



# Green Bond Newsletter

Province of Québec  
September 2024

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# Québec Green Bond program

Québec's Green Bond program draws on the Green Bond Principles (GBP).

A member of the GBP group since October 2018, Québec has committed to publishing an annual information bulletin for investors.

To demonstrate its commitment to protecting the environment and developing the Green Bond market, Québec put in place, in February 2017, a Green Bond program, and updated its framework in July 2022.

- As at March 31, 2024, the Québec government has launched nine Green Bond issues. It is committed to being a regular issuer on this market.
- Québec is advertising its Green Bond program in a dedicated section of the Ministère des Finances website:  
[www.finances.gouv.qc.ca/departement/financing/green\\_bonds/](http://www.finances.gouv.qc.ca/departement/financing/green_bonds/).



## Second Opinion on Québec's Green Bond Framework

- Shades of Green (formerly part of CICERO) issued an independent opinion on the framework and the selection process of Québec's Green Bond program.
- Québec's Green Bond framework was awarded the highest possible rating - dark green.
- The most recent version of Shades of Green's Second Opinion is available on the Ministère des Finances website. Consult the document from Shades of Green:  
[www.finances.gouv.qc.ca/documents/Autres/en/AUTEN\\_SecondOpinionCICERO\\_GB.pdf](http://www.finances.gouv.qc.ca/documents/Autres/en/AUTEN_SecondOpinionCICERO_GB.pdf).

# Québec Green Bond issues

## Nine issues

Total amount of issues: CAD 5.7 B

Maturity date	Issue amount	Pricing date
November 22, 2032 (reopening)	CAD 600 M	June 8, 2023
November 22, 2032	CAD 800 M	November 15, 2022
May 20, 2032	CAD 1 B	May 13, 2022
May 27, 2031	CAD 500 M	May 19, 2021
February 13, 2027	CAD 500 M	February 6, 2020
July 6, 2025	CAD 500 M	June 28, 2018
February 22, 2024 (matured)	CAD 800 M*	February 14, 2019
March 1, 2023 (matured)	CAD 500 M	February 22, 2018
March 3, 2022 (matured)	CAD 500 M	February 24, 2017

\* [Environmental Finance](#) Bond Awards 2020 – Green Bond of the Year – Local authority/Municipality  
Note: As at March 31, 2024.

**FORMAT: GLOBAL** (five first issues)  
**AND MTN CAN** (last four issues and upcoming issues)

### Stock exchange

Luxembourg Green  
Exchange (LGX) —  
Euro MTF Market

### Inclusion in green indexes

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

### Categories of projects funded to date:

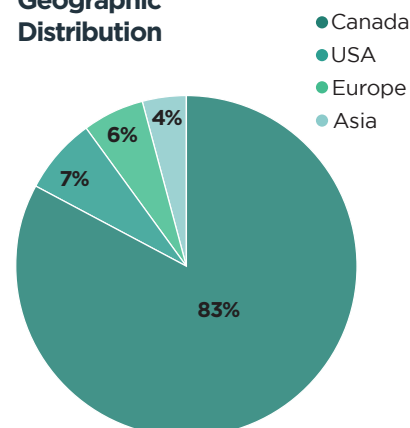
Clean Transportation and Green Buildings (LEED Gold project)

## Alignment with the United Nations' sustainable development goals

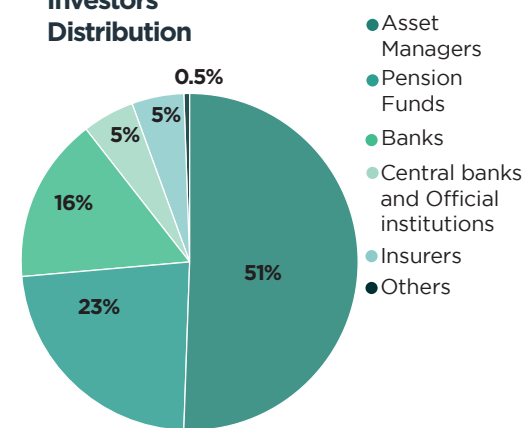


## Global statistics of Québec's nine green bond issues

### Geographic Distribution



### Investors' Distribution



### Investors with Green Mandates or signatories of the UN PRI



Note: The acronym UN PRI stands for United Nations Principles for Responsible Investment.

