

Green Bond 2016 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.

"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). In March 2016, the Province of Ontario became a member of the GBP maintained by the International Capital Markets Association (ICMA).

Alignment with Green Bond Principles (cont.)

The GBP are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for the issuance of Green Bonds.

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 Ontario Financing Authority (OFA) website).

The Auditor General of Ontario provides an annual assurance audit on the use of Green Bond proceeds.

Impact Reporting

Ontario's first Green Bond Newsletter was released on December 9, 2015.

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

Future Issuance Plans

The Green Bond program is an ongoing program of the Province of Ontario. To date, Ontario has issued two Canadian dollar Green Bonds. The Province plans to issue its third Green Bond before the end of fiscal 2016–17.

Ontario's Green Bond Issues

	Inaugural Green Bond (1.75%, October 9, 2018)	Second Green Bond (1.95%, January 27, 2023)
Size:	CAD 500 Million	CAD 750 Million
Pricing Date:	October 2, 2014	January 22, 2016
Re-offer spread:	+38 bps over CAN 1.25% September 1, 2018	+103 bps over CAN 2.75% June 1, 2022
Format Currency:	Global Canadian dollar	Global Canadian dollar
Listing:	Luxembourg Stock Exchange Euro MTF Luxembourg Green Exchange	Luxembourg Stock Exchange Euro MTF Luxembourg Green Exchange
Green Bond Indices:	Barclays MSCI Green Bond Index BofA Merrill Lynch Green Bond Index S&P Green Bond Index Solactive Green Bond Index	Barclays MSCI Green Bond Index BofA Merrill Lynch Green Bond Index S&P Green Bond Index Solactive Green Bond Index
Project Categories:	Clean Transportation (1 project)	Clean Transportation (3 projects); Energy Efficiency & Conservation (5 projects)
Green Mandates/ UN PRI Signatories:	85%	70%
Domestic/ Foreign Investors:	83% / 17%	65% / 35%
Joint Bookrunners:	BofAML, CIBC, HSBC, RBC	BofAML, BMO, HSBC, RBC, TD

Use of Proceeds

- Green Bond proceeds are paid into the Consolidated Revenue Fund of Ontario and are not in a segregated account.
- An amount equal to the net proceeds of the bonds is recorded in a designated account in the Province of Ontario's financial records. This designated account is used to track the use of and allocation of funds to eligible projects.
- So long as the Bonds are outstanding and the designated account has a positive balance, amounts are deducted from the balance of the account as funds are allocated to eligible projects.
- The proceeds are invested in short-term Government of Canada securities.
- Green Bond projects are expected to be fully funded within one year of the date of issue.
- An assurance audit by the Auditor General of Ontario verifies the amounts used for selected projects and the balance of proceeds remaining.
- **As of March 31, 2016, all funds from the inaugural Green Bond have been deployed and \$191,647,500 of the funds from the second Green Bond have been disbursed.**

Project Evaluation and Selection

The selection of eligible green projects is done on behalf of the Province by 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 based on selection criteria including:

- Environmental project assessment considerations, including measurable results or other performance indicators clearly outlining the environmental benefits and features of each project;
- Funding requirements that occur within a twelve month period following and six month period prior to the issue of the Green Bond; *and*
- An ability to track the progress and funding of the selected projects.

This process can be summarized as:

Ministries and Government Agencies:
provide fully approved green projects for consideration

Ontario Financing Authority:
screens green projects for all applicable approvals and against eligibility criteria

Green Bond Advisory Panel (GBAP):
evaluates and recommends projects for inclusion in Ontario's Green Bond program

Ontario Financing Authority staff:
selects projects based on recommendations from GBAP

