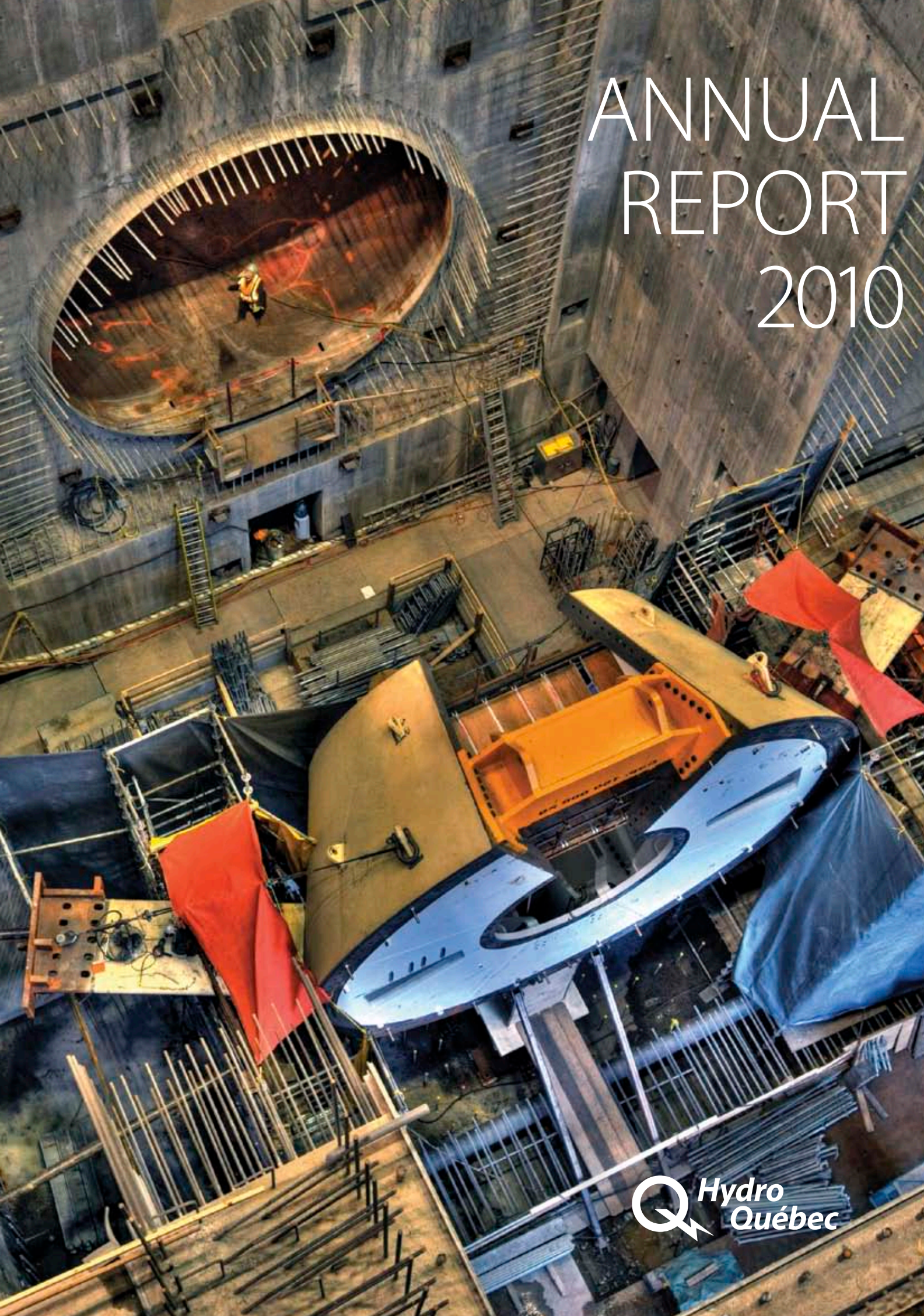


# ANNUAL REPORT 2010



# HYDRO-QUÉBEC

Hydro-Québec generates, transmits and distributes electricity. Its sole shareholder is the Québec government. It uses mainly renewable generating options, in particular hydropower, and supports the development of wind energy through purchases from independent power producers. It also conducts R&D in energy-related fields such as energy efficiency. The company has four divisions:

## **HYDRO-QUÉBEC PRODUCTION**

generates power for the Québec market and sells its surpluses on wholesale markets. It is also active in arbitraging and purchase/resale transactions.