# Use and allocation of proceeds from Québec Green Bonds

## Use of proceeds as at March 31, 2024

Balance as at March 31, 2023		CAD 0
Net proceeds from the ninth Green Bond issue	CAD 589 902 000	
Proceeds used for the AZUR project (refinancing)	(CAD 310 245 000)	
Proceeds used for the AZUR project	(CAD 22 850 000)	
Proceeds used for the Ville de Québec's structuring public transit network <sup>1</sup> project	(CAD 92 441 000)	
Proceeds used for the Bellechasse bus garage project	(CAD 76 080 000)	
Proceeds used for the Réno-Infrastructures project (refinancing)	(CAD 57 625 000)	
	CAD 30 661 000	
Balance as at March 31, 2024		CAD 30 661 000

<sup>1</sup> On June 13, following an analysis conducted by the Caisse de dépôt et placement du Québec (CDPQ Infra), the government authorized the completion of the first phase of the new structuring public transit network project, namely a 19-km tramway line. According to information received by the Ville de Québec, the amounts already paid through Green Bonds will be used for this new structuring project.



## Distribution of the use of proceeds as at March 31, 2024

**Total net proceeds from  
Green Bond issues =  
CAD 5 675 906 000**

Amount paid for the REM =  
CAD 1 199 020 000 (21.2%)

Amount paid for AZUR =  
CAD 1 109 550 000 (19.6%)

Amount paid for the Blue line extension =  
CAD 710 835 000 (12.6%)

Amount paid for Réno-Infrastructures =  
CAD 484 300 000 (8.6%)

Amount paid for Réno-Systèmes =  
CAD 428 755 000 (7.6%)

Amount paid for Accessibility program =  
CAD 262 900 000 (4.7%)

Amount paid for the Bellechasse bus garage =  
CAD 238 430 000 (4.2%)

Amount paid for the Ville de Québec's structuring public transit network<sup>1</sup> =  
CAD 201 047 000 (3.6%)

Amount paid for electric or hybrid<sup>2</sup> buses =  
CAD 174 088 000 (3.1%)

Refinancing of the portion of AZUR initially financed  
with conventional bonds =  
CAD 152 320 000 (2.7%)

Refinancing of the portion of AZUR initially financed  
with matured Green Bonds =  
CAD 626 375 000 (11.1%)

Refinancing of the portion of Réno-Infrastructures initially  
financed with matured Green Bonds =  
CAD 57 625 000 (1.0%)

**Balance as at March 31, 2024 =  
CAD 30 661 000**

**New green financings =  
CAD 4 808 925 000 (85.2%)**

**Refinancings =  
CAD 836 320 000 (14.8%)**

<sup>1</sup> On June 13, following an analysis conducted by the Caisse de dépôt et placement du Québec (CDPQ Infra), the government authorized the completion of the first phase of the new structuring public transit network project, namely a 19-km tramway line. According to information received by the Ville de Québec, the amounts already paid through Green Bonds will be used for this new structuring project.

<sup>2</sup> Since June 2022, the Green Bond program no longer finances hybrid buses, only electric buses.

## Allocation of Green Bond proceeds by project as at March 31, 2024

(in million \$)

Project name		Total cost authorized	Québec's participation	Financed with Green Bonds	% of the total cost of the project	Refinancing <sup>1</sup>	Total
Clean Transportation	Réseau express métropolitain (REM)	6 900.00	1 280.00	1 199.02	17.4%	—	1 199.02
	AZUR	2 624.30	1 787.90	1 109.55	42.3%	778.70	1 888.25
	Blue line extension	6 164.70	3 691.20	710.84	11.5%	—	710.84
	Réno-Infrastructures	1 451.30	1 088.60	484.30	33.4%	57.63	541.93
	Réno-Systèmes	2 395.30	1 704.70	428.76	17.9%	—	428.76
	Accessibility program	686.00	473.10	262.90	38.3%	—	262.90
	Ville de Québec's structuring public transit network <sup>2</sup>	3 965.00	2 197.50	201.05	5.1%	—	201.05
	Electric or hybrid <sup>3</sup> bus purchase	1 960.00	959.10	174.09	8.9%	—	174.09
	Bus garage electrification	941.50	618.10	—	0.0%	—	—
	<b>Subtotal – Clean Transportation</b>						<b>5 406.82</b>
Green Buildings	Bellechasse bus garage	584.40	431.20	238.43	40.8%	—	238.43
	East end of Montréal bus garage	315.40	267.90	—	0.0%	—	—
	<b>Subtotal – Green Buildings</b>						<b>238.43</b>
<b>Total</b>		<b>27 987.90</b>	<b>14 499.30</b>	<b>4 808.93</b>		<b>836.32</b>	<b>5 645.25</b>

Note: Totals may not add due to rounding.

