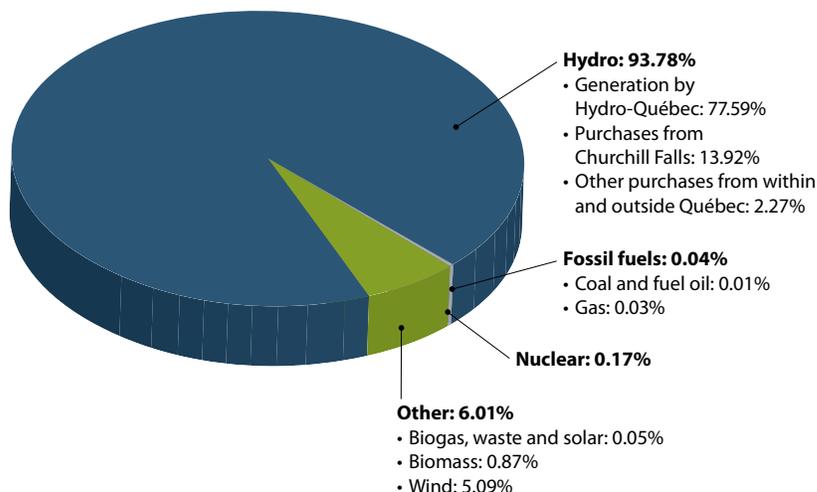


# HYDRO-QUÉBEC'S ELECTRICITY FACTS: Electricity Supply and Air Emissions

## HYDRO-QUÉBEC SOURCES OF ENERGY SUPPLY

Breakdown based on energy generated and purchased by Hydro-Québec (excluding off-grid generation as well as energy from Hydro-Québec Production and from independent producers for which renewable energy certificates have been sold or transferred to third parties): 12-month period ended December 31, 2018.

**RENEWABLE SOURCES: 99.79%**  
**NON-RENEWABLE SOURCES: 0.21%**



## AIR EMISSIONS

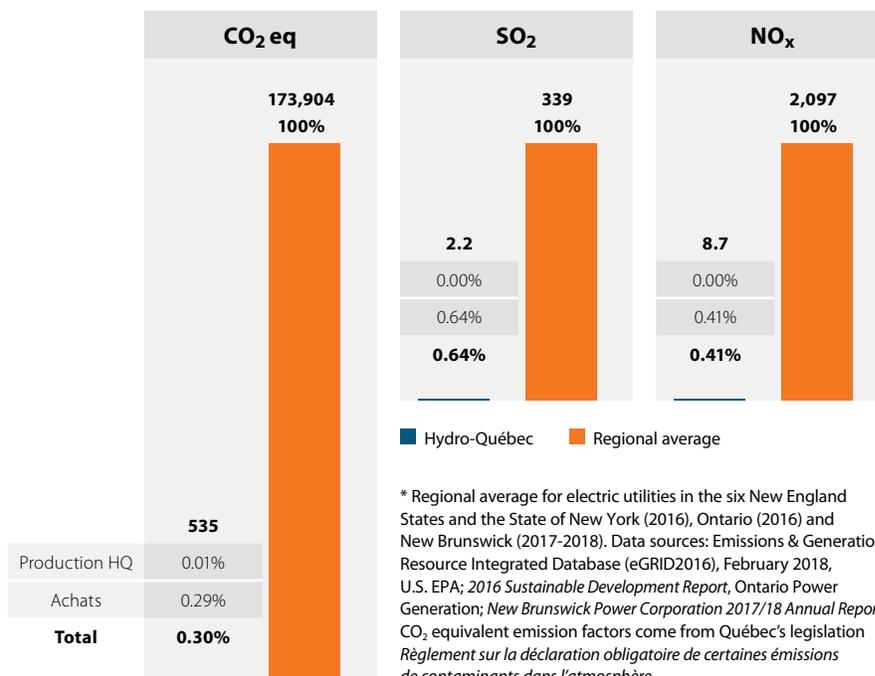
Corresponding to the generation and purchases described above.

- **CO<sub>2</sub>** (carbon dioxide): primary contributing gas to global warming. Atmospheric emissions of greenhouse gases are expressed in CO<sub>2</sub> equivalent.
- **SO<sub>2</sub>** (sulfur dioxide): major precursor of acid rain and fine particulate matter.
- **NO<sub>x</sub>** (nitrogen oxides): major precursors of ground-level ozone and acid rain.

For more detailed information on the environmental impact of electricity generation, refer to Hydro-Québec's *Sustainability Report – 2018*.

## COMPARISON OF HYDRO-QUÉBEC PRODUCTION'S AIR EMISSIONS WITH THE REGIONAL AVERAGE\*

Emission factors: metric tonnes/TWh





## **VERIFICATION STATEMENT**

### **ELECTRICITY SUPPLY AND AIR EMISSIONS – HYDRO-QUÉBEC**

Hydro-Québec retained GHD Consultants Limited (GHD) to undertake an audit of the Electricity Supply and Air Emissions fact sheet representing Hydro-Québec's electricity generation and purchases in 2018. This fact sheet targets and reports on the atmospheric emissions of oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>) and greenhouse gases (as equivalent metric tons of CO<sub>2</sub>), associated with the generation and purchase of electricity.

GHD has conducted the audit to a reasonable level of assurance, using the general principles outlined in ISO Standard 14064 Greenhouse Gases Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions (ISO 14064-3:2006). This standard outlines the verification principles to apply in order to ensure that greenhouse gas emissions reporting is complete, accurate, consistent, transparent and without material differences. Although the ISO standard only applies to greenhouse gas verification, these general principles were used for the verification of the NO<sub>x</sub> and SO<sub>2</sub> atmospheric emissions reported. GHD is an accredited verification body and is recognized as an organization accredited to the ISO Standard 14065:2013 by a member of the International Accreditation Forum (IAF).

This fact sheet has been prepared by Hydro-Québec, based on its own collection of data gathered from numerous internal sources of information that have been corroborated and reviewed by Hydro-Québec's control methods and procedures. The energy mix chart illustrating the composition by type and energy source is obtained from Hydro-Québec's electricity generation and purchase activities, on its distribution network. Energy generated by off-grid power stations and energy from Hydro-Québec Production and purchased from independent producers for which Renewable Energy Certificates (RECs) have been sold or transferred to third parties, are excluded. Hydro-Québec's air emissions associated with the generation and purchase of electricity is also compared with regional averages reported by its counterparts in other provinces and states, based on third-party information.

GHD's responsibility is to determine whether the reported emissions are accurately represented and whether errors, omissions or discrepancies, once aggregated, are below the materiality threshold. The audit methods used by GHD include, but are not limited to, comparing input values with raw data, recalculating emissions and where applicable, applying sensitivity analysis to assess data integrity and reliability.

The supporting evidence is satisfactory and there is no material discrepancy. GHD can affirm that the evidence obtained during the verification served to conduct the audit to a reasonable level of assurance. There is no restriction (qualification or limitation) applicable to GHD's opinion.

Montreal, June 14, 2019

Gordon Reusing, P. Eng.  
GHD Principal