## **HYDRO-QUÉBEC TRANSÉNERGIE**

operates the most extensive transmission system in North America for the benefit of customers inside and outside Québec.

## **HYDRO-QUÉBEC DISTRIBUTION**

provides Quebecers with a reliable supply of electricity. To meet needs beyond the annual heritage pool, which Hydro-Québec Production is obligated to supply at a fixed price, it mainly uses a tendering process. It also encourages its customers to make efficient use of electricity.

## **HYDRO-QUÉBEC ÉQUIPEMENT ET SERVICES PARTAGÉS**

and Société d'énergie de la Baie James (SEBJ), a subsidiary of Hydro-Québec, design, build and refurbish generating and transmission facilities, mainly for Hydro-Québec Production and Hydro-Québec TransÉnergie.

- 2 Hydro-Québec at a Glance
- 5 Message from the Chairman of the Board
- 6 Message from the President and Chief Executive Officer

### **Review of Operations**

- 8 Hydro-Québec Production – Québec Hydropower: Energy for the Future
- 14 Hydro-Québec TransÉnergie – An Ambitious Capital Program
- 20 Hydro-Québec Distribution – Customer Satisfaction: Our Constant Concern
- 26 Hydro-Québec Équipement et services partagés and SEBJ – Commendable Performance
- 32 Innovation: An Ongoing Challenge
- 38 A Longstanding Commitment to Sustainability
- 42 A Major Player in the Québec Economy