1 Québec can refinance unamortized borrowings from existing projects. For example, a project with a 15-year amortization period financed with a 5-year Green Bond issue could be refinanced with Green Bonds. Conversely, a project with a 5-year amortization period financed with a 5-year Green Bond issue cannot be considered for refinancing. Consequently, matured Green Bonds will not be refinanced without the refinancing of a project being associated with it.

2 On June 13, following an analysis conducted by the Caisse de dépôt et placement du Québec (CDPQ Infra), the government authorized the completion of the first phase of the new structuring public transit network project, namely a 19-km tramway line. According to information received by the Ville de Québec, the amounts already paid through Green Bonds will be used for this new structuring project.

3 Since June 2022, the Green Bond program no longer finances hybrid buses, only electric buses.



# Financed projects

## Update

- Acquisition of AZUR métro cars
- Réno-Systèmes and Réno-Infrastructures
- Ville de Québec's structuring public transit network
- LEED project – Bellechasse bus garage

# Acquisition of **AZUR** métro cars



## Project description

- The project involves the Société de transport de Montréal's (STM) acquisition of 71 AZUR trains (639 cars), 38 of which are to replace the 1963 métro cars (MR-63), 7 of which are to replace the 1973 métro cars (MR-73) and 26 are additional métro cars. These new trains feature leading-edge design and technology.
- For Montréal métro users, the new rolling stock significantly improves service: an 8% increase in capacity, high-tech information systems, a new ventilation system, 27% wider doors than the previous ones and an optimized layout.
- Powered 100% by hydroelectricity, these cars manufactured with 60% Canadian content will be 92.5% recyclable at the end of their useful life.
- Thanks in part to the AZUR métro cars, the STM aims to increase electric-powered travel on its network from 69.5% in 2015 to 88.6% in 2025.



## Project progress

*The delivery of the new AZUR trains is now complete.*

- The 71<sup>st</sup> and last AZUR train was put into service in December 2021 and completes the second phase of train acquisition.
- The delivery of the 54 trains of the first acquisition phase was finalized in June 2019.
- A total of 639 AZUR cars are now part of the STM's rolling stock. The 423 MR-73 cars complete the fleet.
- Québec's Green Bond program financed the acquisition of 330 AZUR cars.



Photo: STM

## Reclamation of MR-63 and MR-73 cars

Following the arrival of the AZUR métro cars, the MR-63 cars were either sent for recycling (313 cars) or reused for artistic or conservation projects (15 cars). The reclamation rate of the MR-63 cars is 85%. More than 50 types of parts were reused on the MR-73 cars and the locotractors, which resulted in major savings. In total, more than 85% of the 8200 tonnes of MR-63 materials were reclaimed.

In order to free up parking space in the tunnel to accommodate the new AZUR métro cars, the STM also had to dispose of 63 MR-73 métro cars in 2021. On the strength of the high diversion rate obtained during the disposal of its MR-63 métro cars, the STM began the preparatory work for the disposal of these 63 cars in 2020; 62 of them were recycled and the other car was sold for a second life project.

# Réno-Systèmes and Réno-Infrastructures



## Projects' description

The Réno-Systèmes program attends to the replacement, construction or refurbishment of the Montréal métro network's operational stationary equipment, while the Réno-Infrastructures program attends to the replacement or refurbishment of the infrastructure related to the métro's network. These two programs aim to optimize investments by using them as leverage to improve service quality and safety as well as the financial and operational performance of the Montréal métro's network.

The two projects are essential to maintaining the métro service and are closely linked to the AZUR métro car acquisition project, partly funded through Québec Green Bond issues.

## Advantages

### Réno-Systèmes

- Improvement in the reliability, availability and safety of the métro network's operational stationary equipment (fewer service outages)
- Improvement in communications with clients (public address system and visual)
- Improvement in response times in the event of a service outage and reduction in their occurrence
- Improvement in universal accessibility
- Upgrading of systems and equipment

### Réno-Infrastructures

- Maintenance of the infrastructure's condition and reliability
- Maintenance of the métro network's availability and safety
- Improvement in universal accessibility
- Restoration of several works of art
- Upgrading of signage
- Upgrading of infrastructure



# Ville de Québec's structuring public transit network



Photo:  
Québec city tramway  
Ville de Québec

## Project description

On June 13, following an analysis conducted by the Caisse de dépôt et placement du Québec (CDPQ Infra), the government authorized the completion of the first phase of the new structuring public transit network project, namely a 19-km tramway line.

