Ontario

Ontario Financing Authority

2020 Ontario Green Bond Newsletter

Ontario's Green Bonds

LETTER FROM THE CEO

Ontario's Green Bond program has come a long way since we issued our inaugural Green Bond in 2014. With eight Green Bonds issued to date for a total of $6.75 billion, Ontario remains the largest issuer of Canadian dollar Green Bonds. Green Bonds continue to be a core component of our borrowing program and are an important tool to help finance public transit initiatives, extreme weather-resistant infrastructure, and energy efficiency and conservation projects. Green Bonds are also a key part of Ontario's Environment Plan to address Climate Change.

Ontario's eight Green Bonds have funded 23 projects across three categories in Ontario's Green Bond Framework. Our eighth and most recent Green Bond was issued on October 8, 2020. It was our largest Green Bond to date at $1.5 billion, and provided funding for four projects in the Clean Transportation, Energy Efficiency and Conservation, and Climate Adaptation and Resilience framework categories.

In 2019–20, the Province issued two Green Bonds in the same fiscal year for the first time. A $750 million Green Bond was issued on November 27, 2019, which provided funding for two Clean Transportation projects. This was followed by a $500 million Green Bond issued on February 14, 2020, with nine projects selected to receive Green Bond funding. This included the Port Lands Flood Protection project, which was the first project to receive Green Bond funding in the Climate Adaptation and Resilience framework category.

Ontario has established itself as a regular issuer of Green Bonds backed by a solid program which includes a second opinion provided by CICERO and the publication of the Auditor General of Ontario's annual assurance audit on the use of Green Bond proceeds. Ontario's Green Bond program has a dedicated section on the OFA website, including: case studies, a projects page with disaggregated data by issue, the publication of now six Green Bond newsletters, and background information on the program.

The Province monitors both domestic and international Green Bond issuance opportunities and issues bonds into markets that are supportive and cost effective. We plan to continue to be an active issuer of Green Bonds in 2020–21 and subject to market conditions, we may issue another Green Bond this fiscal year.

Ontario's Green Bond program wouldn't be possible without the support from various Ministries and agencies across government including:

- Infrastructure Ontario
- Metrolinx
- Ministry of the Attorney General
- Ministry of Children, Community and Social Services
- Ministry of Colleges and Universities
- Ministry of the Environment, Conservation and Parks
- Ministry of Health
- Ministry of Infrastructure
- Ministry of Transportation

I would also like to thank investors for supporting our borrowing program in the midst of an evolving economic situation and very volatile market conditions.

Gadi Mayman
Chief Executive Officer, Ontario Financing Authority

Ontario's Green Bond Issues

$6.75
Total Issuance
($Billions)

2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21
$500 M	$750 M	$800 M	$1,000 M	$950 M	$1,250 M	$1,500 M
Ontario's first Green Bond issue	Introduces a basket of projects to allow flexibility in funding	Ontario remains the largest issuer of Canadian dollar Green Bonds			First time the Province issued two Green Bonds in a fiscal year	The Province's largest issue of $1.5 billion

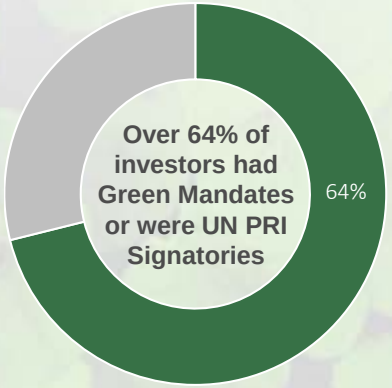
8
Green Bond Issues

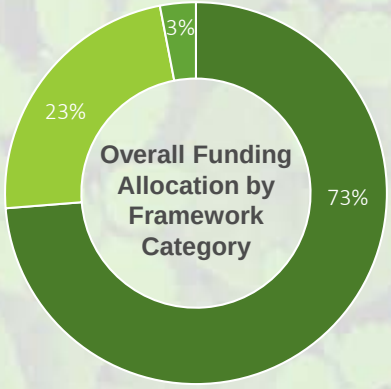
FORMAT
- Domestic Medium Term Note
- Global Canadian Dollar

