Ontario

Ontario Financing Authority

2022 Ontario Green Bond Newsletter

Tobermory, ON

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. 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. In 2021, Ontario became a member of the GBP Impact Reporting Working Group.

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 United Nations 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.

Tobermory, ON

Ontario's Green Bond Issues

12
Green Bond Issues

13.5
Total Issuance ($Billions)

FORMAT

Domestic Medium Term Note

Global Canadian Dollar

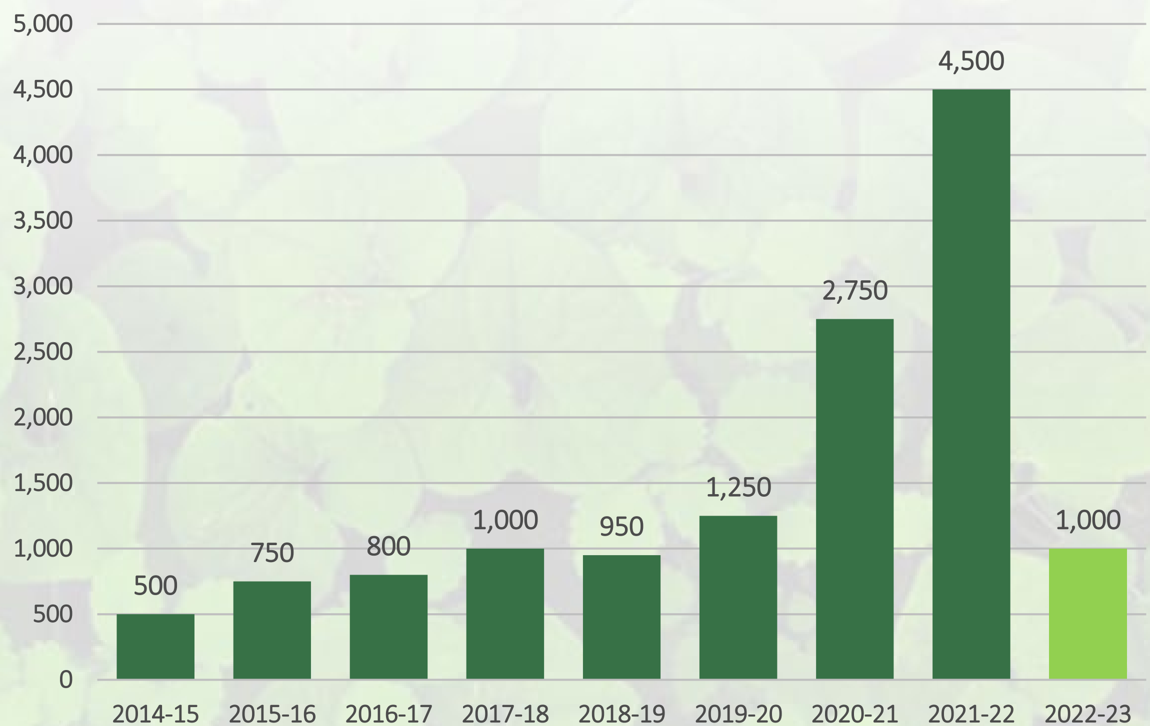
LISTINGS

Luxembourg Stock Exchange Euro MTF

Luxembourg Green Exchange

Ontario is the largest and most frequent issuer of Canadian dollar Green Bonds.

ONTARIO'S ANNUAL GREEN BOND ISSUANCE ($M)



Inclusion in Green Bond Indices

Bloomberg MSCI Green Bond Index	ICE BofA Merrill Lynch Green Bond Index
S&P Green Bond Index	Solactive Green Bond Index

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.