Impact Reporting

Project Name	Framework Category	Estimated Energy Savings (kWh / year)	Estimated Greenhouse Gas (GHG) Reductions (CO ₂ [or equivalent] tonnes / year) and Equivalent Passenger Vehicles Off the Road (vehicles / year)	Estimated Water Savings (litres / year) and Equivalent Water Saved per Household (Ontario households / year)	Other Environmental Benefits
Eglinton Crosstown Light Rail Transit (LRT)	Clean Transportation	–	490,000 tonnes / year or 103,594 passenger vehicles off the road / year (starting 2031) ¹	–	All 25 stations and stops are aiming to achieve the Toronto Green Standard. Eglinton Crosstown maintenance and storage facility is aiming to achieve LEED Silver certification.
GO Regional Express Rail (RER)	Clean Transportation	–	84,000 tonnes / year or 17,759 passenger vehicles off the road / year (starting 2024) ²	–	New GO stations and facilities are aiming to achieve LEED Gold certification
York vivaNext Bus Rapid Transit (BRT)	Clean Transportation	–	8,800 tonnes / year or 1,860 passenger vehicles off the road / year (starting 2031) ³	–	Improving access to public transit and new mobility options such as the vivaNext BRT will contribute to decreasing GHG emissions and Criteria Air Contaminants (CAC), manage traffic congestion, and encourage mode shift from auto trips to transit trips.
Sheridan College Hazel McCallion Campus Expansion	Energy Efficiency & Conservation	660,000 kWh / year	33 tonnes / year or 7 passenger vehicles off the road / year	–	Targeting LEED Silver certification
St. Joseph's Healthcare Hamilton – West 5th Campus	Energy Efficiency & Conservation	15 million kWh / year	3,568 tonnes / year or 754 passenger vehicles off the road / year	7.1 million litres / year or enough water for 37 Ontario households / year	LEED Gold Certified
St. Joseph's Healthcare – London and St. Thomas	Energy Efficiency & Conservation	6.6 million kWh / year	3,269 tonnes / year or 691 passenger vehicles off the road / year	8.7 million litres / year or enough water for 45 Ontario households / year	LEED Gold Certified
Waypoint Centre for Mental Health Care	Energy Efficiency & Conservation	540,000 kWh / year	27 tonnes / year or 6 passenger vehicles off the road / year	2.8 million litres / year or enough water for 14 Ontario households / year	LEED Gold Certified
Centre for Addiction and Mental Health – Phase 1B	Energy Efficiency & Conservation	20 million kWh / year	1,000 tonnes / year or 220 passenger vehicles off the road / year	4.3 million litres / year or enough water for 22 Ontario households / year	LEED Gold Certified

¹ Source: *Eglinton Crosstown Rapid Transit Benefits Case Update (2012)*. Note: Estimate is under review. Further analysis is needed to better quantify GHG benefits associated with this project. The quoted figure is associated with emissions reductions that may occur as auto users switch from driving to taking the LRT. Additional GHG reductions are also expected as a result of the replacement of buses with electric light rail vehicles, however these are not included in the estimate at this time.

² Source: *GO Regional Express Rail Initial Business Case (2015)*. Note: Estimate is under review. Further analysis is needed to better quantify GHG benefits associated with this project. The quoted emissions reduction is associated with the switch from diesel to electric trains only. GO RER is expected to further reduce emissions by encouraging people to switch from driving to taking the train. However, more work is required to quantify the potential benefits due to mode shift, and are not included in the estimate at this time.

³ Source: *VIVA Benefits Case (2008)*. Note: Estimate is under review. Further analysis is needed to better quantify GHG benefits associated with this project. The quoted figure is associated with emissions reductions that may occur as auto users switch from driving to taking the BRT.

Auditor General of Ontario's Assurance Audit



Office of the Auditor General of Ontario
Bureau du vérificateur général de l'Ontario
Independent Auditor's Report

To the Ontario Financing Authority and the Minister of Finance

I have audited the accompanying Schedule of Use of Green Bond Proceeds maturing on October 9, 2018 and January 27, 2023 (the "Schedule") as at March 31, 2016. The Schedule has been prepared by management based on the financial reporting provisions defined in the basis of accounting section below.

Management's Responsibility for the Schedule

Management of the Ontario Financing Authority is responsible for the preparation of the Schedule in accordance with the basis of accounting defined in Note 2 to the Schedule and for such internal control as management determines is necessary to enable the preparation of the Schedule that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on the Schedule based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Schedule is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Schedule. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Schedule, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of the Schedule in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the Schedule.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

In my opinion, the Schedule of Use of Green Bond Proceeds maturing on October 9, 2018 and January 27, 2023, as at March 31, 2016 is prepared in all material respects, in accordance with the financial reporting provisions defined in the basis of accounting section below.

