

**Green Bond 2017 Newsletter**



# 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.

## Project Selection

The selection of eligible green projects is done on behalf of the Province by Ontario Financing Authority (OFA) staff 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 the Environment and Climate Change and the OFA, evaluates and recommends projects for inclusion in Ontario's Green Bond program.

"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 and align with the Province's environmental and climate change policies.

Without limitation, projects in the following sectors will generally be 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).

## Assurances

The Center for International Climate and Environmental Research – Oslo (CICERO) provided a second opinion on Ontario's Green Bond Framework ([available in the Green Bond section of the OFA website](#)).

Each fiscal year, the Auditor General of Ontario provides an assurance audit on the use of Green Bond proceeds ([available in the Green Bond section of the OFA website](#)).

## Impact Reporting

Ontario uses core indicators that are widely recognized by the market for its projects and expects to adopt future impact reporting recommendations of the GBP.

## Future Issuance Plans

The Green Bond program is an ongoing program of the Province of Ontario. To date, Ontario has issued three Canadian dollar Green Bonds.

The Province is planning for its fourth Green Bond issuance before the end of fiscal 2017–18.



Sleeping Giant Provincial Park, ON

# Ontario's Green Bond Issues

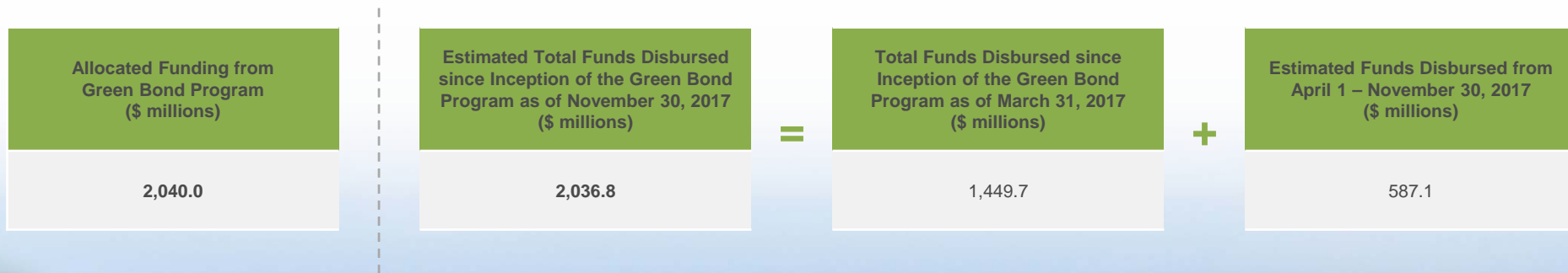
- A total of 13 projects have received or will receive funding from Ontario's three Green Bond issues, with the majority of the funding allocated towards clean transportation projects.
- All bonds were issued in Global Canadian dollar format, and were listed on the Luxembourg Stock Exchange Euro MTF and Luxembourg Green Exchange.
- Issues were available through Ontario's current dealer group to Canadian and international institutional investors to help establish a Canadian dollar Green Bond market. More than 70% of the investors had Green Mandates or were UN PRI Signatories.
- All three issues were also made available to retail investors through Canadian financial institutions.
- Ontario's three Green Bond issues have met the standards to be included in the following Green Bond indices: Barclays MSCI Green Bond Index, BofA Merrill Lynch Green Bond Index, S&P Green Bond Index and the Solactive Green Bond Index.



Bruce Peninsula, ON

## Use of Proceeds

- Each fiscal year, an assurance audit by the Auditor General (AG) of Ontario verifies the amounts used for selected projects and the balance of proceeds remaining.
- From inception of the Green Bond program to March 31, 2017, \$1,449.7 million of the funds have been disbursed. This includes \$554.7 million of funds from the second Green Bond and \$204.7 million from the third Green Bond, disbursed during fiscal 2016–17.
- From April 1 to November 30, 2017, an estimated \$587.1 million has been disbursed, bringing the estimated total disbursements under the Ontario Green Bond program to \$2,036.8 million. These post-March 31st, 2017 amounts will be included in the AG's assurance audit on the use of Green Bond proceeds next fiscal year.