23
Projects across three project categories[1]

LISTINGS
- Luxembourg Stock Exchange Euro MTF
- Luxembourg Green Exchange

- **6** Clean Transportation
- **16** Energy Efficiency & Conservation
- **1** Climate Adaptation & Resilience





Inclusion in Green Bond Indices	
Bloomberg Barclays MSCI Green Bond Index	ICE BofA Merrill Lynch Green Bond Index
S&P Green Bond Index	Solactive Green Bond Index

AWARD
Environmental Finance Bond Awards 2019
—
Green Bond of the Year – Local/Municipality (2018 Issue)

AWARD
Climate Bond Initiative 5th Green Bond Pioneer Awards
—
Largest Subnational Green Bond Issuer Over the Past 10 Years

All Green Bond issues were available through Ontario's current dealer group for placement with Canadian and international institutional investors.

All issues were also made available to retail investors through Canadian financial institutions.

1 - Figures include the Hamilton LRT project. The Province announced the cancellation of the procurement for the Hamilton LRT project as of December 16, 2019.

Ontario's Green Bond Features

Ontario's Green Bonds

- Carry the full faith and credit of the Province of Ontario.
- Rank *pari passu* with Ontario's other bonds and are payable without any preference or priority.
- Payments of principal of and interest on the bonds will be a charge on and payable out of the Consolidated Revenue Fund of Ontario.
- An amount equal to the net proceeds of each Green Bond issue is recorded in a designated account in the Province of Ontario's financial records. These designated accounts are used to track the use and allocation of funds to eligible projects.

Ontario's Green Bond Framework

"Eligible projects" means projects (mainly infrastructure) funded by the Province that have environmental benefits, exclusive of fossil fuel and nuclear energy projects. Eligible projects are located throughout Ontario communities.

Without limitation, projects in the following categories have generally been considered eligible:

- Clean Transportation;
- Energy Efficiency and Conservation;
- Clean Energy and Technology;
- Forestry, Agriculture and Land Management; *and*
- Climate Adaptation and Resilience.

Alignment with Green Bond Principles

Ontario's Green Bond program aligns with the Green Bond Principles (GBP). Since March 2016, Ontario has been a member of the GBP group, maintained by the International Capital Market Association.

As recommended by the GBP, the Province of Ontario reports annually on the use of proceeds and impact statistics for the projects that received Green Bond funding until full allocation. Ontario uses widely recognized core indicators for its projects and expects to adopt any future impact reporting recommendations of the GBP.

Alignment with UN Sustainable Development Goals

Ontario's Green Bond proceeds fund project categories which support many of the United Nations Sustainable Development Goals.

Assurances

The Center for International Climate and Environmental Research — Oslo (CICERO) provided a second opinion on Ontario's Green Bond Framework.

Each fiscal year, the Auditor General of Ontario provides an assurance audit on the use of Green Bond proceeds.

Future Issuance Plans

As stated in the *2020 Budget*, the Province plans to continue to be an active issuer of Green Bonds in 2020–21. Subject to market conditions, Ontario may issue another Green Bond this fiscal year.

Point Pelee National Park, ON

Project Evaluation and Selection

The selection of eligible green projects is done on behalf of the Province by the Ontario Financing Authority (OFA) with advice from the Province's Green Bond Advisory Panel (GBAP). The GBAP, which includes staff from various ministries and agencies, including the Ministry of Environment, Conservation and Parks and the OFA, evaluates and recommends projects for inclusion in Ontario's Green Bond program.

Since inception of Ontario's Green Bond program, the Province has worked on refining its project evaluation and selection process:

- **2016:** An Environmental Considerations decision tree was developed, providing additional rigour to the overall project evaluation process.
- **2017:** An updated methodology was established for evaluating LEED rated buildings focusing on the category scores that lead to greater environmental performance.
- **2018:** Ontario Green Bond project reporting began referencing the United Nations Sustainable Development Goals (UNSDGs), as well as Ontario's Green Bond Framework.
- **2019:** The Province realigned its Green Bond program to support the government's plan, *Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan.*
- **2020:** The program funded its first project in the Climate Adaptation and Resilience framework category.

