

SUSTAINABLE DEVELOPMENT

—
2010 HIGHLIGHTS



 **Hydro
Québec**

FIGHTING CLIMATE CHANGE



Eastmain 1 reservoir, where gross greenhouse gas emissions are comparable to those of natural lakes.

A REMARKABLE PERFORMANCE

Our net exports of hydropower helped avoid 16 times more greenhouse gas emissions than were generated by our core operations.

- > Direct and indirect emissions: 556,810 t CO₂ eq.
- > Emissions avoided by net exports of electricity: 9,050,255 t CO₂

RESPONSIBLE DEVELOPMENT OF RENEWABLES

- > Hydropower: Work continued at the Romaine complex and on the Eastmain-1-A/Sarcelle/Rupert jobsites, and 13 projects were selected under the power purchase program for 150 MW produced by facilities rated 50 MW or less.
- > Wind power: we accepted 12 bids totaling 291.4 MW under a call for power generated in Québec.
- > Biomass: six contracts were approved for the supply of 52.9 MW of electricity produced by biomass cogeneration facilities.
- > Hydrokinetic power: We contributed to the deploying of two prototypes in the Saint-Laurent near Montréal.

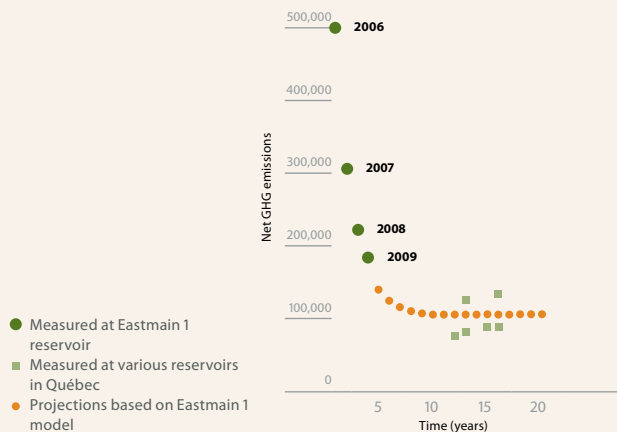
RESERVOIRS COMPARABLE TO NATURAL LAKES

- > A seven-year study, in which 100,000 measurements were recorded by over 80 specialists and researchers, compared GHG emissions from Eastmain 1 reservoir with those that would have been generated by natural lakes and rivers over a 100-year period. The conclusion: in Québec, average emissions from hydropower are comparable to those from wind power, and gross emissions from reservoirs are comparable to those from natural lakes.

BREAKTHROUGHS IN GROUND TRANSPORTATION ELECTRIFICATION

- > Agreements were reached and test programs were carried out with automakers and other partners.
- > Battery development saw spectacular progress: enhanced energy and power performance, reduced recharging time and increased battery life.
- > Hydro-Québec subsidiary TM4 delivered nearly a hundred electric powertrains to Indian automaker Tata Motors for demonstration projects in the United Kingdom and Norway.
- > A feasibility study was conducted for a proposed electric rail shuttle between Montréal-Trudeau Airport and downtown Montréal, as well as electric bus demonstration projects.

NET EMISSIONS FROM RESERVOIRS (T CO₂ EQ.)



Prototype of a hydrokinetic turbine being installed in the Saint-Laurent, close to Montréal. Hydro-Québec, in conjunction with Groupe RSW, will assess the turbine's efficiency and performance.

LIMITING OUR ENVIRONMENTAL FOOTPRINT



Gaspésie/Bas-Saint-Laurent region. View of Goémon–Gros-Morne line before the installation of conductors.

MAKING OUR PROJECTS ACCEPTABLE TO HOST COMMUNITIES



Monitoring of lake sturgeon larvae drift in the Rupert, as part of the Eastmain-1-A/Sarcelle/Rupert project.

BIODIVERSITY PRESERVATION

- › We determined baseline salmon populations in the Romaine and its main tributaries.
- › In connection with the Romaine complex, lakes close to the workcamp were stocked with 7,580 adult brook trout from a local genetic population to prevent overharvesting of resources by the workers' leisure activities.
- › Biodiversity protection measures were developed for land clearing on the distribution system: selective clearing, snag preservation, management of merchantable timber, debris windrowing, debris scattering, debris mixing and debris chipping.

SUSTAINABILITY

- › Hydro-Québec earned BOMA BESt certification for 15 administrative buildings. BOMA assesses the environmental and energy performance of commercial buildings.
- › One of our vehicle repair shops received the CLÉ VERTE environmental certification—a first for Hydro-Québec.
- › 1,548 measures were taken (donations of surplus food to charitable organizations, promotion of mass transit, etc.) during 120 sustainability events.