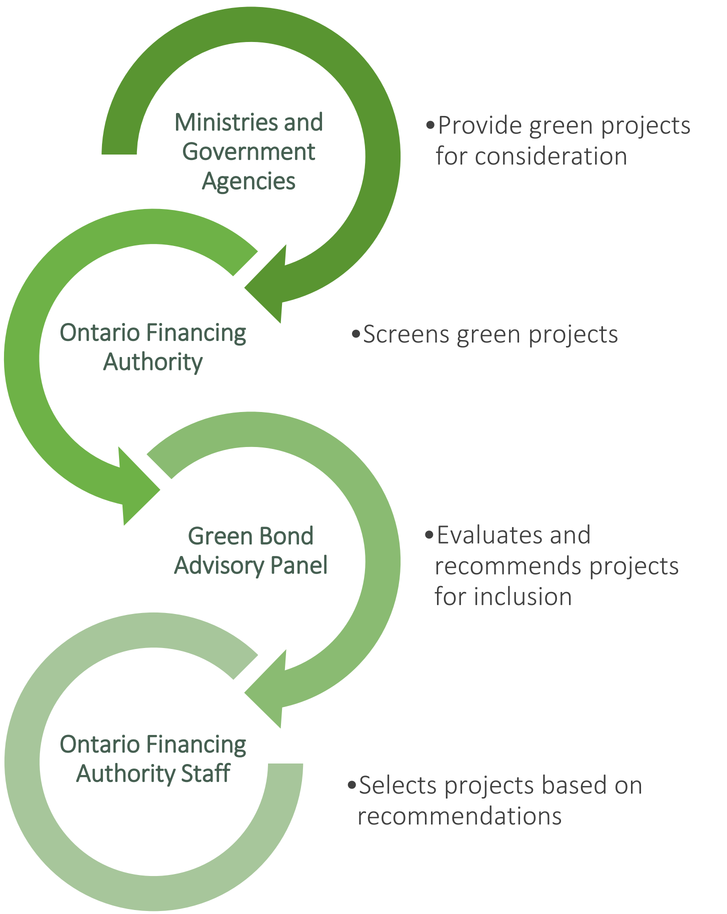
Future Issuance Plans

Ontario remains committed to the Green Bond market. Subject to market conditions, Ontario plans to continue to issue multiple Green Bonds each fiscal year, including in 2022–23.

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, 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. Ontario is considering updating its Green Bond Framework. The update may include better alignment of framework categories with the Green Bond Principles through standardized wording, as well as the possible expansion from green to sustainable to allow for a greater breadth of potential bond offerings in the future.



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.

Use and Management of Proceeds Overview

Clean Transportation Projects	Green Bond Allocation											
	1	2	3	4	5	6	7	8	9	10	11	12
Eglinton Crosstown Light Rail Transit (LRT)	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	
GO Expansion (formerly Regional Express Rail)		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
York Viva Bus Rapid Transit		✓	✓	✓								
Finch West LRT			✓	✓			✓	✓	✓	✓	✓	✓
Hurontario LRT			✓	✓					✓	✓	✓	✓
Ontario Line Subway									✓	✓	✓	✓
Scarborough Subway Extension											✓	✓
Hamilton LRT[1]			✓									
Energy Efficiency and Conservation Projects	1	2	3	4	5	6	7	8	9	10	11	12
Macdonald Block Reconstruction									✓	✓		
Michael Garron Hospital									✓			
West Park Healthcare Centre									✓		✓	
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	9	10	11	12
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.

Post-March 31, 2022 amounts will be included in the AG's assurance audit of the use of Green Bond proceeds next fiscal year.