# Impact Reporting – Clean Transportation

Project Name	Project Description	Other Environmental Benefits
<b>Eglinton Crosstown Light Rail Transit (LRT)</b>	A CAD 5.3 billion (2010\$) capital commitment to 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. The Eglinton Crosstown will link to 54 bus routes, three subway stations, UP Express and three GO Transit lines.	<ul style="list-style-type: none"> <li>Improving access to public transit and new mobility options such as the Eglinton Crosstown will contribute to decreasing Greenhouse Gas (GHG) emissions and Criteria Air Contaminants (CACs), manage traffic congestion, and encourage mode shift from auto trips to transit trips.</li> <li>The transition from diesel buses to electric light rail vehicles (LRVs) will also contribute to decreasing GHG emissions.</li> <li>All 25 stations and stops are aiming to achieve the Toronto Green Standard Tier 1.</li> <li>Eglinton Crosstown maintenance and storage facility is aiming to achieve LEED Silver certification.</li> </ul>
<b>GO Regional Express Rail (RER)</b>	A CAD 13.5 billion (2014\$) capital commitment to provide faster and more frequent service on the GO rail network, with electrified service on core segments, including the Union Pearson Express.	<ul style="list-style-type: none"> <li>The GO RER program 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.</li> <li>New GO stations and facilities are aiming to achieve LEED Gold certification.</li> <li>Expanding and electrifying the rail network will provide a more environmentally friendly alternative to the existing diesel trains.</li> </ul>
<b>York Viva Bus Rapid Transit (BRT)</b>	A CAD 1.4 billion (2010\$) capital commitment to expand transit in York Region through the construction of dedicated rapidways along the existing Highway 7, Yonge Street and Davis Drive VIVA corridors.	<ul style="list-style-type: none"> <li>Improving access to public transit and new mobility options such as the York Viva BRT will contribute to decreasing GHG emissions and CACs, manage traffic congestion, and encourage mode shift from auto trips to transit trips.</li> </ul>
<b>Finch West LRT</b>	A CAD 1.0 billion (2010\$) capital commitment to expand transit in Toronto through the building of an 11-kilometre LRT line along the Finch West Corridor.	<ul style="list-style-type: none"> <li>Improving access to public transit and new mobility options such as the Finch West LRT, Hurontario LRT and Hamilton LRT will contribute to decreasing GHG emissions and CACs, manage traffic congestion, and encourage mode shift from auto trips to transit trips.</li> <li>The transition from diesel buses to electric LRVs will also contribute to decreasing GHG emissions.</li> <li>Rapid transit will also support intensification, the efficient use of land and mixed-use land development, which reduces the Province's carbon footprint, promotes active transportation choices, and protects natural resources.</li> <li>New stations and facilities are aiming to achieve LEED Silver certification.</li> </ul>
<b>Hurontario LRT</b>	A CAD 1.4 billion (2014\$) capital commitment to build a new 20-kilometre LRT line in Mississauga and southern Brampton, connecting to two GO Transit lines, as well as local and express bus services in both municipalities.	
<b>Hamilton LRT</b>	A capital commitment of up to CAD 1.0 billion (2014\$) to build a LRT in the City of Hamilton.	
<b>TOTAL IMPACT</b>	<b>Estimated Aggregate Greenhouse Gas Reductions across all Clean Transportation Projects (CO<sub>2</sub> [or equivalent] tonnes / year)</b>	600,000 (starting in 2031) <sup>1</sup>
	<b>Equivalent Passenger Vehicles Off the Road across all Clean Transportation Projects (vehicles / year)</b>	128,000 (starting in 2031) <sup>1</sup>

<sup>1</sup> Source: Metrolinx Business Case Analyses. Forecast is based on currently available information and subject to change. Metrolinx is examining methods to better quantify GHG benefits and impacts associated with transit projects, including emissions reductions resulting from reduced auto usage (modal shift) and transit vehicle electrification.

