

SUMMARY  
2013

SUSTAINABILITY

# OUR GROWTH MODEL



## OUR GROWTH MODEL

Supplying clean energy enhances quality of life. Meeting people's electricity needs in a sustainable way is very important. It is also crucial to use resources wisely and preserve the quality of the environment for future generations. Québec long ago opted for hydroelectricity, a clean, renewable energy source with known, well-controlled environmental impacts. Today, Québec is actively involved in the fight against climate change in North America.

Hydro-Québec has a sustainability vision—its growth model—that goes well beyond the environment. We endeavor to see that stakeholders participate in our decisions. We are also determined to contribute to the province's economic vitality.



At the Îles de Varennes, 315-kV and 735-kV transmission lines span the Saint-Laurent (St. Lawrence River).



# CLIMATE CHANGE

In large part due to its size, climate and resource-based economy, Canada is among the five major industrialized countries with the highest GHG emissions per capita. According to the most recent data, the electricity sector accounts for 13% of these emissions. In Québec, the electricity sector represents barely 0.7% of the province's emissions, thanks to the abundance of water. Over 99% of Hydro-Québec's output comes from hydropower.

## EMISSIONS AVOIDED

Using clean, renewable electricity such as ours means that buyers avoid using power generated by fossil fuels. The result in 2013: emissions of nearly 9 million tonnes of CO<sub>2</sub> were avoided thanks to Hydro-Québec's net exports.

# 0.7%

The La Grande-3 development, in the Baie-James region: The enlightened choice of clean, renewable energy is supported by vast hydropower resources.





# DEMAND-SIDE MANAGEMENT

Quebecers are the world's second-largest consumers of electricity, after Icelanders. This is mainly attributable to strong demand in the industrial (aluminum, pulp and paper, etc.) and residential (home heating) sectors.

Since 2003, the year the Energy Efficiency Plan (EEP) was introduced, we have invested close to \$1.8 billion to help our customers save energy. The 2013 budget totaled \$174 million, including contributions to Bureau de l'efficacité et de l'innovation énergétiques projects.

In addition, we have adopted new strategies to educate and support our customers. By seeking lasting behavioral changes, we hope to transform the market and achieve long-term energy savings.

## ENERGY SAVINGS

In 2013, the EEP generated energy savings of 619 GWh. Since 2003, combined savings have totaled 8.5 TWh—equivalent to the consumption of 485,000 Québec households.



# \$174 million

On January 22, 2014, electricity demand reached a historic peak of 39,240 MW.



# ENERGY PORTFOLIO

Hydro-Québec is one of North America's largest producers of electricity. To meet demand, we count on our own output and that of independent power producers (wind, biomass and small hydro). We operate 61 hydroelectric generating stations and 26 thermal power plants, with a total capacity of 36,068 MW. Most of our thermal facilities are not connected to the main grid; they account for less than 0.2% of our total electricity output.

## GREATER CAPACITY

When completed, the Romaine complex will comprise four generating stations with a total capacity of 1,550 MW. The first facility, Romaine-2, will soon go into operation, adding 640 MW to our energy portfolio.

0.2%

Romaine-1 jobsite. Concreting of the upstream portal for the temporary bypass has begun.