Ontario Framework Category	Project Examples
Clean Transportation	Funding of public transit projects
Energy Efficiency and Conservation	Public sector building efficiency improvements
Climate Adaptation and Resilience	Flood protection and storm water management

United Nations Sustainable Development Goals

Ontario funds eligible Green Bond projects within Framework Categories which primarily support the following UNSDGs:

EU Taxonomy

Ontario funds Green Bond projects that contribute to environmental objectives set out in the EU Taxonomy, primarily in Climate Change Mitigation and Climate Change Adaptation.

Northumberland County, ON

Use and Management of Proceeds Overview

Clean Transportation Projects	Green Bond Allocation							
	1	2	3	4	5	6	7	8
Eglinton Crosstown Light Rail Transit (LRT)	✓	✓	✓	✓	✓	✓	✓	
GO Expansion (formerly Regional Express Rail)		✓	✓		✓	✓	✓	✓
York Viva Bus Rapid Transit		✓	✓	✓				
Finch West LRT			✓	✓			✓	✓
Hurontario LRT			✓	✓				
Hamilton LRT[1]			✓					
Energy Efficiency and Conservation Projects	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Centre for Addiction and Mental Health — Phase 1C Redevelopment					✓		✓	
Cortellucci Vaughan Hospital (formerly Mackenzie Vaughan Hospital)					✓		✓	✓
New Toronto Courthouse							✓	
Brockville General Hospital							✓	
Groves Memorial Community Hospital							✓	
William Osler Health System — Etobicoke General Hospital Phase 1 Patient Tower Project					✓			
Whitby Rail Maintenance Facility				✓				
Seneca College King Campus Expansion				✓				
Joseph Brant Hospital — Redevelopment Project Phase 1				✓				
St. Joseph's Healthcare Hamilton — West 5th Campus		✓	✓					
St. Joseph's Healthcare London (Parkwood) and St. Thomas		✓	✓					
Waypoint Centre for Mental Health		✓	✓					
Centre for Addiction and Mental Health — Phase 1B		✓	✓					
ErinoakKids Centre for Treatment and Development			✓					
Woodstock General Hospital			✓					
Sheridan College Hazel McCallion Campus Expansion		✓						
Climate Adaptation and Resilience Project	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Port Lands Flood Protection							✓	✓

1 - Province announced the cancellation of the procurement for the Hamilton LRT project as of December 16, 2019.

Funding Allocation and Disbursements

- Each fiscal year, an assurance audit by the Auditor General (AG) of Ontario verifies the amounts allocated for selected projects and the balance of proceeds remaining.
- From the inception of the Green Bond program to March 31, 2020, $5,133.0 million had been disbursed. This includes $145.6 million from the fifth Green Bond, $778.4 million from the sixth Green Bond and $357.0 million from the seventh Green bond which were all disbursed during fiscal 2019–20.
- From April 1 to November 30, 2020, $931.8 million have been disbursed, including $815.2 million from the eighth Green Bond, bringing the total disbursements under the Ontario Green Bond program to $6,064.8 million. These post-March 31st, 2020 amounts will be included in the AG's assurance audit of the use of Green Bond proceeds next fiscal year.

Allocated Funding since Inception of the Green Bond Program ($ millions)		Total Funds Disbursed since Inception of the Green Bond Program as of November 30, 2020 ($ millions)		Total Funds Disbursed since Inception of the Green Bond Program as of March 31, 2020 ($ millions)		Funds Disbursed from April 1 – November 30, 2020 ($ millions)
6,858.6		6,064.8	=	5,133.0	+	931.8

Elora Gorge, ON

Funding Allocation and Disbursements

During fiscal 2019–20, the Province allocated and disbursed Green Bond proceeds to nine projects:

Project Name	Total Project Cost[1] ($ millions)	Allocated Funding from Green Bond Program ($ millions)	Funds Disbursed since Inception of the Green Bond Program as of March 31, 2020 ($ millions)
Clean Transportation			
Eglinton Crosstown LRT	5,300 (2010$)	2,644.7	2,644.7
GO Expansion	13,500 (2014$)	1,684.1	820.2
Finch West LRT	1,200 (2010$)	447.7	31.5
Energy Efficiency and Conservation			
Cortellucci Vaughan Hospital	1,300	461.0	255.6
Centre for Addiction and Mental Health — Phase 1C Redevelopment	685	140.0	104.4
Groves Memorial Community Hospital	127.5	100.0	100.0
Brockville General Hospital	131.2	40.0	2.5
New Toronto Courthouse	956.4	24.2	0.0
Climate Adaptation and Resilience			
Port Lands Flood Protection	1,250	219.8	77.1