Basis of Accounting and Restriction on Use

Without modifying my opinion, I draw attention to Note 2 of the Schedule which describes the basis of accounting for green bonds. The Schedule was prepared to assist the Province in disclosing its use of green bond proceeds. The determination of the eligibility of the projects under the Ontario Green Bond Framework is the responsibility of the Province and accordingly, I do not express an opinion thereon.

Bonnie Lysyk, MBA, CPA, CA, LPA
Auditor General

ONTARIO FINANCING AUTHORITY

Schedule of use of Green Bond proceeds

As at March 31, 2016

Balance as of March 31, 2015		\$296,221,180
Proceeds Used for Eglinton Crosstown Transit Project		(296,221,180)
Balance of First Green Bond Issue		<u>0</u>
Proceeds from the Second Green Bond Issue		747,315,000
Proceeds used for:		
Eglinton Crosstown	(29,231,312)	
VivaNext	(108,876,347)	
RegionalExpress Rail	(53,539,841)	(191,647,500)
Balance as of March 31, 2016		<u>\$555,667,500</u>

Notes to the Schedule of Use of Green Bond Proceeds

1. Background

On October 2, 2014, Ontario launched a Green Bond Program, with an inaugural global Canadian dollar bond of \$500 million, maturing on October 9, 2018. A subsequent Canadian dollar bond of \$750 million was issued on January 29, 2016, maturing on January 27, 2023. The Green Bonds are being used to help finance transit and other environmentally friendly projects across Ontario. Ontario's Green Bond Framework sets out the types of projects that are eligible for proceeds from Green Bonds. Eligible projects are determined by the Province of Ontario.

2. Basis of Accounting

The Schedule was prepared to track on a cash basis the use of funds generated by the issuance of these Ontario Green Bonds for selected projects that were approved by the Province under the Ontario Green Bond Framework. The Schedule of Use of Green Bond proceeds shows the net proceeds of the Green Bond issue that is recorded in a designated account in the Province's financial records, which tracks the use of funds for eligible projects. As long as the account has a positive balance, amounts are deducted from the balance of the designated account as funds are used for eligible projects, approved as eligible by the Province.

3. Interest Earned on the Designated Account

Interest earned on the proceeds in the designated account is not available to fund any eligible Green Bond projects. Interest earned is remitted to the consolidated revenue fund of the Province of Ontario.

4. Related Party

Metrolinx is a related party to the Ontario Financing Authority as both agencies are controlled by the Province of Ontario. Metrolinx administers the project to which the green bond proceeds are allocated. As at March 31, 2016, Metrolinx had disbursed an additional \$147,931,619 which had not yet been paid out of Green Bond proceeds by the Ontario Financing Authority.

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December 8, 2016

Green Bond Project Updates

Eglinton Crosstown Light Rail Transit (LRT)

Overview

- The Eglinton Crosstown LRT project, which is being implemented by Metrolinx, is a CAD 5.3 billion (2010\$) investment by the Government of Ontario to expand transit in Toronto. It is the largest transit expansion in the history of the region and is currently under construction with scheduled completion in 2021. The Eglinton Crosstown LRT was selected in 2014 as the first green project to receive funding from the inaugural Green Bond issue.
- The new LRT line will bring 19 new kilometres of rapid transit to Toronto, connecting Mount Dennis in the west to Toronto Transit Commission's (TTC) Kennedy Station in the east, and will include a 10 km underground tunnel in its central section between Keele Street and Laird Avenue.
- It will have 25 stations and stops, a link to 54 bus routes, three subway stations and three GO Transit lines. It is anticipated to be up to 60 per cent faster than today's existing bus corridor service.
- The LRT vehicles are electric powered and produce near zero emissions, making them the right choice for the environment. The Crosstown will be an efficient and reliable transit option for people, which will ease traffic congestion and provide an excellent, environmentally friendly travel alternative.
- The forecast of Green Bond funding for this project was approximately CAD 500 million for the inaugural Green Bond and CAD 402 million for the second Green Bond. As of March 31, 2016, all funds from the inaugural Green Bond have been disbursed and CAD 29.2 million from the second Green Bond has been disbursed.

