

Manulife

Type of Engagement: Annual Review

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Introduction

In 2017 and 2018, Manulife issued green bonds (the "2017 and 2018 Green Bonds") aimed at financing activities that promote a low-carbon, climate-resilient future. In April 2022, Manulife engaged Sustainalytics to review the projects funded through the issued green bonds and provide an assessment as to whether the projects met the Use of Proceeds criteria and the Reporting commitments outlined in the Manulife Green Bond Framework. Sustainalytics provided a Second Party Opinion on the Framework in November 2017.

This review follows previous reviews of the 2017 issuance conducted in October 2018 and November 2019, a previous review of the 2018 issuance conducted in May 2019, and a previous review of the combined issuances conducted in April 2020 and May 2021.

Evaluation Criteria

Sustainalytics evaluated the projects and assets funded with proceeds from the 2017 and 2018 Green Bonds based on whether the projects and programmes:

- 1. Met the Use of Proceeds and Eligibility Criteria outlined in the Manulife Green Bond Framework; and
- 2. Reported on qualitative and/or quantitative environmental performance indicators as outlined in the Manulife Green Bond Framework.³

Table 1 lists the Use of Proceeds and Eligibility Criteria that are applicable to the 2017 and 2018 Green Bond issuances.

Table 1: Use of Proceeds and Eligibility Criteria4

Use of Proceeds	Eligibility Criteria			
Renewable Energy	Development, construction, operation, maintenance and upgrades of: i. Facilities and equipment wholly dedicated to the generation of renewable energy, as defined by the International Renewable Energy Agency (IRENA) Statute ⁵ , including: • wind energy • solar energy • small-scale hydro (under 25 Mega Watts) • bio-energy from waste biomass • tidal energy • geothermal energy ii. Transmission infrastructure and other supporting infrastructure wholly dedicated to renewable energy generation facilities including inverters, transformers, energy storage systems and control systems			

¹ Manulife's Green Bond Framework dated November 2017 is available on their website at:

https://www.manulife.com/content/dam/corporate/global/en/documents/pas/MFC_GBF_2017_EN.pdf

https://www.manulife.com/content/dam/corporate/global/en/documents/pas/MFC_GB_SPO_2017_EN.pdf

² Sustainalytics Second-Party Opinion on Manulife Green Bond Framework is available at:

³ The Manulife Green Bond Framework commits to reporting on qualitative and quantitative environmental performance indicators where feasible. See Appendix 1 for environmental performance indicators reported on per use of proceeds category in Manulife's 2021 Green Bond Annual Report, dated May 2021.

⁴ The Green Bond Framework also allows for investment in green buildings, clean transportation, sustainable water management, and pollution prevention and control

⁵ IRENA Statute, 2009. https://www.state.gov/documents/organization/179955.pdf



	iii. Production or manufacturing facilities wholly dedicated to equipment, feedstock or components for renewable energy generation facilities
Sustainably Managed Forestry	Purchase and operation of sustainably-managed forest holdings certified by credible third-party forest certification systems, such as:
	i. Forest Stewardship Council (FSC)ii. Programme for the Endorsement of Forest Certification (PEFC)
Energy Efficiency	Development, construction, acquisition, installation, operation, and upgrades of projects that reduce energy consumption or improve the efficiency of resources, including: i. Projects involving the installation, maintenance or replacement of efficient heating, ventilation, air conditioning, refrigeration, lighting and electrical equipment ii. Projects that allow the monitoring and modeling of energy performance such as the design and installation of digital controls, sensors or building information systems iii. Projects that optimize the amount and time of energy consumption by minimizing peak loads, such as design and installation of metering systems, smart grids, load control systems

Issuing Entity's Responsibility

Manulife is responsible for providing accurate information and documentation relating to the details of the projects that have been funded, including description of projects, amounts allocated, and project impact.

Independence and Quality Control

Sustainalytics, a leading provider of ESG and corporate governance research and ratings to investors, conducted the verification of Manulife's Green Bond Use of Proceeds. The work undertaken as part of this engagement included collection of documentation from Manulife employees and review of documentation to confirm the conformance with the Manulife Green Bond Framework.

Sustainalytics has relied on the information and the facts presented by Manulife with respect to the Nominated Projects. Sustainalytics is not responsible nor shall it be held liable if any of the opinions, findings, or conclusions it has set forth herein are not correct due to incorrect or incomplete data provided by Manulife.