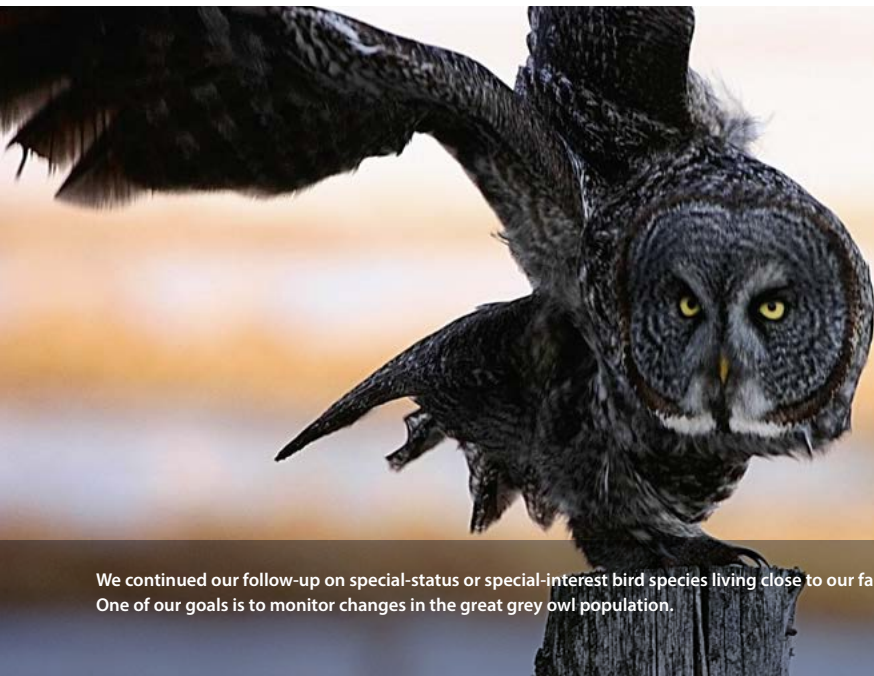
# ENVIRONMENTAL PROTECTION

## HIGHLIGHTS

We helped protect some 15 at-risk wildlife species in Québec.

Eight buildings earned BOMA BEST certification, which assesses the environmental performance and management of commercial buildings.

Conditions at the fish pass built at kilometre point 207 on the Eastmain support upstream migration of all species concerned (walleye, suckers, northern pike and lake sturgeon).



We continued our follow-up on special-status or special-interest bird species living close to our facilities. One of our goals is to monitor changes in the great grey owl population.





# ACCEPTABILITY AND SPINOFFS FROM PROJECTS AND OPERATIONS

## TOGETHER, WITH THE REGIONS

Economic spinoffs from the Eastmain-1-A/Sarcelle/Rupert project, which was completed this year, total \$2.9 billion for Québec as a whole, including \$640 million for the Nord-du-Québec region.

To get the green light, all Hydro-Québec projects must meet three conditions: they must be profitable, environmentally acceptable and favorably received by the host community. To achieve this, we work with communities affected by our construction projects and business activities. We also work with stakeholders to find the best project variants from social, environmental and economic standpoints.

## HYDRO-QUÉBEC'S CONTRIBUTION TO THE QUÉBEC ECONOMY IN 2013

# \$6.6 billion

Dividend  
**\$2,207 million**

Procurement from  
Québec-based companies  
**\$3,370 million**

Water-power  
royalties  
**\$669 million**

Public  
utilities tax  
**\$245 million**

Municipal  
and school taxes  
**\$36 million**

Community  
investments  
**\$31 million**



# RESPONSIBILITY FOR ELECTRICITY SERVICE

Hydro-Québec maintains high-quality service at affordable rates by putting substantial efforts into its power system. In 2013, we invested more than \$1.9 billion in the reliability and long-term operability of our facilities. With the rollout of next-generation meters, we have laid the groundwork for a smart grid with undeniable environmental, social and economic benefits.

We also continue to support low-income customers who have difficulty paying their electricity bills. Every year, thousands of customers benefit from special long-term payment arrangements.

## TOGETHER, WITH OUR CUSTOMERS

We reached 66,913 long-term arrangements (\$294 million) with low-income customers; 19,232 of these agreements (\$19 million) provided assistance with payment of arrears and, if necessary, for current electricity use.



# \$1.9 billion

Jean-Simon Désilets installs a next-generation meter. As at December 31, 1,136,000 of the new meters were in operation.





# TECHNOLOGICAL INNOVATION

Hydro-Québec's research institute, IREQ, has an annual budget of around \$100 million to conduct research and innovation projects for the company. Its work focuses on reliability and asset sustainment, energy efficiency, transportation electrification, environment and emerging renewable energies.

Among other projects, we are testing electricity demand management strategies. Our objective is to reduce winter peak demand with voluntary measures that do not affect customer comfort.

## OPEN INNOVATION

We signed a three-year scientific collaboration agreement in the geothermal energy field with Québec's INRS water, earth and environment research centre. The objective: continue research and validate the results of preliminary studies on the geothermal potential of four targeted regions.



# \$100 million

The Electric Circuit has expanded to 241 charging stations (240 V and 400 V) in 14 administrative regions, along with a 24/7 telephone help line and an interactive charging station locator service.