### **Financial Review**

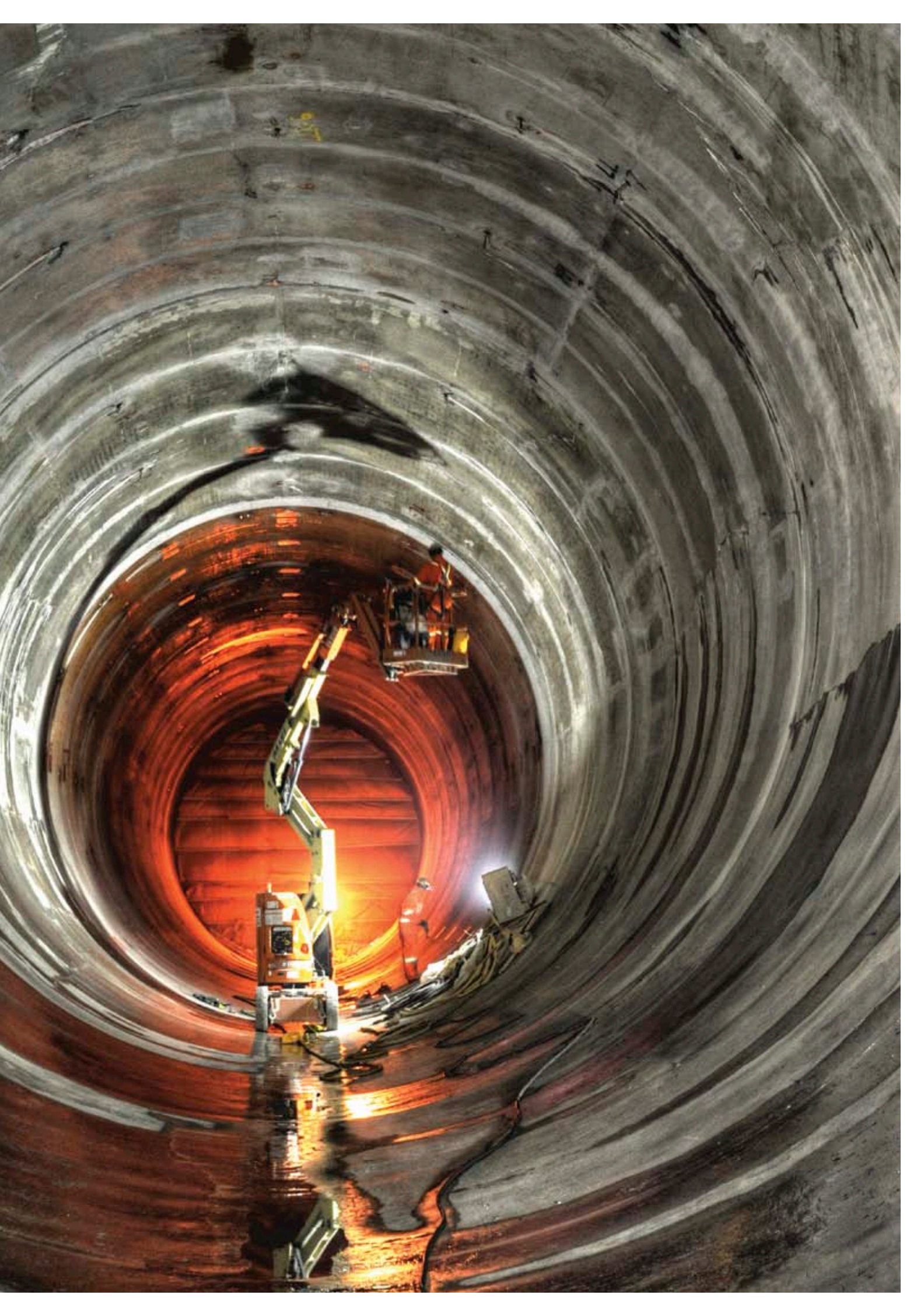
- 47 Management's Discussion and Analysis
- 70 Consolidated Financial Statements
- 96 Five-Year Review
- 99 Consolidated Results by Quarter

### **Corporate Administration**

- 101 Corporate Management
- 102 Board of Directors
- 104 Activity Report of the Board of Directors and Board Committees
- 108 Corporate Governance
- 112 Code of Ethics and Rules of Professional Conduct for Directors, Executives and Controllers of Hydro-Québec
- 116 Generating, Transmission and Distribution Facilities
- 117 Major Facilities
- 118 Other Information

**On the cover** *Sarcelle jobsite – Stay ring and lower part of the sealing ring of one the powerhouse's bulb-type units. Such units are ideal for very low heads. This is the first time they are being used at Hydro-Québec. See diagram on page 118.*

*Inspection of a penstock at Eastmain-1-A powerhouse.*

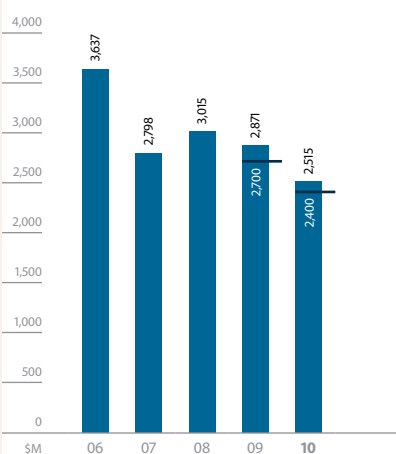


# HYDRO-QUÉBEC AT A GLANCE

Note: The comparative data include adjustments mainly associated with the change in the accounting policy regarding the depreciation method for property, plant and equipment. In addition, certain figures have been reclassified to reflect the presentation adopted for 2010.