Project Status

- The Eglinton Crosstown LRT project is currently under construction in Toronto.
- Work constructing the 10 km underground tunnel has been underway since 2011. The 6.5 km western segment of the tunnel (between Keele Street and Yonge Street) was completed in May 2016. Tunnelling on the eastern segment of the tunnel (from Brentcliffe Road to Yonge Street) began in Fall 2015.
- In July 2015, a contract was awarded to Crosslinx Transit Solutions (Crosslinx), the consortium delivering the Design, Build, Finance, and Maintain (DBFM) contract for the LRT line.
- Current activities include utility work, demolitions and station construction (shoring) at various stations along the line. By the end of 2016, every underground station will be under construction.

Project Status (cont.)

- The process of developing and submitting 30 per cent of designs for all LRT stations was completed in June 2016. Crosslinx continues their design work and will submit the completed 60 per cent engineering design packages in the Fall of 2016.
- The project is expected to reach completion by September 2021.



Estimated Environmental Benefits

- *An annual reduction of 490,000 tonnes of CO₂ equivalent emissions (projection under review), equal to 103,594 passenger vehicles off the road per year, starting 2031.
- All 25 stations and stops are aiming to achieve the Toronto Green Standard. The Eglinton Crosstown maintenance and storage facility is aiming to achieve LEED Silver certification.
- Eglinton Crosstown is projected to have 59 million boardings per year in 2031.
- The Eglinton Crosstown will bring fast, reliable and convenient transit service to passengers across Toronto. It will carry more passengers and move up to 60 per cent faster than the existing bus service on Eglinton Avenue.
- The underground portion of the Eglinton Crosstown will reduce congestion and increase street level capacity by reducing current bus traffic across the same line.

**Source: Eglinton Crosstown Rapid Transit Benefits Case Update (2012). Note: Estimate is under review. Further analysis is needed to better quantify GHG benefits associated with this project. The quoted figure is associated with emissions reductions that may occur as auto users switch from driving to taking the LRT. Additional GHG reductions are also expected as a result of the replacement of buses with electric light rail vehicles, however these are not included in the estimate at this time.*

Metrolinx

- In June 2016, Metrolinx received the Canada Green Building Council's 2016 Government Leadership Award in recognition of their leadership in developing policies and programs to advance green building in Canada.
- In June 2016, two Metrolinx teams, working on the GO Regional Express Rail and Pan Am/Parapan Am games received Amethyst Awards for their exceptional work in the areas of client service, innovation, leadership, professional achievement, building a diverse organization, championing learning and working horizontally across government.
- In May 2016, Metrolinx received an award from the Canadian Urban Transit Association for its Corporate Leadership in the area of Marketing and Communications regarding the vivaNext BRT "Business Support Communication – Davis Drive Rapidway" campaign.

Green Bond Project Updates

GO Regional Express Rail (RER)

Overview

- In 2015, the Province of Ontario committed CAD 13.5 billion for extensive rail improvements through the GO system, known as the Regional Express Rail (RER) program. Metrolinx is currently implementing RER, which will bring faster and more frequent GO train service across the Greater Toronto and Hamilton Area (GTHA).
- In 2015, RER was selected as a green project to receive funding from the second Green Bond issue.
- RER will build on all the expansion already underway and transform the region's transportation system by providing better and more frequent service.
- To enable RER, a range of projects including track construction, train control/signals systems improvements, grade separations, vehicle overhaul, train shed restoration and station rehabilitation are required. Many of these works are already underway in communities throughout the GTHA.
- Five GO corridors will be upgraded to provide service every 15 minutes (or better) in both directions throughout the day. Trains will be electrified, which shortens trip times by up to 20 per cent. Implementing RER is expected to add 4,500 new weekly train trips, for a total of 6,000 weekly trips, and increase GO ridership by 140 per cent over the next fifteen years.
- Electrification of the GO train system in core areas will contribute towards a significant reduction in GHG emissions. Expanding and electrifying the rail network will provide a more environmentally friendly alternative to the existing diesel trains.
- The forecast of Green Bond funding for this project is CAD 200 million. As of March 31, 2016, CAD 53.5 million has been disbursed.



