

2022 Ontario Teachers' Finance Trust

# Green Bond Report



**ONTARIO  
TEACHERS'**  
PENSION PLAN





The Ontario Teachers' Pension Plan Board (Ontario Teachers') guarantees the bonds issued by Ontario Teachers' Finance Trust (OTFT) and manages \$241.6 billion in net assets as of December 31, 2021. Ontario Teachers' invests for, and administers the pensions of, more than 333,000 active and retired Ontario teachers.

Responsible investing is embedded in Ontario Teachers' strategy and throughout the organization.

Ontario Teachers' believes strong environmental, social and governance (ESG) practices enable it to make good investments today, while also having a positive impact on future generations. As a long-term and global investor, Ontario Teachers' is an active steward and engaged owner of businesses – not only to earn returns, but to help shape a better future.

Refer to Ontario Teachers' [responsible investing website](#), where you can find further information about its ESG practices and latest responsible investing and climate change reports.

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# Our 2022 Green Bond Report

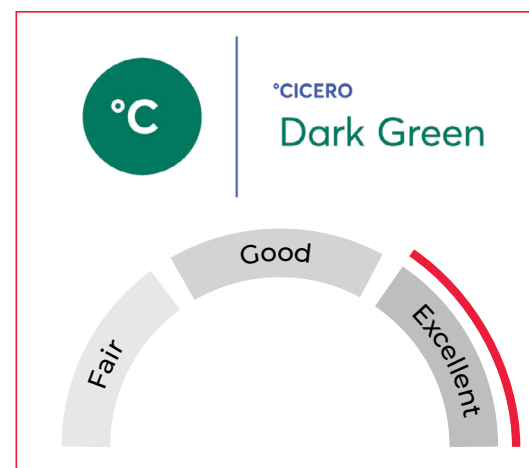
OTFT, a wholly owned subsidiary of Ontario Teachers', is an established global issuer with outstanding bonds in U.S. dollars, Euros, Pounds Sterling and Canadian dollars. OTFT's green bond issuance allows us to access capital to support the much-needed investments to transition towards a sustainable future.

[Ontario Teachers' Green Bond Framework](#) describes four key elements of our green bond issuance:

- i) what assets the proceeds will be used for;
- ii) how the assets will be selected;
- iii) how the proceeds will be managed; and
- iv) how we will report back to bond investors.

The framework is aligned with the International Capital Market Association (ICMA) Green Bond Principles and is summarized on the next page. The framework was independently reviewed by [CICERO Shades of Green](#), which provides an external opinion on the quality of the framework and the governance around how assets are selected.

The framework received a "CICERO Dark Green" shading (indicating strong alignment with a low-carbon future) as well as a governance score of "Excellent," demonstrating the robustness of the governance structure Ontario Teachers' has put in place.



**€1.25  
billion**  
total issued

**Rated**  
**Aa1 | AA+ | AAA**  
Moody's      S&P      DBRS

# Green Bond Framework

## Use of proceeds



## Asset selection and evaluation



## Management of proceeds



## Reporting

### Eligible Green Assets include the following types of investments:

- Renewable Energy
- Clean Transportation
- Energy Efficiency
- Green Buildings
- Circular Economy
- Water and Wastewater Management
- Natural Resources and Land Use
- Pollution Prevention and Control
- Climate Change Adaptation

### An internal Green Bond Council regularly assesses Eligible Green Assets with consideration given to:

- Eligibility criteria
- EU Taxonomy, UN Global Compact Principles, OECD Guidelines for Multinational Enterprises

### We intend to continue maintaining Eligible Green Assets that are at least equal to net outstanding green bond issuances:

- We track Eligible Green Assets through our Green Bond Register
- In the event of unallocated proceeds, funds will be used where feasible in accordance with OTFT's normal liquidity activities

### Allocation and impact reporting on the portfolio of Eligible Green Assets are provided annually:

- Allocation reporting includes:
  - Assets by ICMA Green Bond Principle category
  - Assets by geography where practical
  - Select case studies on assets that are being financed
- Impact reporting includes qualitative and quantitative environmental or societal performance indicators
- Reporting is externally reviewed

# Green Bond Issuance and Register

## Issuance Details

OTFT has issued two green bonds to date, both in Euros (EUR), as detailed below

Issuer	Ontario Teachers' Finance Trust
Rating	Aa1/AA+/AAA <sup>1</sup>
Size	€750,000,000
Format	Reg S
Issuance Date	November 25, 2020
Maturity Date	November 25, 2030
Coupon	0.05%

Issuer	Ontario Teachers' Finance Trust
Rating	Aa1/AA+/AAA <sup>1</sup>
Size	€500,000,000
Format	Reg S
Issuance Date	November 24, 2021
Maturity Date	November 24, 2051
Coupon	0.95%

## Green Bond Register

All amounts are in Canadian dollars unless otherwise stated. Foreign currency amounts were converted to Canadian dollars using the exchange rate as of the transaction date.