# Impact Reporting – Energy Efficiency & Conservation

Project Name	Project Description	Estimated Energy Savings (kWh / year)	Estimated Greenhouse Gas Reductions (CO <sub>2</sub> [or equivalent] tonnes / year)	Equivalent Passenger Vehicles Off the Road (vehicles / year)	Estimated Water Savings (litres / year)	Equivalent Water Saved per Household (Ontario households / year)	Other Environmental Benefits
<b>ErinoakKids (EOK) Centre for Treatment and Development</b>	EOK's 11 existing sites will be replaced by three new purpose built accessible sites in Oakville, Mississauga and Brampton, while more than doubling the existing treatment therapy space.	At this time, the EOK project has not yet reached substantial completion for all three sites and therefore impact reporting data is not yet available.					Targeting LEED Silver certification
<b>Sheridan College Hazel McCallion Campus Expansion</b>	A new 220,000 square feet facility within the urban core of Mississauga to accommodate 3,200 full-time students.	660,000	33	7	–	–	Targeting LEED Silver certification
<b>St. Joseph's Healthcare Hamilton – West 5<sup>th</sup> Campus</b>	An 850,000 square feet facility that provides specialized mental health services.	15,000,000	3,568	754	7,100,000	37	LEED Gold Certified
<b>St. Joseph's Healthcare London (Parkwood) and St. Thomas</b>	The project included two Brownfield facilities — one at the London (Parkwood) site for longer-term mental health and one at the St. Thomas site for forensics.	6,600,000	3,269	691	8,700,000	45	LEED Gold Certified
<b>Waypoint Centre for Mental Health Care</b>	The new centre in Penetanguishene replaced the 160-bed Oak Ridge building and the 20-bed Brebeuf building to offer a larger, more modern hospital space.	540,000	27	6	2,800,000	14	LEED Gold Certified
<b>Woodstock General Hospital</b>	A new 350,000 square feet hospital, more than double the size of the previous facility.	3,134,600	2,203	465	–	–	LEED Silver Certified
<b>Centre for Addiction and Mental Health (CAMH)</b>	The project involves redevelopment at the CAMH Queen Street site in Toronto.	20,000,000	1,000	220	4,300,000	22	LEED Gold Certified