LAND USE

- › The Grande-Vallée–Montagne-Sèche–L'Anse-à-Valleau line was built inland to preserve the scenic corridor along Highway 132 and protect private properties along the Golfe du Saint-Laurent (Gulf of St. Lawrence).

ROMAINE COMPLEX (CÔTE-NORD)

- › The three agreements signed with the communities of Ekuanitshit, Nutashkuan, and Unamen Shipu and Pakua Shipi were monitored by Innu–Hydro-Québec joint ventures. These agreements provide funding to be used by the Innu communities for economic, environmental, social and cultural initiatives.

EASTMAIN-1-A/SARCELLE/RUPERT PROJECT (NORD-DU-QUÉBEC)

- › Six Cree communities were visited for meetings with the tallymen and land users directly affected by the project to inform them about the follow-up on commitments and the work carried out in their area.

ONTARIO INTERCONNECTION (OUTAOUAIS)

- › A Project Summary bulletin was circulated to wind up the project; it describes public participation highlights and technical, economic and environmental factors.



Romaine-2 generating station, currently under construction, will be the largest in the Romaine complex in terms of capacity (640 MW), and the first to come on stream, in 2014.

MEETING THE SPECIFIC NEEDS OF OUR DIFFERENT CUSTOMERS



Hydro-Québec participates in various events to inform people about its services, such as those related to energy efficiency.

AN ONGOING ENERGY EFFICIENCY EFFORT

- > ENERGY WISE Home Diagnostic: Approximately 1.2 million personalized recommendation reports have been produced since the program was introduced, for potential savings of 368 GWh per year.
- > Savings of 13.2 GWh were achieved under our Energy Efficiency Retrofit Program for Low-Income Households, exceeding our objective of 9.8 GWh.
- > The Solar Pool Cover program was launched after studies demonstrated that solar covers reduce water heating needs, use of water maintenance products and water losses through evaporation.
- > The newly launched Electronic Thermostats for Rental Properties program allows owners to replace conventional thermostats with electronic ones for \$10 per unit.
- > Savings of 11 GWh were achieved as a result of rebates offered to farmers when they bought specific heat pads, plate heat exchangers, fans, lighting products, motors and refrigeration systems.
- > Under our program of support for small and medium-sized industrial customers, we performed 300 visits, identified 65 GWh of energy savings potential and completed 45 projects, mostly related to lighting.

- > RECYC-FRIGO Environnement™ program: Over 104,500 energy-guzzling refrigerators and freezers were collected and recycled, for a total of more than 290,600 appliances since the launch of the program in 2008. In addition to contributing to preserving the ozone layer, the program generated 207 GWh in energy savings by the end of 2010, enough to power approximately 11,700 households for a year.
- > ENERGY WISE Competition of Excellence: The awards honored 56 business customers and partners who distinguished themselves through their exceptional initiatives in energy efficiency.

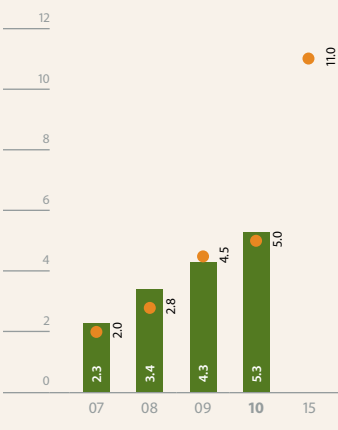
SUPPORT FOR CUSTOMERS WITH PAYMENT DIFFICULTIES

- > 41,161 payment arrangements were reached with low-income customers for a total of \$213.6 million, including 4,420 long-term arrangements amounting to \$5.4 million that offer debt reduction and, if necessary, a reduction in the current energy cost.
- > Over a hundred employees participated in a day-long workshop on poverty and the prejudices it engenders to help them understand payment collection in a context of poverty.



Through the RECYC-FRIGO program, 95% of the components in recovered refrigerators and freezers are recycled.

RECURRING ENERGY SAVINGS (TWH)



By the end of 2010, the Energy Efficiency Plan, CATVAR project and programs of the Agence de l'efficacité énergétique had yielded 5.3 TWh in electricity savings—48% of the 11 TWh target set for 2015.

■ Recurring energy savings
● Target

INVESTING IN THE COMMUNITY



Biodiversity protection and enhancement of coastal habitats in the Baie de Rimouski, one of the projects supported by the Fondation Hydro-Québec pour l'environnement.