Note: As recommended by the GBP, the Province of Ontario reports annually on the use of proceeds and impact reporting statistics, for the projects that received Green Bond funding until full allocation.
1 – For Clean Transportation projects, this is referring to the base capital construction costs. For Energy Efficiency & Conservation projects, the "Total Project Cost" represents contract value (the payment(s) to be made by the Sponsor for a P3 project, as defined in the Project Agreement and prior to taking into account inflation).

Impact Reporting – Clean Transportation

Project Name	Expected Completion Date	Project Description	Estimated Greenhouse Gas (GHG) Reductions (CO_2 [or equivalent] tonnes / yr)*	Equivalent Passenger Vehicles Off the Road (vehicles / yr)	Other Environmental Benefits
Eglinton Crosstown LRT	2022	The Eglinton Crosstown will expand transit in Toronto through the building of a 19-kilometre LRT line across Eglinton Avenue, with a 10-kilometre central underground portion, and 25 stations and stops. It will link to 54 bus routes, three subway stations, UP Express and three GO Transit lines.	11,000 (starting 2030)[1]	2,558 (starting 2030)	• Transition from diesel buses to electric light rail vehicles (LRVs) contributes to decreasing greenhouse gas (GHG) emissions and Criteria Air Contaminants (CACs) • LRT vehicles are electrically powered and produce near zero emissions • Maintenance and storage facility main building targeting LEED Silver certification
GO Expansion	GO rail service enhancements to be incrementally introduced over the life of the program.	The GO Rail Expansion program will transform the existing GO Rail network into a comprehensive, all-day rapid transit network by providing two-way, all-day service every 15 minutes over core segments of the GO Transit rail network.	480,000 (starting 2030)[2]	111,628 (starting 2030)	• GO Expansion will shift GO from a largely commuter system to a comprehensive regional rapid transit option, thereby contributing to mode shift and decreasing GHG emissions and CACs. • New facilities will be minimum LEED Silver and are targeting LEED Gold certification where possible.
Finch West LRT	2023	The Finch West LRT will expand transit in Toronto through the building of an 11-kilometre LRT line along the Finch West Corridor.	17,000 (starting 2030)	3,953 (starting 2030)	• Transition from diesel buses to electric LRVs contributes to decreasing GHG emissions and CACs. • New stations and facilities are aiming to meet LEED Silver certification.

Source: Metrolinx Business Case Analyses.

1 - In May 2020, the estimated GHG reduction for the Eglinton Crosstown LRT was revised to 11,000 CO_2 tonnes / year starting in 2030. This revised figure is consistent with the order of magnitude of GHG emissions reductions of similar rapid transit projects.

2 - The GO Expansion Full Business Case estimates emission reductions of 13,500,000 tonnes of CO_2 by 2055 from reductions in auto use and the switch from diesel to electric rail vehicles, which is equivalent to about 480,000 tonnes per year, commencing in 2030.