Project Status

- RER is a complex infrastructure program and several key project elements are currently underway.
- Eleven Metrolinx-led RER related Environmental Assessments are completed, in progress or about to be launched.
- Planning and analysis are underway for additional tracking and station improvements along the Milton, Stouffville and Lakeshore West corridors.
- Construction, expansion and refurbishment is in progress for multiple stations along the Richmond Hill, Lakeshore East, Kitchener, and Barrie Corridors.
- On-going track and platform rehabilitation work at Union Station continues as a key component of the RER initiative, as it will increase station capacity, upgrade customer service systems and prepare for GO electrification.
- Construction work at a layover facility along the Lakeshore West corridor and two stations, one of which is aiming to achieve LEED Silver certification is ongoing.
- The RER program is expected to reach completion by 2025.

Estimated Environmental Benefits

- *An annual reduction of 84,000 tonnes of CO₂ equivalent emissions (projection under review), equal to 17,759 passenger vehicles off the road per year, starting 2024.
- GO train ridership in 2014 was approximately 54 million annual trips. With the implementation of GO RER on five corridors, ridership is forecast to climb to 127 million annual trips over the next fifteen years.
- New GO stations and facilities are aiming to achieve LEED Gold certification.
- Electric trains are able to accelerate faster and travel at top speeds for longer, cutting journey times for some trips by up to 20 per cent.

**Source: GO Regional Express Rail Initial Business Case (2015). Note: Estimate is under review. Further analysis is needed to better quantify GHG benefits associated with this project. The quoted emissions reduction is associated with the switch from diesel to electric trains only. GO RER is expected to further reduce emissions by encouraging people to switch from driving to taking the train. However, more work is required to quantify the potential benefits due to mode shift, and are not included in the estimate at this time.*

Green Bond Project Updates

York vivaNext Bus Rapid Transit (BRT)

Overview

- In partnership with the Regional Municipality of York, Metrolinx is improving rapid transit in York Region through the vivaNext BRT program. The construction of dedicated bus lanes in the centre of the road, known as rapidways, will allow rapid transit buses to move out of congested traffic.
- The York vivaNext BRT program is a CAD 1.4 billion (2008\$) investment by the Government of Ontario to expand transit in York Region. In 2015, vivaNext was selected as a green project to receive funding from the second Green Bond issue.
- Construction of the York vivaNext BRT program is well underway. Two BRT rapidway sections in the system, Highway 7 East and Davis Drive, are in service. The remaining two BRT rapidways, Highway 7 West and Yonge Street, are currently under construction to be completed by 2020.
- The new rapidways will bring 34.7 km of planned segregated BRT routes. They will provide more reliable service to travellers, with more frequent service of two to five minutes between arrivals in peak periods, and connections with GO Transit, regional transit and future extensions of the subway system.
- The forecast of Green Bond funding for this project is CAD 100 million. As of March 31, 2016, CAD 108.8 million has been disbursed.

Project Status

- The Highway 7 East rapidway was completed in Fall 2015. Final streetscaping work is nearing completion for the Davis Drive section with completion expected in Fall 2016.
- The Yonge Street BRT is currently in the design and construction phase of the project, and is midway through utility relocation activities. As of May 2016, 100 per cent of design packages for all segments of the rapidway have been submitted and reviewed. Progress is also being made towards acquiring properties adjacent to the entire rapidway and completing the necessary environmental work. The Yonge Street rapidway is scheduled to be in-service by the end of 2018.

**Source: VIVA Benefits Case (2008). Note: Estimate is under review. Further analysis is needed to better quantify GHG benefits associated with this project. The quoted figure is associated with emissions reductions that may occur as auto users switch from driving to taking the BRT.*

Project Status (cont.)