According to information received by the Ville de Québec, the amounts already paid through Green Bonds will be used for this new structuring project.

The Ville de Québec is implementing the biggest infrastructure project in its history: a tramway. This will contribute to achieving the following benefits:

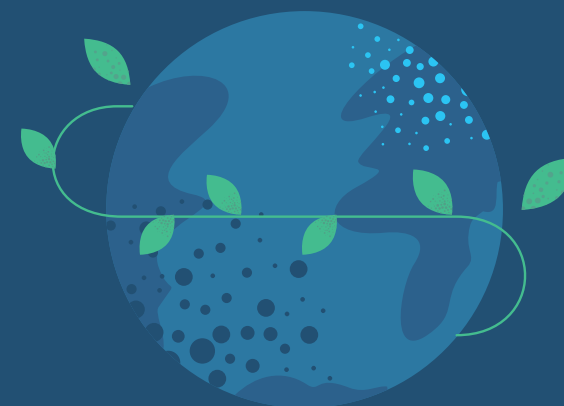
- improve travel
- reduce air pollution
- bolster communities
- spur economic growth

## Project progress

### 2020-2024

#### Preparatory works

For more information on the main stages of the project, ongoing and upcoming work, environmental benefits and more, visit the following website: [tramwaydequebec.info](http://tramwaydequebec.info) (in French only).



# LEED Project – Bellechasse bus garage



## Project description

- The Bellechasse bus garage will be the STM's first garage designed to accommodate a fleet of 100% electric buses. This new centre will thus contribute to the Québec government's electrification plan.
- This project, as part of the STM's strategy to add 300 new air-conditioned hybrid buses to its fleet announced in January 2018, will also allow for an increase in the service offer.
- This bus garage will accommodate up to 250 buses-equivalent. The layout of the building will be planned to accommodate new technologies, which will allow the maintenance of all types of vehicles (standard, hybrid and electric). This concept of multistage underground building with indoor circulation will also reduce noise in the neighborhood.
- The innovative concept of the bus garage will improve working conditions and quality of life in the area. The administrative sections and certain zones dedicated to employees will be universally accessible.

In addition, the STM aims to obtain LEED Gold level certification for this new building, one of the highest certification in the industry, in order to meet the objectives of sustainable development.



## Main sustainability-related advantages

- Energy savings of more than 60% and reduction in GHG emissions of approximately 85%, thanks to a high energy efficiency system
- Reduction of heat islands thanks to significant greening, part of which will be accessible to the public
- Reduction in drinking water consumption thanks to efficient equipment and the recycling of water from the bus wash
- Maximized landfill diversion rate of waste and residues from construction, renovation and demolition



## Project progress

- Work began in spring 2019.
- The first phase, during which the STM carried out the preparatory work, i.e., the demolition of the building, the removal of materials and residues, the decontamination of the soil and the excavation of the rock, is completed.
- The second phase, i.e., the construction of the new transportation centre, is underway.
- As of March 31, 2024, work is at 87% physical progress.
- The building construction will be completed in the fall of 2024, including the greening of the roof. The gradual commissioning of equipment inside the building will begin in the fall of 2024 and end in the summer of 2025.