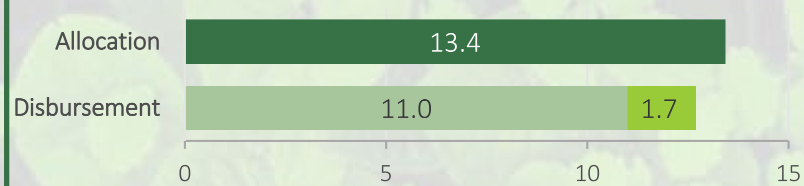
28 Projects across three project categories[1]

12.7 Total Funds Disbursed[2] ($ Billions)

95 Total Funds Disbursed[2] (Per Cent)

ALLOCATIONS & DISBURSEMENTS

($ Billions)



■ Allocated Funding since inception of the Green Bond Program

■ Funds Disbursed from Inception to March 31, 2022

■ Funds Disbursed from April 1, 2022 - November 30, 2022

Energy Efficiency & Conservation

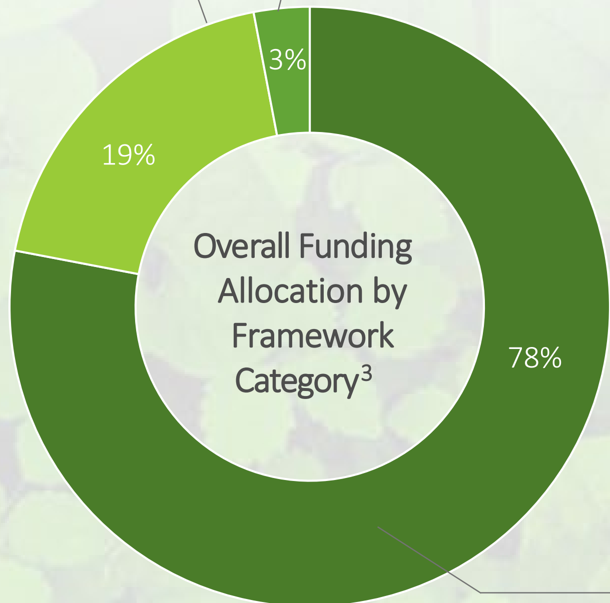
19 Projects

$2.5 Billion

Climate Adaptation & Resilience

1 Project

$0.4 Billion



Clean Transportation

8 Projects

$10.5 Billion

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.

2: As of November 30, 2022.

3: Numbers may not add due to rounding.

Funding Allocation and Disbursements

During fiscal 2021–22, the Province allocated and disbursed Green Bond proceeds to eleven 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, 2022 ($ millions)
Clean Transportation			
Eglinton Crosstown LRT	5,300 (2010$)	3,744.7	3,744.7
GO Expansion	13,500 (2014$)	3,618.7	2,284.0
Finch West LRT	1,200 (2010$)	872.7	781.9
Hurontario LRT	1,400 (2014$)	916.0	645.1
Ontario Line Subway	10,900 (2020$)	942.2	742.2
Scarborough Subway Extension	5,500 (2020$)	204.1	100.0
Energy Efficiency and Conservation			
Macdonald Block Reconstruction	1,536.0	360.0	299.2
New Toronto Courthouse	956.4	172.1	157.6
Michael Garron Hospital	411.0	150.0	0.0
West Park Healthcare Centre	1,200.0	225.0	119.0
Climate Adaptation and Resilience			
Port Lands Flood Protection	1,250.0	400.4	306.4

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).

Clean Transportation – Electrification

Through investments in Ontario's priority subway projects, the GO Rail Expansion Program, and light rail transit projects across the Province, Ontario is delivering an integrated transit network that will support the development of sustainable communities and travel patterns.

Electric rail technology will be used across all new subway and light rail projects currently in delivery. In addition, electrification of the GO rail network is a key component of the Province's commitment to transform the GO Transit rail network into a comprehensive, all-day rapid transit network.

Electric vehicles will provide faster journey times and support lower operating costs per kilometer, delivering safe, fast and reliable service while reducing localized emissions and noise impacts.

In 2021, Ontario's generation mix was over 90 per cent emissions-free.