	2010	2009
<b>Operations and Dividend (\$M)</b>		
Revenue	12,338	12,333
Operating income	5,041	5,269
Net income	2,515	2,871
Dividend	1,886	2,168
<b>Balance Sheets (\$M)</b>		
Total assets	65,898	64,992
Property, plant and equipment	55,512	53,824
Long-term debt, including current portion and perpetual debt	38,660	37,943
Equity	18,566	18,419
<b>Cash Flows (\$M)</b>		
Operating activities	4,639	4,787
Investing activities	(3,302)	(3,475)
Financing activities	(1,725)	(1,209)
Cash and cash equivalents	80	472
<b>Ratios</b>		
Interest coverage	1.92	2.11
Return on equity (%)	14.0	16.5
Profit margin (%)	20.4	23.3
Capitalization (%)	32.1	32.6
Self-financing (%)	46.8	41.3

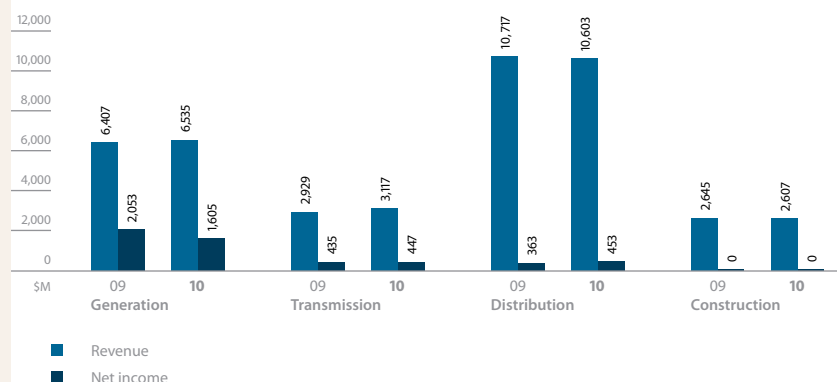
## NET INCOME



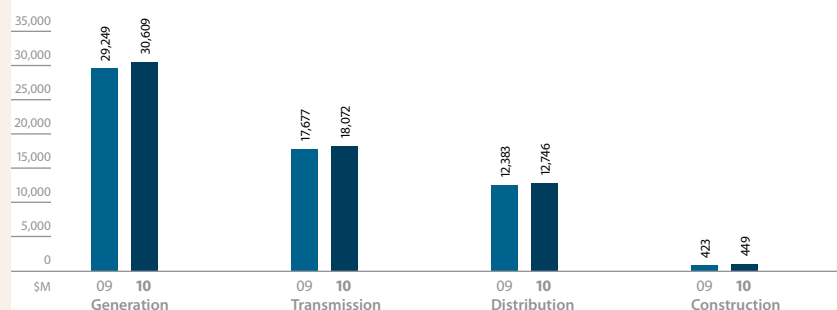
— Target in Strategic Plan 2009–2013

Hydro-Québec earned net income of \$2,515 million in 2010, exceeding the \$2,400-million target in the *Strategic Plan 2009–2013*, in spite of difficult conditions as a result of precipitation levels considerably lower than the historic mean across the entire generating fleet. This positive result reflects strict control over operating expenses and higher-than-expected demand for electricity from industrial customers in Québec.