### GREEN BOND ISSUANCES

Issuance Date	EUR	CAD
November 25, 2020	€ 750,000,000	\$1,162,125,000
November 24, 2021	€ 500,000,000	\$709,625,000
Total	€ 1,250,000,000	\$1,871,750,000

OTFT's inaugural green bond was issued in November 2020, followed by a second green bond issuance in November 2021. As of December 2021, Eligible Green Assets have been fully allocated to cover the net proceeds of outstanding green bonds.

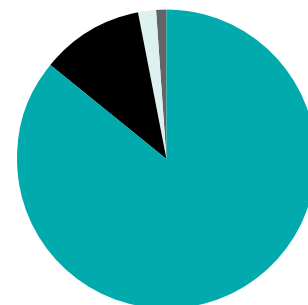
<sup>1</sup> Rating by Moody's, S&P and DBRS, respectively.

Below we report on the use of proceeds of OTFT's green bond issuances and allocation to the portfolio of outstanding Eligible Green Assets within the Green Bond Register. Only disbursements within the three-year look-back period are considered notwithstanding ownership of companies prior to that period. The Green Bond Council is responsible for approving the Eligible Green Assets included in the Green Bond Register.

A portfolio approach is used since Ontario Teachers' and OTFT's intention is to maintain, directly or indirectly, an aggregate amount of Eligible Green Assets that is at least equal to the aggregate net proceeds of all green bond issuances that are currently outstanding. This is in line with the guidance provided by ICMA.

### ELIGIBLE ASSETS BY ICMA CATEGORY

Asset Category	December 2021	December 2020
Renewable Energy	86%	14%
Energy Efficiency	11%	75%
Climate Change Adaptation	2%	11%
Natural Resources and Land Use	1%	0%
Total Eligible Assets (\$ millions)	\$4,026.8	\$595.0

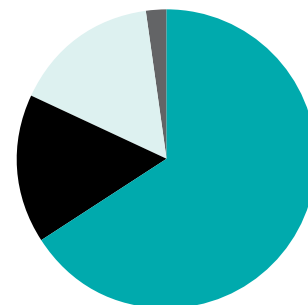


December 2021

Renewable Energy	86%
Energy Efficiency	11%
Climate Change Adaptation	2%
Natural Resources and Land Use	1%

### ELIGIBLE ASSETS BY GEOGRAPHIC REGION

Geographic Region	December 2021	December 2020
Europe	66%	75%
North America	16%	14%
Asia-Pacific	2%	11%
South America	16%	0%
Total Eligible Assets (\$ millions)	\$4,026.8	\$595.0



December 2021

Europe	66%
North America	16%
South America	16%
Asia-Pacific	2%



# Impact Reporting

On the next page we report on the positive impacts provided by our Eligible Green Assets. The portfolio as of December 2021 had impacts in four main categories: i) renewable energy generation and transmission; ii) energy efficiency; iii) climate change adaptation; and iv) natural resources and land use.

Our Eligible Green Assets provide environmental and societal benefits. The benefits of these assets are wide ranging, including: reducing emissions and removing greenhouse gases (GHG) from the atmosphere, enabling transition to net-zero through carbon footprint reduction, increasing energy efficiency, saving costs, and developing resiliency to climate impacts.

In addition to positive impact metrics, the Green Bond Council reviewed potentially detrimental environmental and societal impacts and respective mitigants of each investment composing the portfolio. The EU Taxonomy “Do No Significant Harm” was used as a main criterion. No issues were found.

We make efforts to align our impact reporting with market practices and leveraged ICMA resources to identify relevant impact metrics for each category. We allocate impact metrics according to proceeds as a percentage of each asset’s enterprise value<sup>1</sup>. We believe this to be a leading and conservative approach – considering financing across the capital structure prevents double counting of impact in case our partners or assets themselves issue green bonds.

The table on the next page includes the proportionate share of impact based on proceeds as of December 31, 2021. We have also prorated impacts attributable to green bond investors.

Lastly, we specify which impacts are ex-post, or “after the fact” and based on actual measurements or estimations, and ex-ante, which uses estimates to gauge future performance.

All metrics were independently reviewed by CICERO.



<sup>1</sup> Enterprise value = market cap of equity + book value of debt. Cash is not deducted.

## Impact Metrics by Category and Ownership<sup>1</sup>

As at December 31, 2021, 46% of impact metrics are attributable to green bond investors.

