.

We maintain our area for improvement which consists in explicitly excluding other controversial sectors such as animal welfare, chemicals of concern, genetic engineering, high interest rate lending, pornography, reproductive medicine and tobacco.

Regarding the identification and management of environmental and social (E&S) risks associated with the Eligible Projects and Businesses, external parties have conducted risks assessments covering legal, reputational, environmental, social and operational risks. VE had access to an example of an independent engineering report which appears to provide a complete risk assessment of an Eligible Project. The Issuer has performed internal ESG due diligences for all Projects and Businesses financed by the Bonds, through a dedicated ESG evaluation sheet (the "Evaluation Sheets" mentioned above).

The Issuer has conducted an annual ESG controversies screening of its asset portfolio, in line with its initial commitment. VE had access to this document. Based on the document provided, no ESG controversy related to the asset portfolio has been identified, therefore no specific *Note* has been provided from the Operations teams to the Account Managers.

We maintain our area for improvement which consists in explicitly disclosing the process of identification and management of environmental and social (E&S) risks in the Framework.

Management of Proceeds

We express a reasonable level of assurance on the Issuer's capacity to implement the allocation process, in line with its initial commitments.

The allocation process appears to be implemented, however VE did not have access to a financial audit. The Issuer states that the management of proceeds has been made according to its initial commitment:

- The Issuer states that the net proceeds of the Bonds were deposited in the general funding accounts of the NBC and managed by the Corporate Treasury team.
- 100% of the proceeds of the Bonds were allocated to Eligible Businesses and Projects within 18 months, in line with the Issuer's initial commitment.
- The NBC has established and maintained a Sustainability Bond Register to track the Eligible Businesses and Projects and the allocation of the net proceeds. VE had access to the Register which provides main relevant information regarding the Bonds issued.
- No divestments from Eligible Businesses and Projects have been reported by the Issuer until today.

The allocation of funds appears to be appropriately tracked and internally verified. However, the Issuer did not mandate an independent party to verify the allocation of funds for each Bond, which is not in line with its initial commitment. Therefore, an area for improvement consists in mandating an external auditor for this purpose.

Reporting

We express a reasonable level of assurance on the Issuer's capacity to implement the reporting process, in line with its initial commitments.

The Issuer has reported annually on the Bonds, in line with its initial commitment. However, the Issuer states that the report will be made publicly available on its website as of February 20th, 2020, which will not be verified by VE.

First, we express a reasonable assurance on the Issuer's capacity to report on the fund allocation, in line with its initial commitments. The indicators used for the allocation reporting are complete and relevant, at category level, including:

- o Confirmation from the NBC that the use of proceeds of the Sustainability Bond complies with the NBC's Sustainability Bond Framework;
- o The amount of proceeds allocated to each Eligible Category (in%);
- o For each Eligible Category, one or more examples of Eligible Businesses and Projects financed, in whole or in part, by the proceeds obtained from the Sustainability Bond, including their general details (brief description, location, stage — construction or operation);
- o The balance of unallocated net proceeds (in %).

In addition, the Issuer has reported on the actual share of financing vs refinancing, following our recommendation.

We express a reasonable assurance on the Issuer’s capacity to report on environmental and social benefits of the financed Eligible Businesses and Projects, in line with its initial commitments. The indicators used for the environmental and social benefits reporting (outputs, outcomes and impacts) are relevant and in line with the Issuer’s initial commitments.

Eligible Categories	Environmental and/or social benefits indicators		Vigeo Eiris’ opinion
	Outputs and outcomes	Impact Indicators	
Renewable Energy	Total installed capacity (MW)	GHG emissions reduced or avoided (t eq. CO2)	The selected indicators are relevant and in line with the Issuer’s initial commitment.
Affordable Housing	- Number of buildings - Number of units		The selected indicators are relevant and in line with the Issuer’s initial commitment.
Access to Basic and Essential Services	- Number of places – Babies - Number of places – Total - Number of childcare centers		The selected indicators are relevant and in line with the Issuer’s initial commitment.

The calculation methodologies and assumptions for outcomes and impacts indicators have been disclosed in the Issuer’s reporting.

We maintain our area for improvement which consists in (i) mandating an external auditor (audit firm) to verify the social and environmental data included in the report. In addition, an area for improvement consists in, in case of co-financing, reporting on the environmental and social benefits on a pro rata basis of the Bonds proceeds’ contribution to the total cost of the project.

METHODOLOGY

In Vigeo Eiris' view, Environmental, Social and Governance (ESG) factors are intertwined and complementary. As such they cannot be separated in the assessment of ESG management in any organization activity or transaction. In this sense, Vigeo Eiris writes an opinion on the Issuer's Corporate Social Responsibility as an organization, and on the Issuances through the objectives, management and reporting of the assets/projects to be (re)financed.