## REVENUE AND NET INCOME BY SEGMENT



## TOTAL ASSETS BY SEGMENT



	2010	2009	2008	2007	2006
<b>Customers and sales</b>					
Total customer accounts in Québec	<b>4,011,789</b>	3,960,332	3,913,444	3,868,972	3,815,126
Electricity sales in Québec (TWh)	<b>169.5</b>	165.3	170.4	173.2	167.3
Electricity sales outside Québec (TWh)	<b>23.3</b>	23.4	21.3	19.6	14.5
<b>Number of Employees<sup>a</sup></b>					
Permanent as at December 31	<b>19,521</b>	19,536	19,297	19,459	19,116
Temporary (year's average)	<b>4,138</b>	4,080	4,048	3,910	3,799
<b>Facilities</b>					
Number of hydroelectric generating stations	<b>60</b>	60	59	57	55
Total installed capacity (MW) <sup>b</sup>	<b>36,671</b>	36,813	36,432	35,654	35,322
Peak power demand in Québec (MW) <sup>c</sup>	<b>37,717</b>	34,659	37,230	35,352	36,251
Lines (overhead and underground)					
Transmission (km)	<b>33,453</b>	33,244	33,058	33,008	32,826
Distribution (km) <sup>d</sup>	<b>112,089</b>	111,205	110,127	109,618	108,883
Number of substations	<b>514</b>	515	510	509	508
<b>Power Generation and Purchases</b>					
Renewables (GWh) <sup>e</sup>	<b>192,321</b>	196,633	200,109	194,154	184,379
All generating sources (GWh)	<b>203,842</b>	203,181	206,603	208,156	196,236
Proportion of renewables (%)	<b>94</b>	97	97	93	94

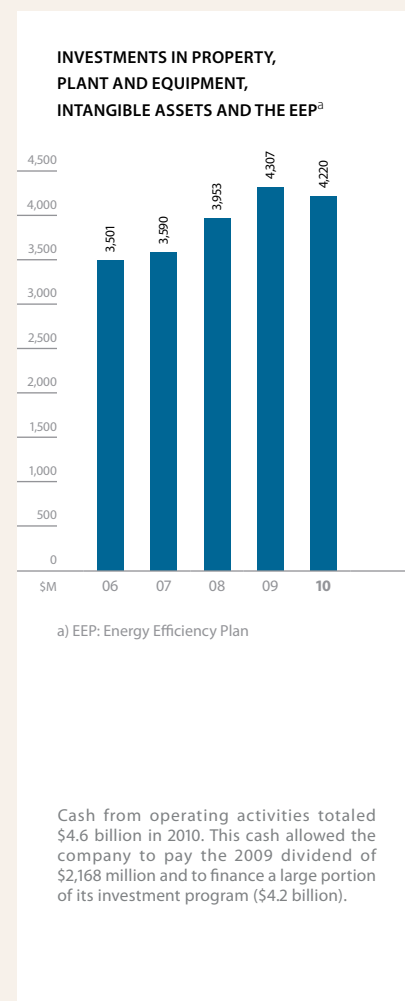
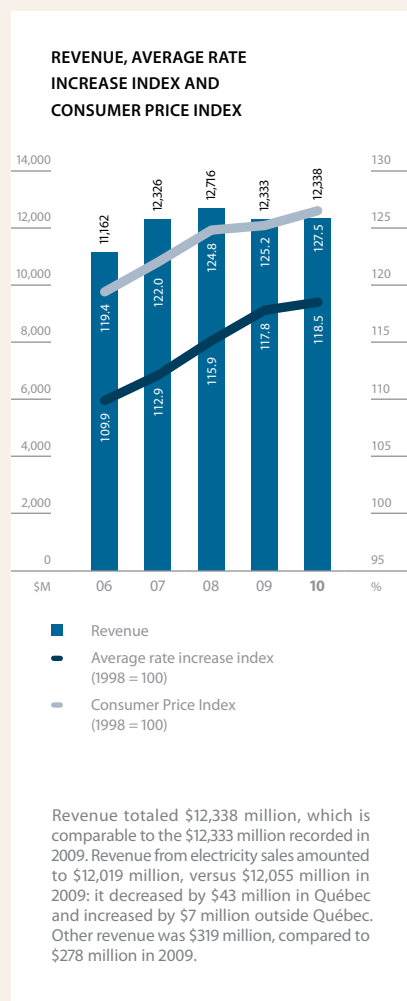
a) Excludes employees of subsidiaries and joint ventures.