Sustainalytics made all efforts to ensure the highest quality and rigor during its assessment process and enlisted its Sustainability Bonds Review Committee to provide oversight over the assessment of the review.

Conclusion

Based on the limited assurance procedures conducted,⁶ nothing has come to Sustainalytics' attention that causes us to believe that, in all material respects, the reviewed bond projects, funded through proceeds of Manulife's Green Bond, are not in conformance with the Use of Proceeds and Reporting Criteria outlined in the Manulife Green Bond Framework. Manulife has disclosed to Sustainalytics that the proceeds of both the 2017 and 2018 Green Bonds were fully allocated at the respective times of issuance.

⁶ Sustainalytics limited assurance process includes reviewing the documentation relating to the details of the projects that have been funded, including description of projects, estimated and realized costs of projects, and project impact, which were provided by the Issuer. The Issuer is responsible for providing accurate information. Sustainalytics has not conducted on-site visits to projects.



Detailed Findings

Table 3: Detailed Findings

Eligibility Criteria	Procedure Performed	Factual Findings	Error or Exceptions Identified
Use of Proceeds Criteria	Verification of the projects funded by the 2017 and 2018 Green Bonds to determine if projects aligned with the Use of Proceeds Criteria outlined in the Manulife Green Bond Framework and above in Table 1.	d 2018 Green Bonds to determine complied with the Use of Proceeds of Proceeds criteria. outlined in the Manulife Green	
Reporting Criteria	Verification of the projects funded by the 2017 and 2018 Green Bonds to determine if the impact of projects was reported in line with the Manulife Green Bond Framework. For a list of KPIs reported please refer to Appendix 1.	All projects reviewed reported on at least one KPI per Use of Proceeds criteria.	None



Appendix 1: Impact Reporting by Eligibility Criteria

Manulife has provided in their 2021 Green Bond Report the following reporting information. These figures have been revised for the reporting period to reflect actual energy generation and forest management practices for 2021.

Green Bond Category	Issuance	Location(s)	Amount Allocated (million) ⁷	Avoided CO ₂ (tonnes)	Other reported quantitative indicators
Renewable Energy: Wind Energy	Green Bond 1	Canada	SGD 219	41,146	296,607 MWh generated
Renewable Energy: Solar Energy	Green Bond 1	Canada and US	SGD 278	13,917	85,257 MWh generated
Renewable Energy: Wind Energy	Green Bond 2	Uruguay	CAD 19.8	315	32,128 MWh generated
Renewable Energy: Solar Energy	Green Bond 2	Canada, US and Peru	CAD 333.9	17,656	82,874 MWh generated
Energy Efficiency	Green Bond 2	US	CAD 171.6	56,754	32,635 MWh saved
Sustainably Managed Forestry	Green Bond 2	US	CAD 72.6	110,767	36,243 PEFC-certified acres ⁸
-		TOTAL:	SGD 497 million CAD 597.9 million	240,555	

NOTE:

- (1) The capacity, energy, and avoided emissions are calculated on a basis proportional to Manulife's share of debt and equity investments in the project, scaled to the amount financed by the green bond proceeds.
- (2) Manulife has added assets to the allocation of the 2nd bond, as the carrying value of the underlying assets amortized was below the issuance amount.
- (3) Manulife has implemented a methodological change to align with the Partnership for Carbon Accounting Financials (PCAF), which recommends the calculation of share in the project by taking the amortized value of debt and increased value of equity as a proportion of the total enterprise value (EV) of the project at the year-end. Historically, the calculation methodology used the ratio of deployed capital as the percent of EV at project origination. Manulife has also updated emission factors following IRENA's update of the 2014 data with 2018, and the EIA's release of the 2021 power generation mix in the US.

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⁷ Allocated amounts from Green Bond 1 are provided in million SGD, amounts from Green Bond 2 are provided in million CAD, reflecting the currency in which the bond was issued.

⁸ Manulife has confirmed that the forestry projects to which green bond proceeds have been allocated are certified by the Sustainable Forest Initiative (SFI) endorsed by the Programme for the Endorsement of Forest Certification (PEFC) and has provided information on the certifications for Sustainalytics' review.



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