# Project Updates – Clean Transportation

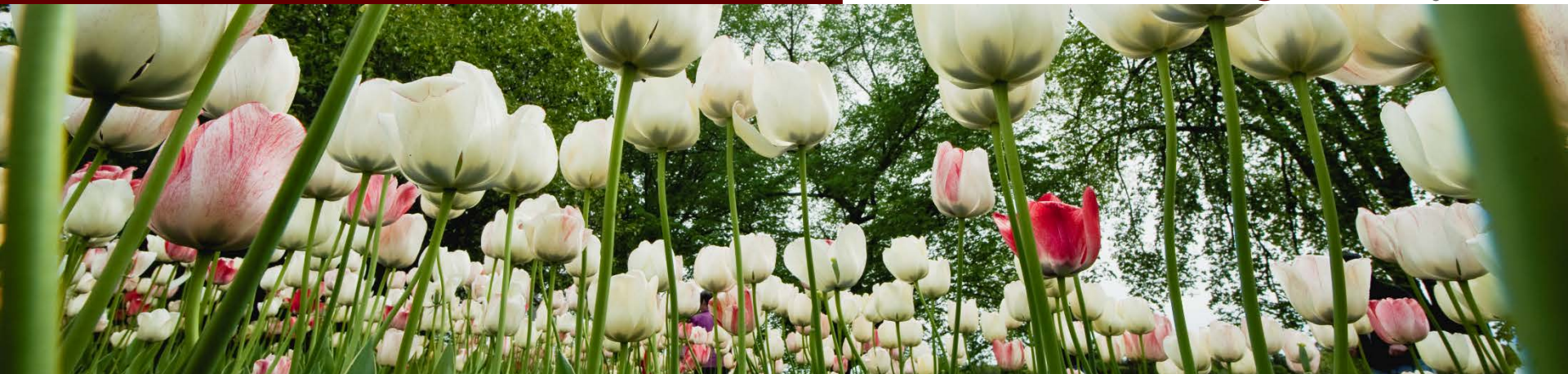
Project Name	Allocated Funding from Green Bond Program (\$ millions)	Funds Disbursed since Inception of the Green Bond Program as of March 31, 2017 (\$ millions)	Expected Completion Date	Project Updates
Eglinton Crosstown Light Rail Transit (LRT)	1,286.6	934.5	2021	<ul style="list-style-type: none"> <li>The 10-kilometre East and West tunnels sections are complete.</li> <li>Construction is underway at all 15 underground stations.</li> <li>Work has begun along the 9-kilometre eastern surface section with utility relocations and median removals to prepare for construction of the dedicated guideways and 10 surface stops.</li> <li>Track installation began at the maintenance and storage facility.</li> </ul>
GO Regional Express Rail (RER)	301.8	253.0	2025	<ul style="list-style-type: none"> <li>The Notice of Completion for GO Rail Network Electrification environmental assessment was issued in October 2017.</li> <li>Metrolinx<sup>1</sup> is undertaking work to examine the feasibility of hydrogen propulsion rail as an alternative to traditional overhead electrification, including a feasibility study on the use of hydrogen fuel cells, which is expected to be completed by the end of 2017. This work will help inform a decision on how Ontario will proceed with the electrification of GO rail services.</li> <li>Work continues to progress on RER enabling work projects across all RER corridors.</li> <li>The City of Toronto has been engaged to participate in the environmental assessment process for the six new SmartTrack stations.</li> <li>Metrolinx is working with stakeholders on initial concept designs for the proposed 12 new stations.</li> </ul>
York Viva Bus Rapid Transit (BRT)	158.9	158.9	2020	<ul style="list-style-type: none"> <li>Highway 7 from Richmond Hill Centre to Warden Avenue in Markham and Davis Drive in Newmarket were completed and are in service.</li> <li>Highway 7 in Vaughan to Richmond Hill Centre is progressing with completion anticipated in 2019.</li> <li>Highway 7 West to Vaughan Metropolitan Centre and the various segments of Yonge Street construction are also progressing with in service dates ranging from December 2017 to 2020.</li> </ul>
Finch West LRT	10.0	10.0	2022	<ul style="list-style-type: none"> <li>The Request for Proposal was issued in February 2016, resumed in summer 2017 and is expected to close by the end of 2017.</li> <li>Alstom Transport Canada was announced as the vehicle supplier for the project in May 2017.</li> </ul>
Hurontario LRT	6.0	6.0	2022	<ul style="list-style-type: none"> <li>The Request for Proposal was issued to the three proponent teams in August 2017.</li> <li>The three teams will submit their proposals to Infrastructure Ontario and Metrolinx in 2018.</li> <li>Alstom Transport Canada was announced as the vehicle supplier for the project in May 2017.</li> </ul>
Hamilton LRT	3.0	3.0	2024	<ul style="list-style-type: none"> <li>In April 2017, the Ministry of Transportation confirmed that the Province would work to include the three kilometres easterly to Eastgate Square shopping centre to the scope of the project procurement, subject to municipal support and consideration of available funding.</li> <li>The Environmental Project Report Addendum was approved in August 2017.</li> <li>The Request for Qualifications was issued in February 2017.</li> </ul>

<sup>1</sup> Metrolinx, an agency of the Government of Ontario, was created to improve the coordination and integration of all modes of transportation in the Greater Toronto and Hamilton Area.