- Construction and utility work is progressing along various segments of the Highway 7 West rapidway. Preparation work has commenced for the foundation construction of the station at Millway Avenue, which will coincide with the opening of the TTC's Toronto-York Spadina Subway Extension.
- The vivaNext BRT program is expected to reach completion by 2020.

Estimated Environmental Benefits

- *An annual reduction of 8,800 tonnes of CO₂ equivalent emissions (projection under review), equal to 1,860 passenger vehicles off the road per year, starting 2031.
- The new vivaNext rapidways will support improved community connectivity and access to services, education, and businesses by making it easier to travel in and around York Region.
- Improving access to public transit and new mobility options such as the vivaNext BRT will contribute to decreasing GHG emissions and Criteria Air Contaminants (CAC), manage traffic congestion, and encourage mode shift from auto trips to transit trips.
- The vivaNext project is a successful example of partnership between Metrolinx and a local government. The BRT project was selected for these corridors by York Region after careful study and was endorsed by Metrolinx, which assessed the project to have a strong cost-benefit performance.
- Once complete, rapidways will improve flow for existing traffic, adding left-turn lanes where none previously existed, removing buses from general lanes and diverting auto trips onto transit.



Green Bond Project Updates

Sheridan College Hazel McCallion Campus Expansion

Overview

- Sheridan College Hazel McCallion Campus Expansion project is a joint investment by the Government of Ontario and Sheridan College, which includes substantial green features.
- Expansion will accommodate 3,200 full-time students.
- The new facility will be 220,000 square feet within the urban core of Mississauga, and will include new classrooms, studios, laboratories and production spaces. The new building will also house a gallery space to showcase student creativity and innovation.
- This College expansion project will be the first postsecondary education asset in Canada to be funded using Green Bond proceeds.



Project Status

- The Hazel McCallion Campus Expansion achieved substantial completion in November 2016.

Estimated Environmental Benefits

- An annual reduction of 33 tonnes of CO₂ emissions, equal to 7 passenger vehicles off the road per year.
- Energy usage reduced by 660,000 kWh per year.
- The design and construction of the buildings will adhere to LEED Silver standards.
- The building is being constructed to meet a Sheridan-mandated maximum annual energy consumption of 100 kWh/m²/year. This simple metric drove bidder innovation across many disciplines. It is one of the most energy-efficient academic buildings in North America.
- LED lighting and intelligent lighting controls used throughout the facility.
- Active chilled beams, radiant panels, and in-slab heating utilized for cooling/heating with dedicated outdoor air.
- Solar thermal collectors and waste heat recovery used to offset hot water heating by natural gas.
- High-quality building envelope reduces thermal losses and solar gain through windows.
- Other resource efficiency measures include:
 - Grey water system for all non-potable requirements.
 - Stormwater collected in underground cistern and used as grey water throughout the building.
 - Zero Waste Sheridan three-colour bin system implemented throughout facility.
 - Materials selected per LEED criteria for sourcing, recycled content and toxicity.
 - The building is within 400 meters of major public transportation node with routes serving the entire region.

Green Bond Project Updates

St. Joseph's Healthcare Hamilton – West 5th Campus

Overview

- The West 5th Campus is an 850,000-square-foot facility that provides specialized mental health services to those suffering from severe mental illness or addiction.
- The project provides additional inpatient beds, expanded outpatient clinics for psychiatry, diagnostic imaging and medical services, along with research and academic spaces.

Project Status

- The development of this brownfield site involved construction of a new facility to support existing longer-term mental health, forensics and acute mental health programs and services, expansion of forensic services, geriatric psychiatry and mental health rehabilitation.
- It also increased capacity of inpatient beds from 214 up to 305, including all associated support services as well as expanded outpatient clinics for psychiatry, diagnostic imaging, medical services and education, learning and research services.
- The total approved project cost was CAD 1.09 billion and substantial completion was achieved in 2014–15.