Vigeo Eiris' methodology for the definition and assessment of the ESG performance is based on criteria aligned with public international standards, in compliance with the ISO 26000 guidelines, and organized in 6 domains: Environment, Human Resources, Human Rights, Community Involvement, Business Behaviour and Corporate Governance. The evaluation framework has been customized regarding material issues, based on our relevant sector ESG assessment frameworks and on specific issues considering the Issuer's activity.

Our research and rating procedures are subject to internal quality control at three levels (analysts, heads of cluster sectors, and internal review by the audit department for second party opinions) complemented by a final review and validation by the Direction of Methods. A right of complaint and recourse is guaranteed to all companies under our review, including three levels: first, the team linked to the company, then the Direction of Methods, and finally Vigeo Eiris' Scientific Council. All collaborators are signatories of Vigeo Eiris' Code of Ethics.

Eligible Businesses and Projects review

The analysis of the conformance with the Issuer's initial commitments covers both the eligibility criteria (based on the definition of Eligible Categories, use of proceeds requirements) and the selection criteria (based on the ESG commitments).

Our review covers both the implementation of the initial commitments made by the Issuer in the SPO, and its 2019 Sustainability Bond Report:

- Fund allocation, reporting on the use of proceeds, considered as a primary component and mandatory to achieve reasonable level of assurance at Bond portfolio level; and
- Social and environmental benefits, reporting on outputs, outcomes and impact indicators, considered as a primary component and mandatory to achieve reasonable level of assurance at Bond portfolio level.

Bonds review

The analysis of the implementation of the Bonds' processes and commitments covers:

- The evaluation and selection process, i.e. assessment of the coherence and efficiency of the implemented process, and of the exhaustiveness of the ESG issues covered; and
- The allocation of proceeds' process based on the rules for management of proceeds defined prior to the issuance of the Bonds.

The analysis of the existence and completeness of the reporting, at Bond portfolio level, according to the Issuer's initial commitments, also covers two components:

- Fund allocation, reporting on the aggregated use of proceeds, considered as a primary component and mandatory to achieve a reasonable level of assurance at Bond portfolio level;
- Social and environmental benefits, reporting on aggregated output and impact indicators, considered as a primary component and mandatory to achieve a reasonable level of assurance at Bond portfolio level;

Reporting

The reporting indicators in place for the allocation of proceeds and for the sustainable benefits are evaluated according to the quality of the indicators (exhaustiveness and relevance), and considering the reporting nature and management (format, visibility, data collection, etc.).

The evaluation of the projects results is conducted at Bond portfolio level, including aggregated reporting, based on both social and environmental benefits, considered as essential to achieve a good performance.

VIGEO EIRIS' ASSESSMENT SCALES	
Performance evaluation	
Advanced	Advanced commitment; strong evidence of command over the issues dedicated to achieving the objective of social responsibility. Reasonable level of risk management and using innovative methods to anticipate emerging risks.
Good	Convincing commitment; significant and consistent evidence of command over the issues. Reasonable level of risk management.
Limited	Commitment to the objective of social responsibility has been initiated or partially achieved; fragmentary evidence of command over the issues. Limited to weak level of risk management.
Weak	Commitment to social responsibility is non-tangible; no evidence of command over the issues. Level of insurance of risk management is weak to very weak.

Level of assurance	
Reasonable	Able to convincingly conform to the prescribed principles and objectives of the evaluation framework
Moderate	Compatibility or partial convergence with the prescribed principles and objectives of the evaluation framework
Weak	Lack or unawareness of, or incompatibility with the prescribed principles and objectives of the evaluation framework



Vigeo Eiris is an independent international provider of environmental, social and governance (ESG) research and services for investors and public & private organizations. We undertake risk assessments and evaluate the level of integration of sustainability factors within the strategy and operations of organizations.

Vigeo Eiris offers a wide range of services:

- ▶ **For investors:** decision making support covering all sustainable and ethical investment approaches (including ratings, databases, sector analyses, portfolio analyses, structured products, indices and more).
- ▶ **For companies & organizations:** supporting the integration of ESG criteria into business functions and strategic operations (including sustainable bonds, corporate ratings, CSR evaluations and more).

Vigeo Eiris is committed to delivering client products and services with high added value: a result of research and analysis that adheres to the strictest quality standards. Our methodology is reviewed by an independent scientific council and all our production processes, from information collection to service delivery, are documented and audited. Vigeo Eiris has chosen to certify all its processes to the latest ISO 9001 standard. Vigeo Eiris is an approved verifier for CBI (Climate Bond Initiative). Vigeo Eiris' research is referenced in several international scientific publications.

With a team of more than 240 experts of 28 different nationalities, Vigeo Eiris is present in Paris, London, Brussels, Milan, Montreal, Hong Kong, Casablanca, Rabat and Santiago.

The Vigeo Eiris Global Network, comprising 4 exclusive research partners, is present in Brazil, Germany, Israel and Japan.

For more information: www.vigeo-eiris.com