

3.703% US\$ 750 million, senior notes due 16 March 2032 (the “Green Bond”)

Annual Green Bond Report

Introduction

In 2017, Manulife became the first global life insurer to issue a green bond¹ with an inaugural issuance in Singapore of SG\$500 million.

Since then, we have issued green bonds in Canada (2018) of C\$600 million and in the U.S. (2022) of US\$750 million.

At Manulife, we recognize the threats posted by climate change to our business, public health and the livelihoods of the communities in which we operate. As a global financial services company, we are taking steps to reduce our environmental footprint, support the transition to a lower carbon economy, and invest in climate change mitigation and resilience. In May 2021, Manulife released its Climate Action Plan and our journey to net zero. We have achieved net zero in our operations, and are uniquely positioned due to the carbon removals from our substantial owned and operated forests and farmland outweighing our company-wide operational emissions. The Climate Action Plan includes our commitment to achieve net zero financed emissions by 2050, and our commitment to reduce our absolute scope 1 and 2 emissions by 35% by 2035. We are also taking a combined sector and asset class approach to develop and establish ambitious interim decarbonization targets in line with the target-setting methodology of the Science-Based Targets Initiative.

This report summarizes the Sustainable Bond Framework (the “Framework”) governing green bond issuances on or after February 2022, allocation of green bond proceeds to eligible assets, the associated environmental impacts, and project examples. Consistent with the Framework, we are committed to publishing annually to outline any changes to the proceeds allocation.

Green Bond

Manulife’s Sustainable Bond Framework

Manulife’s Sustainable Bond Framework (the “Framework”) is a component of Manulife’s sustainability objectives and is governed by Manulife Sustainable Bonds Council. The Framework was published in

February 2022 and was developed in line with the International Capital Market Association’s Sustainability Bond Guidelines 2021, Green Bond Principles 2021, and Social Bond Principles 2021. The Framework sets out the following guidelines for issuances of green bonds, social bonds, or sustainability bonds (together, the “Sustainable Bonds”):

- 1. Use of proceeds:** Net proceeds from the Sustainable Bonds are allocated towards assets that meet the Eligibility Criteria described in the Framework.
- 2. Process for project evaluation and selection:** Manulife Sustainable Bonds Council reviews and approves the allocation of the net proceeds to ensure that the assets meet our criteria.
- 3. Management of proceeds:** A Sustainable Bonds Register (the “Register”) is established to record the allocation of the net proceeds, including relevant information of the Eligible Assets, and form the basis for the environmental and social impact reporting.
- 4. Reporting:** Commitment to publish an annual report highlighting the amount of proceeds allocated to each Eligibility Criteria, environmental and social indicators, and the remaining balance of unallocated proceeds, among other disclosures.

Eligible Categories

Green Bond Principles Categories

Renewable energy

Green buildings

Environmentally sustainable management of natural resources and land use

Energy efficiency

Clean transportation

Sustainable water and wastewater management

Pollution prevention and control

Social Bond Principles Categories

Access to essential services

Affordable housing

¹ Manulife’s green bond is a fixed income instrument with an amount equal to the net proceeds allocated to new and/or existing Eligible Assets defined in the Manulife’s Green Bond Framework, for example - renewable energy, energy efficiency, sustainably managed forests and other investments that advance ecosystem improvements

External Review

Sustainalytics, an independent provider of environmental, social, governance research to investors, issued a second-party opinion on the alignment of the Framework with the Sustainability Bond Guidelines 2021, Green Bond Principles 2021, and Social Bond Principles 2021. As committed in the Framework, Sustainalytics has provided limited assurance on the management of the proceeds and compatibility of the selected Eligible Categories in accordance with the Framework.

The second-party opinion on the Framework and the annual report review by Sustainalytics can be found on Manulife's website at www.manulife.com/en/investors/results-and-reports.