# Project Updates – Energy Efficiency & Conservation

Project Name	Allocated Funding from Green Bond Program (\$ millions)	Funds Disbursed since Inception of the Green Bond Program as of March 31, 2017 (\$ millions)	Expected Completion Date	Project Updates
<b>ErinoakKids (EOK) Centre for Treatment and Development</b>	163.3	0.0	2018	<ul style="list-style-type: none"> <li>The Oakville and Mississauga sites reached substantial completion in September 2017.</li> <li>The remaining site in Brampton is targeting substantial completion by fall 2017.</li> <li>The full project is expected to reach completion by the end of January 2018.</li> </ul>
<b>Sheridan College Hazel McCallion Campus Expansion</b>	63.7	63.7	2017	<ul style="list-style-type: none"> <li>Sheridan's Hazel McCallion Phase II project achieved substantial completion in November 2016.</li> <li>The new facility opened to students in January 2017.</li> <li>An official opening ceremony took place in March 2017.</li> </ul>
<b>St. Joseph's Healthcare Hamilton – West 5<sup>th</sup> Campus</b>	16.7	8.5	2013	<ul style="list-style-type: none"> <li>The brownfield facility is to support existing longer-term mental health, forensics and acute mental health programs and services, and expansion of forensic services, geriatric psychiatry and mental health rehabilitation.</li> <li>It increased the capacity of inpatient beds from 214 up to 305 and expanded outpatient clinics for psychiatry, diagnostic imaging, medical services and education, learning and research services.</li> </ul>
<b>St. Joseph's Healthcare London (Parkwood) and St. Thomas</b>	15.6	7.6	2014	<ul style="list-style-type: none"> <li>The London (Parkwood) facility for longer-term mental health has a capacity of up to 168 beds and provides specialized inpatient clinical programs as well as ambulatory services for both inpatients and outpatients.</li> <li>The St. Thomas facility is a medium security forensic facility with a capacity of up to 89 beds for general and secure forensic mental health.</li> </ul>
<b>Waypoint Centre for Mental Health Care</b>	6.3	2.7	2014	<ul style="list-style-type: none"> <li>The facility was designed and constructed to adhere to the guidelines and sustainability principles of LEED Gold certification.</li> <li>The project achieved substantial completion in December 2013.</li> <li>The facility opened for patient care in March 2014.</li> </ul>
<b>Woodstock General Hospital</b>	4.7	0.0	2011	<ul style="list-style-type: none"> <li>The greenfield facility has a capacity of up to 178 beds.</li> <li>It includes an increase of up to 24 medical surgical beds, six dialysis stations, eight complex continuing care beds, two mental health beds and 22 rehabilitation beds.</li> <li>It also includes a larger emergency department and increased rate of single, acute medical/surgical rooms.</li> </ul>
<b>Centre for Addiction and Mental Health (CAMH)</b>	3.4	1.8	2012	<ul style="list-style-type: none"> <li>The project includes the construction of three new buildings:               <ul style="list-style-type: none"> <li>The Intergenerational Wellness Centre provides specialized programming for CAMH's Child, Youth &amp; Family and Geriatric Mental Health program.</li> <li>The Bell Gateway Building houses outpatient programs, central clinical services, laboratories and support and administrative functions.</li> <li>The Utilities and Parking Building features meeting and hearing rooms, client assessment space, new parking facilities and an environmentally efficient central plant.</li> </ul> </li> <li>Construction began in December 2009 and was completed in April 2012.</li> <li>The new buildings opened in June 2012.</li> </ul>





## Green Bond 2017 Newsletter

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

### Contact Us

Investor Relations  
Ontario Financing Authority  
One Dundas Street West, Suite 1400  
Toronto, Ontario M7A 1Y7  
Canada

Telephone (416) 325-1661  
Fax (416) 204-6694  
[www.ofina.on.ca](http://www.ofina.on.ca)  
[investor@ofina.on.ca](mailto:investor@ofina.on.ca)

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