Electrification

is a major focus in Ontario's mass transit system buildout

Impact Reporting – Clean Transportation

Project	Expected Completion	Project Description	Estimated Greenhouse Gas (GHG) Reductions (CO2 [or equivalent] tonnes / yr)	Equivalent Passenger Vehicles Off the Road (vehicles / yr)	Other Environmental Benefits
Eglinton Crosstown LRT	2023	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)	2,558 (starting 2030)	• Reductions in auto usage and the switch 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	Enhancements incrementally introduced over the life of the program	GO Expansion 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)	111,628 (starting 2030)	• GO Expansion will shift the GO Rail network 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 with 18 stops along the Finch West Corridor.	17,000 (starting 2030)	3,953 (starting 2030)	• Reductions in auto usage and the switch from diesel buses to electric LRVs contributes to decreasing GHG emissions and CACs, manages traffic congestion, and encourages mode shift from auto trips to transit trips. • Maintenance and storage facility will meet LEED Silver certification.

Impact Reporting – Clean Transportation

Project	Expected Completion	Project Description	Estimated Greenhouse Gas (GHG) Reductions (CO2 [or equivalent] tonnes / yr)	Equivalent Passenger Vehicles Off the Road (vehicles / yr)	Other Environmental Benefits
Hurontario LRT	2024	The Hurontario LRT will be a new 18-kilometre LRT line with 19 stops, connecting the cities of Mississauga and southern Brampton.	4,000 (starting 2030)	930 (starting 2030)	• Reductions in auto usage and the switch from diesel buses to electric LRVs contributes to decreasing GHG emissions and CACs, manages traffic congestion, and encourages mode shift from auto trips to transit trips. • Maintenance and storage facility will aim to meet LEED Silver certification.
Scarborough Subway Extension[1]	2029	The Scarborough Subway Extension will bring the TTC's Line 2 subway service 7.8-kilometres farther into Scarborough, extending from Kennedy Station to Sheppard Avenue and McCowan Road. The project includes three new stations, and up to six transit connections.	10,000 (starting 2030)	2,326 (starting 2030)	• Reductions in auto usage and the switch from diesel buses to electric rail vehicles contributes to decreasing GHG emissions and CACs, manages traffic congestion, and encourages mode shift from auto trips to transit trips.

1: Estimated timelines for completion and GHG projections will be confirmed following the conclusion of the procurement process.

Impact Reporting – Ontario Line Subway

Ontario Line Subway

will create faster, easier connections between dozens of neighbourhoods and make it more convenient than ever to travel within Toronto and beyond, while reducing public transit rush hour crowding and traffic congestion. The new 15.6-kilometre subway line in Toronto will connect Exhibition/Ontario Place through the heart of downtown to the Ontario Science Centre.

The proposed project includes 15 stations and connections to three GO lines, the TTC's Line 1 and Line 2 subways, the future Line 5 (Eglinton Crosstown LRT), connections to streetcar lines at ten Ontario Line stations., and connections to bus services at 12 Ontario Line stations.

Expected Completion	Estimated Greenhouse Gas (GHG) Reductions (CO2 [or equivalent] tonnes / yr)	Equivalent Passenger Vehicles Off the Road (vehicles / yr)	Other Environmental Benefits
2030	14,000 (starting 2030)	3,256 (starting 2030)	• Reductions in auto usage and the switch from diesel buses to electric rail vehicles contributes to decreasing GHG emissions and CACs, manages traffic congestion, and encourages mode shift from auto trips to transit trips.

Note: Estimated timelines for completion and GHG projections will be confirmed following the conclusion of the procurement process.

Impact Reporting – Energy Efficiency and Conservation

Project	Expected Completion	Project Description	Estimated Energy Savings (kWh / yr)	Estimated GHG Reductions (CO_2 [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
Macdonald Block Reconstruction	2024	The administrative hub of Ontario government operations has a total gross building area of approximately 1.7 million sq. ft., including four office towers, podium, and underground parking. The reconstruction project will update all core building systems, including electrical, water, cooling and heating.	25,067,940	5,464	1,271	28,534,719	150	Targeting LEED Silver certification
New Toronto Courthouse	2022	A new 17-storey, 780,000 sq. ft. courthouse that will include 63 courtrooms, 10 conference settlement rooms, 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 remote testimony suite.	4,615,567	475	111	3,968,717	21	Targeting LEED Silver certification
Michael Garron Hospital	2024	The project includes a new eight-storey patient care tower and three-storey connection, as well as renovation work to the existing hospital in Toronto. This involves new construction and renovations of approximately 550,000 sq. ft.	12,349,413	2,197	511	4,418,232	23	Targeting LEED Silver certification