b) In 2010, Hydro-Québec decommissioned a unit at Tracy generating station. In addition to the generating capacity of its own facilities, the company has access to almost all the output from Churchill Falls generating station (5,428 MW) under a contract with Churchill Falls (Labrador) Corporation Limited that will remain in effect until 2041. It also purchases all the output from nine privately owned wind farms with a total installed capacity of 659 MW. Moreover, 1,277 MW are available under agreements with other independent suppliers.

c) Total power demand at the annual domestic peak for the winter beginning in December, including interruptible power. The peak for a given period is based on measurements at fixed intervals. The 2010–2011 winter peak was 37,717 MW and occurred on January 24, 2011, at 8:00 a.m., after the system load momentarily reached 38,286 MW at 7:38 a.m.

d) These figures include off-grid systems but exclude private systems, lines under construction and 44-kV lines (transmission).

e) Does not include wind energy purchases for which renewable energy certificates were sold to third parties.





# MESSAGE FROM THE CHAIRMAN OF THE BOARD

Hydro-Québec can boast a number of remarkable achievements in 2010, in particular in its work to create value from Québec's energy resources. Through rigorous management, the company was able to exceed its ambitious financial objectives. It also continued to play a role as an economic engine, as evidenced by the many projects currently under way across the province.

---

In September, Hydro-Québec hosted the 21st World Energy Congress. This prestigious event, co-organized with the World Energy Council, broke attendance records with more than 7,000 participants from some 130 countries. They included numerous specialists who were able to fully appreciate the wealth of clean, renewable energy that Quebecers enjoy thanks to Hydro-Québec, the world's leading producer of hydropower.

In 2010, the Board of Directors concentrated on such issues as the development of hydroelectric resources, long-term operability of generating, transmission and distribution facilities, retention of the company's skills and know-how, and continuous improvement of customer services.

In addition to its Chairman and the President and Chief Executive Officer, the Board currently comprises 14 members with diverse backgrounds, who are active on seven committees. The directors exercise a wide range of responsibilities, which include advising Management as it decides on and works to achieve Hydro-Québec's strategic objectives, ensuring the sound management and profitability of the company, approving major

## A Consistent Record of Success



infrastructure projects and seeing that they are completed on budget and in compliance with the company's sustainable development objectives.

I would like to express my gratitude to all the directors for their cooperation and diligent participation in the various meetings we held in 2010. I must also congratulate Management for their careful running of the company. Finally, my thanks go to all employees for their vital contribution to Hydro-Québec's success.

A handwritten signature in black ink, appearing to read 'M. Turcotte', written over a horizontal line.

**Michael L. Turcotte**

Chairman of the Board

# MESSAGE FROM THE PRESIDENT AND CHIEF EXECUTIVE OFFICER

## A Solid Performance



Hydro-Québec was able to maintain a high level of profitability in 2010, despite difficult business conditions marked by well-below-average precipitation that affected our entire hydroelectric generating fleet. Net income totaled \$2,515 million, exceeding the projections in the *Strategic Plan 2009–2013*. The dividend paid to our shareholder, the Québec government, will reach nearly \$1.9 billion.

Low natural inflows into our reservoirs prompted us to cut back our net electricity exports considerably, especially in the latter half of the year, as part of our ongoing careful management of reservoir

storage. Three factors helped compensate for the decline in the volume of net exports. First of all, tight control over our energy market transactions and risks meant that every kilowatthour exported was highly profitable. As well, revenue from domestic sales rose more than anticipated as a result of increased industrial consumption. Finally, we achieved sizable efficiency gains in the area of overall operating expenses, fully offsetting the 2010 increase in costs related to indexation, inflation and natural growth in operations. I must stress that this strong performance would not have been possible without the contribution and commitment of all our employees.