# HEALTH AND SAFETY



GETTING CLOSE TO POWER LINES  
MEANS PUTTING YOUR LIFE AT RISK.

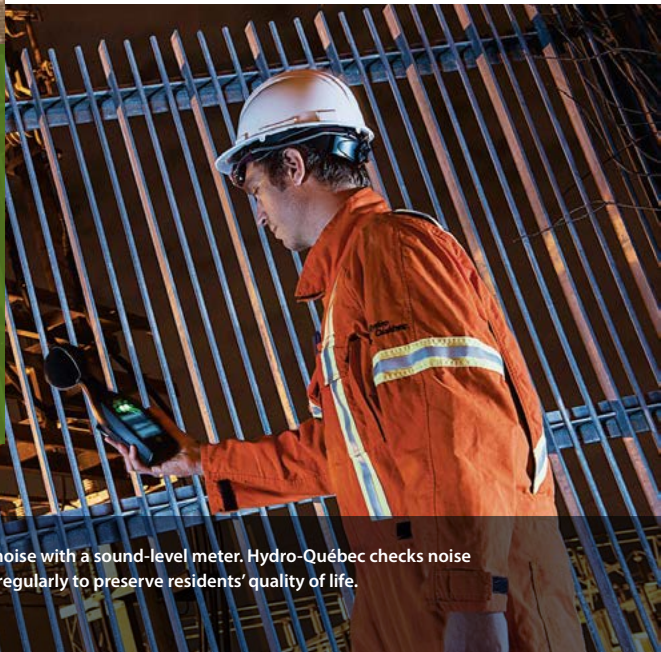
IF A TREE NEEDS TO BE PRUNED OR CUT DOWN,  
ASK A PROFESSIONAL TO DO IT.

[hydroquebec.com/trees](http://hydroquebec.com/trees)

## CARE AND CAUTION

With the arrival of spring,  
Hydro-Québec reminds the  
general public about the  
hazards of pruning trees  
near power lines, particularly  
through the print media.

Hydro-Québec studies its operations' potential effects on human health and endeavors to mitigate risks and inconveniences. These may involve the changes mercury undergoes in reservoirs, noise pollution caused by our equipment in residential neighborhoods, facility security and public safety, and employee health and safety.



Acoustical engineer Franck Duchassin measures noise with a sound-level meter. Hydro-Québec checks noise in facilities located in residential neighborhoods regularly to preserve residents' quality of life.





# HUMAN RESOURCES

Hydro-Québec employs more than 20,000 people in 150 work locations throughout the province. We foster a healthy, motivating workplace that encourages employees to give their best and contribute to the company's success.

In 2013, we hired 626 new employees, 76% of whom were under age 35, and earmarked 2.8% of the payroll for training programs.

Seven of the eight collective agreements governing working conditions for Hydro-Québec employees, 84.5% of whom are unionized, were renewed for a five-year period.



## HYDRO-QUÉBEC WORKFORCE

Permanent workforce

**17,861**

Temporary workforce

**2,382**

Average age

**45.6 years**

**2.8%**

Olivier Francoeur and Steven Landry, automation electronics technicians, at work in Chute-Allard generating station.





# INVESTING IN THE COMMUNITY

Hydro-Québec supports numerous initiatives that are in the public interest. Our community investments totaled \$31 million in 2013. They take various forms: donations and sponsorships, financial assistance under our Integrated Enhancement Program or through the Fondation Hydro-Québec pour l'environnement, and support for colleges and universities.

In terms of donations and sponsorships, Hydro-Québec encourages projects that support its role as a good corporate citizen, always keeping sustainability in mind.

## COMMUNITY INVESTMENTS IN 2013



Donations and sponsorships,  
including United Way/Centraide  
**\$18,640,000**

Fondation Hydro-Québec  
pour l'environnement  
**\$760,000**

Colleges  
and universities  
**\$7,824,000**

Integrated  
Enhancement Program  
**\$2,799,000**

Other  
**\$785,000**

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This is a translation of the original French text.

**On the cover** Lac Maurice, in the Minganie region. Over the summer, Arctic char caught in lakes affected by development of the Romaine complex were transferred here. Our goal is to preserve the biological diversity of the region's aquatic wildlife.