Impact metrics attributable to:

ICMA Category	Impact Metric	Ante / Post	Green Bond Investors (December 31, 2021)	Green Bond Register (December 31, 2021)	Green Bond Register (December 31, 2020)
Renewable Energy	Renewable energy generated and/or transmitted (GWh)	Ex-Post	10,656	22,926	-
		Ex-Ante	465	999	-
	GHG emissions avoided (tCO <sub>2</sub> e)	Ex-Post	6,943	14,936	-
		Ex-Ante	320,336	689,162	-
	Battery usable energy capacity (MWh)	Ex-Post	44	95	82
Energy Efficiency	Annual energy savings (GWh)	Ex-Post	870	1,872	1,822
	GHG emissions avoided (tCO <sub>2</sub> e)	Ex-Post	282,717	608,229	654,880
Climate Change Adaptation	Annual water produced and treated (m <sup>3</sup> )	Ex-Post	304,605	655,320	1,130,900
Natural Resources and Land Use	Total surface financed and certified (ha)	Ex-Post	27,539	59,248	-
	GHG emissions removed (tCO <sub>2</sub> e)	Ex-Ante	102,521	220,561	-

<sup>1</sup> Following the portfolio approach, each ICMA category may include various portfolio companies or assets. Each asset has at least one impact metric, but not all assets necessarily report on more than one impact metric.



## Metrics Measurement, Calculation and Commentary

We strive to use the best available sources and methodologies to estimate impact. Most assets in our Green Bond Register were operational during 2021 and for these we present ex-post impact metrics only. Some assets are starting operations in 2022 and impact metrics are presented as ex-ante.

- Renewable energy generated and/or transmitted; annual water produced and treated; and battery usable capacity are directly measured by appropriate equipment at the asset-level when ex-post metrics are presented. Annual water produced and treated was lower than the previous year due to less need for water desalination. Ex-ante metrics are based on engineering and technical estimations based on power generation capacity. Actual performance may vary due to weather and operational conditions during 2022.
- GHG emissions avoided are calculated using country-specific emission factors obtained from the International Energy Agency, the U.S. Environmental Protection Agency and the International Institute for Sustainability Analysis and Strategy. Values are presented in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e). We note that under the “Energy Efficiency” category, while Annual energy savings remained relatively stable, GHG emissions avoided are slightly lower than the previous year due to less energy-intensive power generation reflected in electricity and heat emission factors. We believe this to be an encouraging result despite the reduction of the impact quantum.
- Annual energy savings were estimated using a study on the end energy reduction through heat cost allocation<sup>1</sup> and by normalizing consumption based on country-specific weather data on a 10-year average.
- Total surface financed and certified is obtained from independent appraisal and certification reports.
- GHG emissions removed estimation was performed by an independent firm, leader in the design, development, and implementation of land use carbon projects. The firm used Verra Standard VM0012 Improved Forest Management in Temperate and Boreal Forests since the company applies Improved Forest Management practices. Key considerations for estimation include:
  - Only carbon removals additional to a business-as-usual scenario are accounted for;
  - The potential for leakage (i.e., timber being harvested in other forests as a result of carbon offset projects) and for carbon reversal due to diseases and wildfires was deducted;
  - Planned harvests;
  - No inclusion of non-productive areas (including protected land).

We note that the green bond financing made these projects possible. OTFT and OTPP will not account for carbon avoidance, removals and offsets in any way against their own carbon emissions.

<sup>1</sup> Auswirkungen der verbrauchsabhängigen Abrechnung in Abhängigkeit von der energetischen Gebäudequalität (Effects of consumption-based billing on building energy quality), found [here](#).

# The following are examples of Eligible Green Assets included in our Green Bond Register as of December 31, 2021.



In 2021, Ontario Teachers' acquired a 50% direct interest in a portfolio of 13 wind, solar and energy storage assets across the United States. The portfolio is managed by NextEra Energy Resources, the world's largest generator of wind and solar energy and a world leader in battery storage. Together, these assets have a generating capacity of approximately 2,520 MW, replacing higher carbon energy sources and fulfilling the energy needs of a more sustainable future.

NextEra is a responsible operator of clean energy projects. Learn more from their latest [Environmental, Social and Governance Report](#).



In 2021, Ontario Teachers' acquired a 40% stake in Caruna, Finland's largest electricity distribution network operator. With over 700,000 customers across an 88,000-kilometre network, Caruna supports the integration of renewable energy into the Finnish power grid. In 2021, the number of small-scale producers of renewable energy linked to Caruna's distribution network grew from 9,400 to 12,060. Also in 2021, 11% of all renewable electricity in Finland was fed into Caruna's network.

Last year, Caruna set a goal to be carbon-neutral by the end of 2025.

Learn more about the actions Caruna is taking in its [2021 Annual Report](#).



Cubico is one of the world's largest privately owned renewable energy platforms. It is involved in acquiring, developing, constructing and operating renewable energy projects, playing a significant role in the world's transition towards clean energy. Since Ontario Teachers' investment in 2015, Cubico has grown from 19 facilities located in seven countries to 170 assets in different stages of development in 12 countries globally.

In 2020, Cubico added around 1.5 gigawatts of renewable energy capacity to its portfolio. Cubico's current development pipeline capacity of 1.8 gigawatts makes this a platform that allows us to continue deploying capital for our green portfolio growth. Learn more about Cubico's approach to ESG in its inaugural [ESG report](#).



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