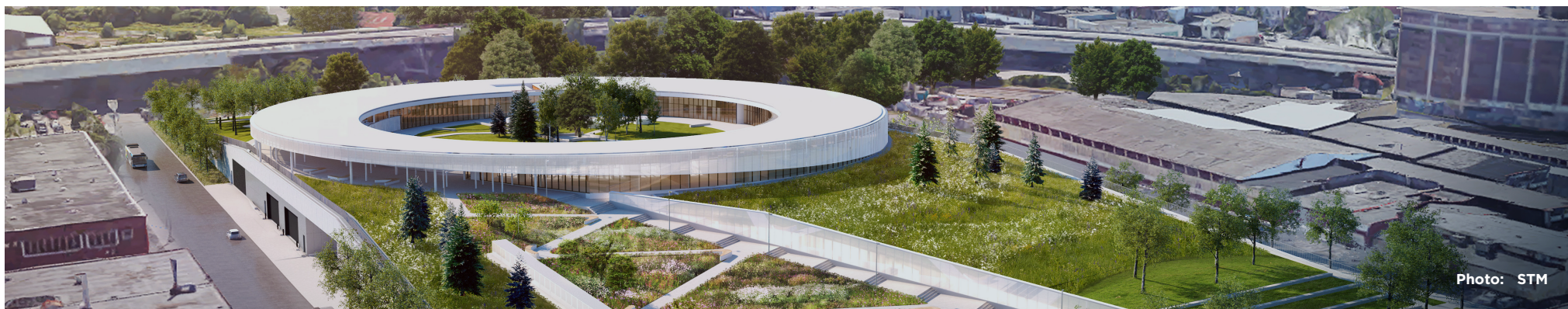


Photo: STM

The background of the slide is a solid dark blue. On the left side, there are two stylized trees. The tree in the foreground is a teal circle with black outlines for its trunk and branches, and it is filled with small white dots. Behind it is a taller, light green rounded rectangle with black outlines for its trunk and branches, filled with small dark green dots.

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# Estimated benefits for the environment

- Electric or hybrid buses
- Métro AZUR and electric or hybrid buses
- Société de transport de Montréal
- Ville de Québec's structuring public transit network

# Electric or hybrid\* buses

## Estimated benefits for the environment

- Thanks to electric or hybrid buses, the STM aims to reduce GHG emissions per seat-kilometre from buses by 6.0% (from 33.0 g CO<sub>2</sub> eq. in 2015 to 31.1 g CO<sub>2</sub> eq. in 2025).
- GHG emissions from buses (fuel and refrigerant leak) per seat-kilometre decreased by 0.8% in 2023 due to a 1.8% decrease in GHG emissions from buses, which is greater than the 1.0% decrease in seat-kilometres. While modest, this reduction follows the trend of recent years. Since 2015, the reduction has been 15%.
- Electric or hybrid buses have the advantage of replacing diesel buses, which reduces fuel consumption and GHG emissions for every kilometre travelled.



The 2025 target has been exceeded since 2019.

**Bus GHG emissions per seat-km**  
(g CO<sub>2</sub> eq.)



\* Since June 2022, the Green Bond program no longer finances hybrid buses, only electric buses.

# Métro AZUR and electric or hybrid\* buses

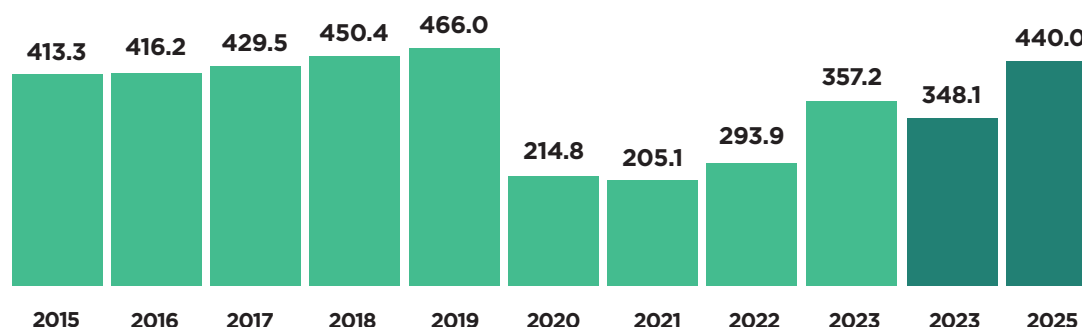
## Estimated benefits for the environment

Thanks to, among other things, AZUR cars and electric or hybrid buses, the STM aims to:

- Reach 440 million public transit trips on the STM network by 2025
- Increase electric-powered travel on its network from 69.5% to 88.6% between 2015 and 2025

### Ridership based on sales (millions of trips)

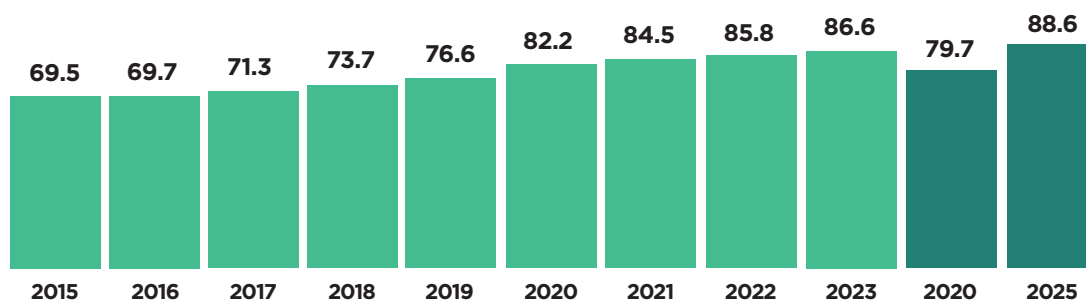
● Real ● Target 2023 of the TRP (priorities) and target 2025 of the OSP



Note : The acronym TRP stands for Transition and recovery plan of the STM and the acronym OSP stands for their Organizational Strategic Plan.