Impact Reporting – Energy Efficiency and Conservation

Project Name	Expected Completion Date	Project Description	Estimated Energy Savings (kWh / yr)	Estimated GHG Reductions (CO2 [or equivalent] tonnes / yr)	Equivalent Passenger Vehicles Off the Road (vehicles / yr)	Estimated Water Savings (litres / yr)	Equivalent Water Usage per Household (Ontario households / yr)	Other Environmental Benefits
Cortellucci Vaughan Hospital	2020	A 1.2 million sq. ft. hospital including: a state-of-the-art emergency department, modern surgical services and operating rooms, advanced diagnostic imaging, and specialized ambulatory clinics.	46,000,558	6,027	1,402	9,359,131	49	Targeting LEED Silver certification
Centre for Addiction and Mental Health — Phase 1C Redevelopment	2020	A new 655,000 sq. ft. space with inpatient and outpatient clinical services for people with complex mental illness including: emergency care and therapeutic supports, research and educational facilities, and information and resource facilities.	8,445,522	617	144	7,938,810	42	Targeting LEED Gold certification
Groves Memorial Community Hospital	2020	A replacement hospital built on a greenfield site, with more space for emergency, ambulatory, and diagnostics. The hospital includes increased inpatient beds, two enclosed ambulance bays, an on-site helipad, and additional isolation facilities.	6,618,032	1,072	249	1,143,896*	6*	Targeting LEED Silver certification
Brockville General Hospital	2020	A new four-storey addition of about 175,000 sq. ft., as well as 20,000 sq. ft. of renovations. It will include increased inpatient beds in the Complex Continuing Care, Palliative Care, and Rehabilitation departments, and an expanded Acute Mental Health and Addictions Program.	Designed and built to LEED Silver standards					
New Toronto Courthouse	2022	A new 17-storey, 780,000 sq. ft. courthouse that will include 63 courtrooms, a barrier-free environment, video conferencing for witnesses and in-custodies to appear from remote locations, and closed-circuit television to enable vulnerable witnesses to appear before the court from a private room.	4,615,567	475	111	3,968,717	21	Targeting LEED Silver certification

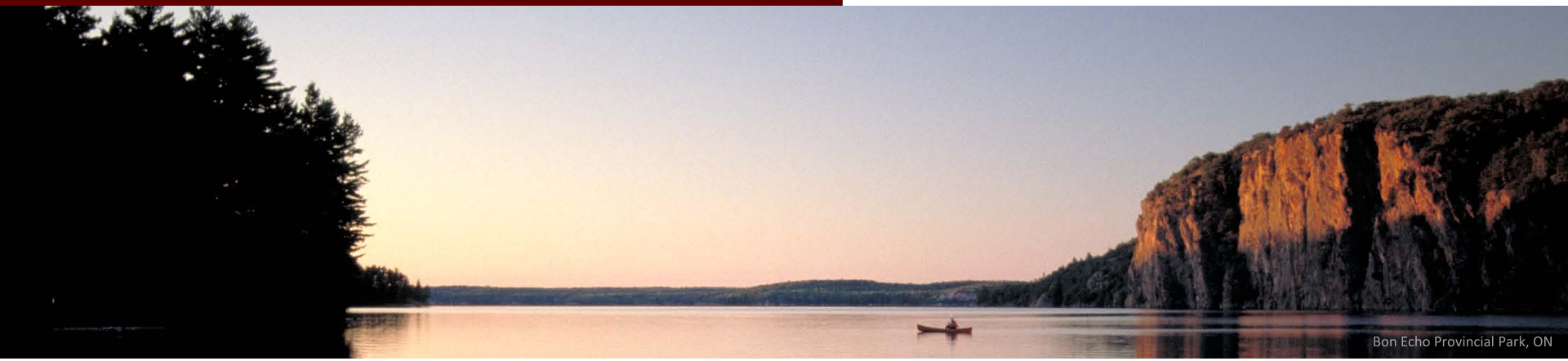
* Based on current preliminary estimates

Impact Reporting – Climate Adaptation and Resilience

Project Name	Expected Completion Date	Project Description	Climate Adaptation and Resilience Benefits	Other Environmental Benefits
Port Lands Flood Protection	2024	A $1.25 billion project for flood protecting southeastern portions of downtown Toronto that are at risk of flooding under a provincially defined Regulatory Storm event. There are four major components to the project: parks, roads and municipal infrastructure, bridges, and earthworks/flood protection.	• 240 hectares of land protected from flooding • 11 hectares of new coastal wetland • 5 hectares of terrestrial habitat to strengthen biodiversity and help clean water	• 30 hectares of naturalized greenspace • 11 hectares of parkland • More than 1000 metres of a new river channel • 1,000,000 plants installed

Ontario

Ontario Financing Authority


Bon Echo Provincial Park, ON

2020 Ontario Green Bond Newsletter

The Ontario Financing Authority is an agency of the Province of Ontario and is responsible for provincial borrowing and debt management activities.

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