Coastal path, Baie de Rimouski © Marylin Labrecque

INTEGRATED ENHANCEMENT PROGRAM (IEP)

› Hydro-Québec pays communities affected by its new transmission projects 1% of the initial authorized value of facilities covered by the IEP. In 2010, the company contributed \$5.9 million, for 32 local initiatives.

FONDATION HYDRO-QUÉBEC POUR L'ENVIRONNEMENT

› User awareness project regarding the Important Bird Area (IBA) along the Baie des Sept Îles: the project, carried out in conjunction with the community, included the development of a sound-practices guide to preserve the birds' tranquility, which is threatened by passing pleasure boats and tourism operations.

MULTIPURPOSE USE OF FACILITIES

› We signed 200 contracts for public or private use of Hydro-Québec property. In addition to construction of roads, water mains and sewers, and development of public parks and park-and-ride lots for public transit, the company allows the use of its rights-of-way for certain residential and business purposes.



Hydro-Québec helps educate young people. The initiative "Les filles et les sciences: un duo électrisant!" helps teenage girls discover the world of science and technology.

GO WITH THE FLOW

› By participating in the ENERGY WISE Home Diagnostic program, nearly 1,000 communities received \$10.4 million from Hydro-Québec to carry out local and regional projects related to the environment, culture, sports, recreation, etc.

DONATIONS AND SPONSORSHIPS

› Donations and sponsorships totaled \$18.3 million, including \$2.9 million for United Way/Centraide which was added to the \$2.9 million contributed by company employees and pensioners.

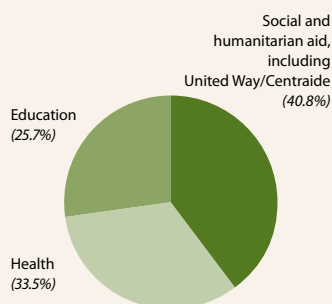
SUPPORT FOR UNIVERSITIES

› Contributions, commitments, chair endowments and research contracts amounted to over \$9 million.

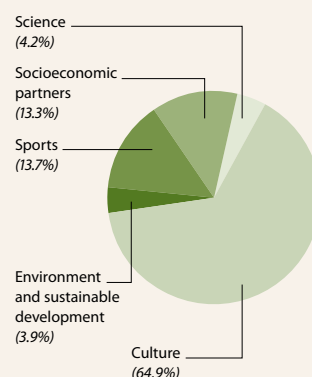
INDUSTRIAL TOURISM

› We welcomed 139,962 visitors to company facilities that are open to the public.

BREAKDOWN OF DONATIONS



BREAKDOWN OF SPONSORSHIPS^{a)}



^{a)} Excludes funding by the Fondation Hydro-Québec pour l'environnement.

CONTRIBUTING TO HUMAN RESOURCE DEVELOPMENT AND TO INCREASING COLLECTIVE WEALTH



New managers and new permanent employees are offered training that provides them with an overview of the company.

A SAFE, HEALTHY WORK ENVIRONMENT WITH A FOCUS ON SUCCESSION PLANNING

- › New hires rated their satisfaction at 8.4 out of 10, which is comparable to the ratings for the past two years.
- › The sixth Action Plan for People with Disabilities was filed; it provides measures to reduce barriers to workplace integration.
- › The company began introduction of a company-wide system of occupational health and safety management standards.
- › The work-related accident frequency rate was 2.40 per 200,000 hours worked.
- › Employee training program funding was 3.5% of the payroll.
- › Internships were offered to 403 university undergraduate and graduate students, and 54 internships were awarded to college-level students, most of whom are enrolled in industrial electronics.

AN ECONOMIC PERFORMANCE BEYOND EXPECTATIONS

- › Hydro-Québec recorded net income of \$2,515 million in 2010—exceeding the \$2,400 million targeted in the *Strategic Plan 2009–2013*. The dividend paid to the Québec government for 2010 totals \$1,886 million.
- › Net exports accounted for 7% of net sales volume and 17% of net income.
- › Procurement of goods and services inside and outside Québec totaled \$2,998 million (\$2,925 million in 2009):
 - purchase of goods: \$1,321 million
 - rental and leasing: \$25 million
 - specialized services and other work: \$1,174 million
 - professional services: \$478 million



To find out more about sustainable development at Hydro-Québec,

consult our Web site and the electronic version of the *Sustainability Report 2010*.

www.hydroquebec.com/sustainable-development



On the cover: In the Baie-James region, the weir at kilometre point 170 on the Rupert serves to maintain the water level in Lac Nemiscau—a key benefit for the lakeshore village of Vieux-Nemaska.