### Percentage of trips made using electricity (percentage)

● Real ● Target



\* Since June 2022, the Green Bond program no longer finances hybrid buses, only electric buses.



- Reduce GHG emissions per passenger-kilometre by 6% between 2015 and 2025



### Total GHG emissions per passenger-km (g CO<sub>2</sub> eq.)



Note: The emission factors used for the GHG emissions inventory were updated following the publication of the *National Inventory Report 1990-2022: greenhouse gas sources and sinks in Canada* and the document *CO<sub>2</sub> Emissions and Hydro-Québec Electricity, 1990-2022*. The emission factors used for fugitive emissions as well as all combustion emission factors (for all years) were updated using data from the *Fifth Assessment Report* of the Intergovernmental Panel on Climate Change (IPCC).

## GHG emissions per passenger-kilometre

GHG emissions per passenger-kilometre, that is, the ratio between the STM's total GHG emissions and the cumulative distances travelled by its customers on the network in a year, decreased from 56.7 g CO<sub>2</sub> eq. in 2022 to 45.4 g CO<sub>2</sub> eq. in 2023. This decrease is mainly due to a 21.6% increase in ridership compared to 2022 and, to a lesser extent, to the reduction in total GHG emissions of 2.5%.

# Société de transport de Montréal (STM)

## Estimated benefits for the environment

### Total GHG emissions

The STM is a major player in the fight against climate change. In the Montréal region, for every tonne of GHG emitted by the STM's operations, 20 are avoided thanks to them. In addition to this regional contribution, the STM aims to set an example by reducing its own emissions and by being a leader in the field of electromobility.

Total GHG emissions decreased by 2.5% compared to 2022, to 136 600 t CO<sub>2</sub> eq.

These results are mainly due to:

- the 9.5% decrease in gas consumption for heating surface buildings, mainly due to a milder winter and a reduction in rental space in 2023;
- the 1.9% decrease in GHG emissions from buses related to fuel consumption, which account for 75% of all bus emissions, particularly due to the fact that the total number of kilometres travelled by buses decreased by 1.1% and the proportion of services provided by electric or hybrid buses is increasing;
- the 24.5% increase in GHG emissions from paratransit cabs and the 6.9% increase in GHG emission from paratransit minibuses, all due to increased trips.

### Total GHG emissions by type of emissions (STM)

(tonnes CO<sub>2</sub> eq.)

	Reference year 2015	2020	2021	2022	2023	Difference 2022-2023
<b>Level 1 emissions</b>	160 156	142 682	140 282	136 622	132 314	-3.2%
<b>Level 2 emissions</b>	402	230	503	506	503	-0.6%
<b>Level 3 emissions</b>	3 804	2 110	2 442	3 037	3 783	24.5%
<b>Total emissions</b>	<b>164 362</b>	<b>145 022</b>	<b>143 228</b>	<b>140 166</b>	<b>136 600</b>	<b>-2.5%</b>

Notes: The emission factors used for the GHG emissions inventory were updated following the publication of the *National Inventory Report 1990-2022: greenhouse gas sources and sinks in Canada*.

In order to align the data with the *Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*, the global warming potential of all emission factors has been retroactively updated.

### Find out more:

- [More information on the STM's calculation methodology](#)
- [Sustainable Development Reports for 2023 \(French only\)](#)
- [Complete Table of Sustainable Development Indicators for 2015-2023 \(French only\)](#)
- [GRI Content Index 2023 \(French only\)](#)

# Ville de Québec's structuring public transit network

## Estimated benefits for the environment

On June 13, following an analysis conducted by the Caisse de dépôt et placement du Québec (CDPQ Infra), the government authorized the completion of the first phase of the new structuring public transit network project, namely a 19-km tramway line.

According to information received by the Ville de Québec, the amounts already paid through Green Bonds will be used for this new structuring project.



Photo:  
Québec city tramway  
Ville de Québec



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# Green Bond Newsletter

Province of Québec  
September 2024

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