Estimated Environmental Benefits

- An annual reduction of 3,568 tonnes of CO₂ emissions, equal to 754 passenger vehicles off the road per year.
- Energy usage reduced by 15 million kWh per year.
- The facility is LEED Gold certified.
- Water usage reduced by 7.1 million litres per year, equivalent to supplying water to 37 Ontario households for a year.
- Storm Water Management System to minimize water pollution. Highly efficient plumbing fixtures to reduce indoor water usage by 20 per cent.
- Mature trees preserved on portions of the Campus with over 500 new trees planted.
- Low emitting materials used during construction to ensure improved indoor environmental quality.
- PVC roof to increase building heat naturally from the sun.
- 90 per cent of construction materials come from landfills and recyclable products.

St. Joseph's Healthcare – London and St. Thomas

Overview

- The St. Joseph's Specialized Mental Health Care facility in London provides services such as adolescent psychiatry, assessment, concurrent disorders, geriatric psychiatry and psychosis.
- The St. Joseph's Forensic Mental Health Care facility in St. Thomas provides specialized inpatient and outpatient services, including assessment, treatment, outreach and support services to individuals with a mental illness who have come into significant contact with the criminal justice system.

Project Status

- The project included a new Brownfield facility at the Parkwood site for longer-term mental health and at the St. Thomas site for forensics. Construction of this DBFM project began in 2010–11.
- The total approved project cost was CAD 1.09 billion and substantial completion was achieved in 2014–15.

Estimated Environmental Benefits

- An annual reduction of 3,269 tonnes of CO₂ emissions per year, equal to 691 passenger vehicles off the road per year.
- Energy usage reduced by 6.6 million kWh per year.
- The two facilities are LEED Gold certified.
- Water usage reduced by 8.7 million litres per year, equivalent to supplying water to 45 Ontario households for a year.



Green Bond Project Updates

Waypoint Centre for Mental Health Care

Overview

- Waypoint Centre for Mental Health Care in Penetanguishene replaced the 160-bed Oak Ridge building and the 20-bed Brebeuf building to offer a larger, more modern hospital space for treatment and care of people with mental illness who have come into contact with the law.
- The new Atrium Building was built with environmentally friendly design features in order to achieve Gold certification according to the LEED green building rating system, as part of the government's commitment to reduce energy use and GHG emissions.
- Waypoint aimed to achieve Gold level certification through focus on healthy indoor environments, reduced GHG emissions, efficient use of energy, water and other resources.

Project Status

- The development of this new Brownfield site was initiated in 2010–11 as a DBFM project.
- The total approved project cost was CAD 623 million and substantial completion was achieved in 2013–14.

Estimated Environmental Benefits

- An annual reduction of 27 tonnes of CO₂ emissions, equal to 6 passenger vehicles off the road per year.
- Energy usage reduced by 540,000 kWh per year.
- The new building is LEED Gold certified.
- Water usage reduced by 2.8 million litres per year, equivalent to supplying water to 14 Ontario households for a year.

Centre for Addiction and Mental Health

Overview

- The Centre for Addiction and Mental Health (CAMH) project involves redevelopment at the CAMH Queen Street site in Toronto.
- All three Phase 1B buildings have been designed with environmentally responsible and sustainable features in order to achieve Gold certification according to the LEED green building rating system.

Project Status

- Phase 1B includes three new buildings. The B2 building provides for twelve new youth concurrent disorder beds and associated day treatment and outpatient programs, as well as up-to-date facilities for 48 existing geriatric beds and associated day treatment and outpatient programs; the C2 building accommodates administration and ambulatory care; and the G1 building provides a new central plant, parking garage and gym.
- Construction of this DBFM project began in 2009–10.
- The total approved cost was CAD 547 million and substantial completion was achieved in 2012–13.

Estimated Environmental Benefits

- An annual reduction of 1,000 tonnes of CO₂ emissions, equal to 220 passenger vehicles off the road per year.
- Energy usage reduced by 20 million kWh per year.
- The three new buildings are LEED Gold certified.
- Water usage reduced by 4.3 million litres per year, equivalent to supplying water to 22 Ontario households for a year.
- Secure underground bicycle parking and change/shower facilities to promote bicycle use and commuting have been added.
- Green spaces, both public and exclusive to clients, have been incorporated into the site, with large-growing shade trees planted throughout the site.



Green Bond 2016 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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- IR Presentation
- Other events

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