Impact Reporting – West Park Healthcare Centre

West Park Healthcare Centre

West Park Healthcare Centre is building a new six-storey, 730,000 square foot hospital which will replace the existing facility, located in Toronto. It will provide specialized rehabilitation, complex continuing care, and community health services on a park-like campus — featuring significantly expanded green spaces, including extensive landscaping for outdoor therapy, therapeutic gardens, walking paths and courtyards, plus terraces on every floor. The healthcare centre will provide a total of up to 314 beds and a significant increase in outpatient care space to accommodate current and new services such as geriatric clinics, a day hospital, and satellite hemodialysis.

Expected Completion	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
2023	22,754,095	3,778	879	5,543,763	29	Targeting LEED Silver Certification

Impact Reporting – Port Lands Flood Protection

Port Lands Flood Protection

is the first project to receive Green Bond funding in the Climate Adaptation & Resilience category.

It is 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.

The project involves excavating a new river valley that has the capacity to handle large volumes of flood water and creating a naturalized mouth for the Don River in the Port Lands. The project also includes structures to control water flow and manage sediment and debris, transit infrastructure to support future development, new parks, and aquatic habitat.

Expected Completion	Climate Adaptation and Resilience Benefits	Other Environmental Benefits	Economic Impacts
2024	• 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 1,000 metres of a new river channel • 1,000,000 plants installed	• $5.1 billion in value to the Canadian economy • 51,900 full-time years of employment • $1.9 billion in government revenues

Ontario

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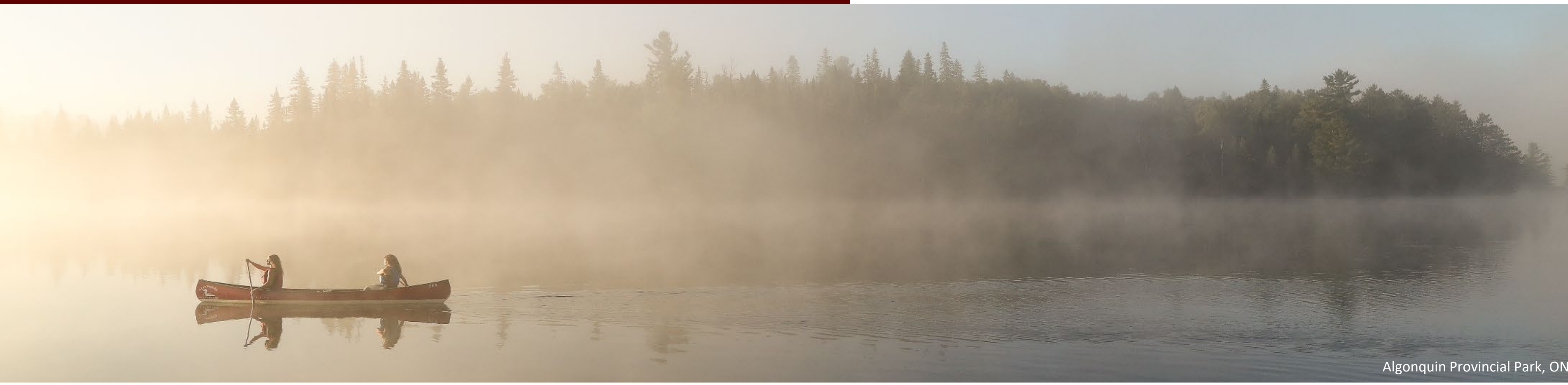

Algonquin Provincial Park, ON

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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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