### HYDROPOWER DEVELOPMENT

Hydro-Québec is actively pursuing the development of Québec's hydroelectric potential, as the Romaine and Eastmain-1-A/Sarcelle/Rupert jobsites demonstrate. These two construction projects—the largest in Canada—have a twofold objective: to secure the province's energy future and to meet the growing demand for clean, renewable energy as part of the effort to stem global warming. Capital investment in generation projects totaled \$1.9 billion in 2010. Work at Eastmain-1-A/Sarcelle/Rupert made steady progress and should be completed, as scheduled, by the end of 2012, while construction got under way on the permanent structures for the Romaine-2 development.

### MAJOR INVESTMENTS IN TRANSMISSION

In 2010, we also invested \$1.2 billion in the expansion, reliability and long-term operability of our transmission system, which is the most extensive in North America. Our projects include integrating new hydropower and wind farm output, upgrading the main transmission grid and refurbishing lines and substations. In addition, we kept up our innovation efforts with a view to optimizing transmission system operation. For example, Hydro-Québec devised a technology—the LineScout robot—for inspecting live transmission lines. This innovation, which we fine-tuned in collaboration with the British Columbia Transmission Corporation, garnered the 2010 Edison Award, the highest honor bestowed by the power industry.



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## **CONTINUING OUR ENERGY EFFICIENCY INITIATIVES**

In line with Hydro-Québec's major strategic objectives, energy efficiency remains a central focus. Our \$216-million investment in energy efficiency programs in 2010 yielded new savings of 989 GWh. We have achieved recurring annual savings of 5.3 billion kilowatthours since the Energy Efficiency Plan was launched in 2003, and are targeting 11 billion kilowatthours by 2015.

---

## **PURCHASES OF COMPLEMENTARY RENEWABLE ENERGIES**

We selected 13 projects in 2010 under a program for the purchase of 150 MW reserved for small hydro. Ten of these projects will be carried out entirely by Aboriginal or other local communities, and three will be built in partnership with the private sector. As well, the Régie de l'énergie approved six contracts (52.9 MW) signed subsequent to tendering in 2009 for the supply of Québec-generated electricity produced by new biomass cogeneration facilities. Lastly, Hydro-Québec announced that it had accepted 12 bids for the purchase of two 250-MW blocks of wind power generated in Québec: one earmarked for Aboriginal projects and the other for community projects. These purchases are part of a complementary renewables purchasing policy that we developed at the Québec government's request.

---

## **INNOVATION AND GROUND TRANSPORTATION ELECTRIFICATION**

Innovation plays an extremely important role in all aspects of our business, from optimizing system performance, operation and maintenance to extending the service life of our facilities.

In 2010, Hydro-Québec stepped up its activities in the electrification of ground transportation. Among other initiatives, our research institute set up an energy storage laboratory where researchers are working on battery materials and assembly for electric vehicles. The company is also involved in several electric-car pilot projects (road tests, rollout of charging infrastructure) in collaboration with major automakers and various Québec partners.

---

*"Our careful management and the commitment of our employees were crucial to our success in 2010."*

---

## **AN ENERGY INDUSTRY BENCHMARK**

In September, Hydro-Québec hosted the 21st World Energy Congress. Held every three years by the World Energy Council, this leading event in the energy industry brought together a record number of participants and laid the groundwork for action aimed at sustainable growth.

It should also be noted that Hydro-Québec was named Utility of the Year by the prestigious magazine *Electric Light & Power*. According to editor-in-chief Teresa Hansen, "Hydro-Québec topped [all North American electric utilities] when we factored in environmental responsibility, happy customers, transmission technology, low rates and profits."

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## **EXCEPTIONAL COMMITMENT**

I must once again emphasize that our solid performance in 2010 is attributable to the commitment of our employees. I therefore salute these energetic women and men who work, throughout the province, to provide Quebecers with reliable, high-quality electricity. We owe our success to them.

In closing, I would also like to thank the members of the Board of Directors for their invaluable contribution to Hydro-Québec's performance.



