Facts regarding Hydro-Québec's electricity

GHG Emission Rate Associated with Residual Electricity Supplies

1990
2025

Hydro-Québec meets the energy and capacity needs of its customers almost entirely with hydroelectricity. We also puchase electricity from independent producers in Québec, elsewhere in Canada and the United States. These purchases include energy from renewable sources (hydropower, biomass, biogas, solar and wind) as well as non-renewable sources (nuclear and fossil thermal energy).

To calculate the GHG emission rate (kg eq./MWh) of all the sources supplying its main distribution grid in Québec, Hydro-Québec uses the following emission factors:

- A zero emission factor for renewables and nuclear energy
- A specific factor for each thermal generating station and each supplier (from Québec and outside Québec)

In addition:

- Renewable energy certificates that have been sold or transferred to third parties are removed from the residual emission rate.
- The emission rates of off-grid systems are also excluded.
- Since 2022, the emission rate no longer takes electricity exports into account.

The yearly emission rate fluctuations are due to variations in our supplies from the different energy sources. The emission rate increases in years when our imports are higher and it decreased when our Tracy thermal generating station ceased its activities in 2011.

Year	CO_2 Emissions (kg eq./MWh)
1990	32.8
2014	1.6
2015	1.0
2016	0.4
2017	0.6
2018	0.5
2019	0.5
2020	0.5
2021	0.6
2022	1.3
2023	0.6
2024	2.48
2025	7.80

For more information, consult the fact sheet entitled *Label for electricity supplies feeding Hydro-Québec's main power grid – 2025*.

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Bureau de normalisation du Québec

BNQ is a member of the National Standards System (NSS).

VERIFICATION STATEMENT

GHG EMISSIONS AND HYDRO-QUÉBEC ELECTRICITY, 1990-2025

To Stakeholders and Hydro-Québec Management

Hydro-Québec retained the professional services of the Bureau de normalisation du Québec (BNQ) to undertake an audit of the *GHG Emission rates and Hydro-Québec Electricity 1990-2025* fact sheet. This fact sheet represents electricity generated and purchased by Hydro-Québec and injected into the provincial grid in 2025. It also accounts for the energy of Renewable Energy Certificates (RECs) sold or transferred to third parties. The purpose of the audit was to evaluate assertions concerning:

- Accuracy and reliability.
- Compliance with the principles of completeness, consistency, accuracy, transparency, and relevance in accordance with the ISO 14064-1:2018 - Part 1 standard (Specification with guidance at the organizational level for quantification and reporting of greenhouse gas).

The BNQ conducted the 2025 greenhouse gas (GHG) audit using a reasonable level of assurance as per general principles outlined in the ISO 14064-3:2019 - Part 3 standard (Specification with guidance for the verification of GHG assertions). This standard describes the verification principles required to ensure that GHG emissions reporting is complete, accurate, consistent, transparent, and without material discrepancy. These general principles were used to audit information presented in this fact sheet, without, however, adhering to the complete process of a regulatory audit. The BNQ is a GHG-accredited verification body under the terms of the ISO 14065:2020 standard (Requirements for GHG verification bodies for use in accreditation). This accreditation was granted on September 13, 2010, by the Standards Council of Canada (SCC), a recognized member of the International Accreditation Forum (IAF).

This fact sheet was prepared by Hydro-Québec. It is based on data collected from numerous internal sources, corroborated and reviewed, by Hydro-Québec's control methods and procedures. It excludes energy generated by off-grid power stations and out-of-province energy exports. Hydro-Québec is responsible for the preparation and contents of this fact sheet. All assertions presented come from measured data and information.

The BNQ's responsibility is to determine whether the reported emissions for 2025 are accurately represented and whether errors, omissions, and discrepancies, considered individually, or once aggregated with similar gaps, are below acceptable materiality thresholds. Audit methods used by the BNQ include, but are not limited to, comparing input values with raw data, recalculating and corroborating emissions and assessing data integrity and reliability.

Based on materiality thresholds established for the mandate, the audit conducted by the BNQ served to attest that the verified assertions are accurate, reliable, and consistent with principles of the ISO 14064-1:2018 standard. Supporting evidence is satisfactory and no material discrepancies were identified. The auditors can affirm that evidence obtained during the audit substantiate verified assertions, with no restrictions, qualifications, or limitations. Opinions expressed in this document are based on information provided by Hydro-Quebec and rely on data sampling methods aimed at identifying convincing evidence.

Québec City, May 12, 2025

Martin Labonté

Martin Labonté
Directeur des opérations
Bureau de normalisation du Québec