Eligible category	Allocation of proceeds (US\$ millions)	Allocation of proceeds (%)	Impact Indicators	Manulife's Share of Impact Indicators
Renewable Energy: Wind	167	22%	Renewable energy capacity installed (MWh)	389,885
			Avoided / reduced carbon emissions (MtCO2e)	46,966
Renewable Energy: Solar	117	16%	Renewable energy capacity installed (MWh)	211,272
			Avoided / reduced carbon emissions (MtCO2e)	82,212
Renewable Energy: Hydro	66	9%	Renewable energy capacity installed (MWh) ¹	n/a
			Avoided / reduced carbon emissions (MtCO2e) ²	n/a
Energy Efficiency	10	1%	Annual energy savings (MWh)	2,912
			Avoided / reduced carbon emissions (MtCO2e)	3,352
Sustainably-Managed Forestry	213	29%	Sustainable certification	Sustainable Forestry Initiative®
			Certified area (acres)	183,705
			Removed / sequestered carbon emissions (MtCO2e) ^{2,3}	-234,477
Green Buildings	173	23%	Green buildings certifications	LEED Gold BOMA BEST Platinum
			Certified area (square footage)	620,982
Total	\$ 746⁴	100%		

¹ Proceeds allocated to the "Renewable Energy – Hydro" meets the Eligibility Criteria, however, it has not reached commercial operations as of December 31, 2022.

² Carbon removals for two sustainably-managed forestry assets acquired during 2022 are not included in Manulife's share of impact indicators as the data is available only on a full year of forestry data.

³ Carbon removals for sustainably-managed forestry assets are expected to fluctuate due to ongoing forest management activities. The year-over-year change in profile may be positive or negative. Refer to Methodology section for more details.

⁴ Represents net proceeds from the Green Bond issuance of US\$750 million.

Examples of Projects

Renewable Energy: Romney Wind

Manulife provided financing to support Aamjiwnaang First Nation (“AFN”)’s acquisition of the Romney Wind project. The project provides the AFN and its local communities with sustainable energy source. The project is a 60 MW wind farm located in Ontario, Canada, that became operational in 2019. The project consists of 17 turbines and powers approximately 25,000 households.

Renewable Energy: Coaldale Solar

Manulife provided financing to the Coaldale Solar project, located in Alberta, Canada. The project consists primarily of photovoltaic equipment, civil and structural infrastructure, electrical systems, and a control system. It includes 78,970 solar panels and has a capacity of 22 MW.

Sustainably-Managed Forestry: Blueback

Blueback is an 89,000-acre forest in the U.S. state of Maine. The property is 100% certified under the Sustainable Forestry Initiative® and is a contiguous block of timberlands with a diverse mix of naturally regenerated spruce fir and northern hardwood tree species. The core of the investment thesis is centered on the timberlands being used primarily to store carbon and to generate high-quality, high-integrity carbon credits.

Methodology

Renewable Energy: Renewable energy capacities installed were provided by the project developer or estimated based on a third-party service provider. Avoided emissions were calculated by multiplying the annual renewable energy project’s production by the region and energy specific carbon dioxide emission avoidance factors as published by the International Renewable Energy Agency. To calculate the impact measures associated with the Green Bond, our share of loan was applied to each project’s enterprise value.

Energy Efficiency: Annual energy savings and avoided emissions were provided directly by the project developer. To calculate the impact measures associated with the Green Bond, our share of loan was applied to each project’s enterprise value.

Sustainably Managed Forestry: Carbon removals from timberland were estimated by our 100% operating subsidiary, Manulife Investment Management Timberland and Agriculture. Carbon removals reflect the change in carbon stored in the forest carbon ‘pools’ over the year, as well as GHG emissions associated with certain timber operations. Generally the net greenhouse gas profile includes change in carbon stock within standing forest inventory (biogenic growth), carbon stored in harvested wood products and nonbiological emissions from operations. The net greenhouse gas profile is expected to fluctuate due to ongoing forest management activities, such as fertilization, herbaceous weed control, and harvesting schedules. The year-over-year change in the profile may be positive or negative.

Change in carbon stored is calculated using standard industry timber inventory and appraisal approaches to estimate ‘opening’ and ‘closing’ growing stock volumes, and these volumes are then converted into amounts of carbon stored.

Green Buildings: Certified square footage was provided by the property owners. To calculate impact measure associated with the Green Bond, our share of mortgage was applied to the property value.