**Thierry Vandal**

President and Chief Executive Officer

# HYDRO-QUÉBEC PRODUCTION



*Manic-5 generating facility – Daniel-Johnson dam. The spherical valves in the powerhouse are undergoing a major overhaul to ensure long-term reliability.*



**Richard Cacchione**  
President, Hydro-Québec Production

**OUR MISSION** Hydro-Québec Production generates electricity to supply the domestic market and sells its excess output on wholesale markets. We also offer balancing and firming capacity services to Hydro-Québec Distribution to offset variations in wind farm output and thereby facilitate the integration of this energy source.

**OUR FACILITIES** Our generating fleet comprises 59 hydroelectric generating stations, 1 nuclear generating station and 4 thermal generating stations, representing assets worth \$25.3 billion and installed capacity of 36.5 GW. We also have 26 large reservoirs with a storage capacity of 175 TWh, and 571 dams and control structures.

**OUR ACTIVITIES** We supply Hydro-Québec Distribution with a heritage pool of 165 TWh of electricity per year. Above this volume, we sell our output in Québec, in response to tender calls by Hydro-Québec Distribution, and outside Québec, on wholesale markets in northeastern North America.

## 2010 IN FIGURES

Revenue	<b>\$6.5 billion</b>
Net income	<b>\$1.6 billion</b>
Customers (% of revenue from electricity sales)	
<i>Hydro-Québec Distribution</i>	<b>75%</b>
<i>Other</i>	<b>25%</b>
Sales volume	
<i>Hydro-Québec Distribution</i>	<b>167.6 TWh</b>
<i>Other</i>	<b>25.3 TWh</b>
Property, plant and equipment as at December 31 (including work in progress)	<b>\$29.1 billion</b>
Investments in property, plant and equipment and intangible assets	<b>\$1.9 billion</b>

## Québec Hydropower: Energy for the Future

Hydro-Québec Production posted a remarkable performance once again this year, thanks to its flexible business model and the unfailing commitment

of its employees. Although precipitation levels were particularly low with respect to the historic mean, with prudent management of our hydraulic reserves, we were able to record net exports of \$1,034 million for 12.6 TWh while maintaining reservoir storage of 99.4 TWh as at December 31, 2010—a level that still meets the criteria for managing the risks associated with security of the energy supply. As a result, we recorded net income of \$1,605 million and paid \$561 million in water-power royalties.

Construction at the Eastmain-1-A/Sarcelle/Rupert and Romaine jobsites proceeded at a steady pace, allowing us to get ahead of deadline for certain structures. At the same time, we continued to optimize the management of our generating fleet. We also signed a long-term contract with two major Vermont power distributors and a transmission service agreement with a view to increasing our exports to New England.

To achieve long-term success in a context marked by massive retirement, Hydro-Québec Production must recruit and develop a new generation of employees to take over from our highly specialized outgoing personnel. In 2010, we implemented several strategic workforce plans and pursued various initiatives aimed at conserving the knowledge and expertise required for our continued success.

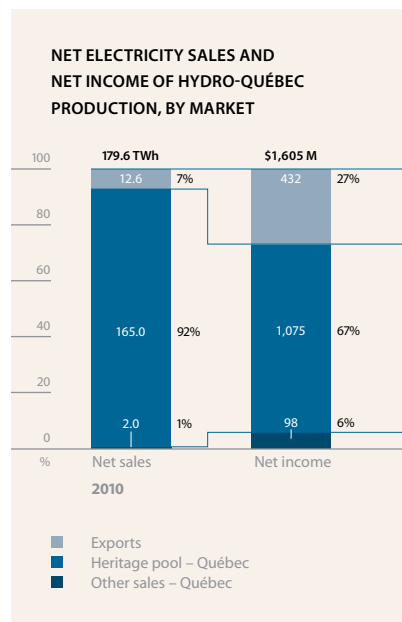
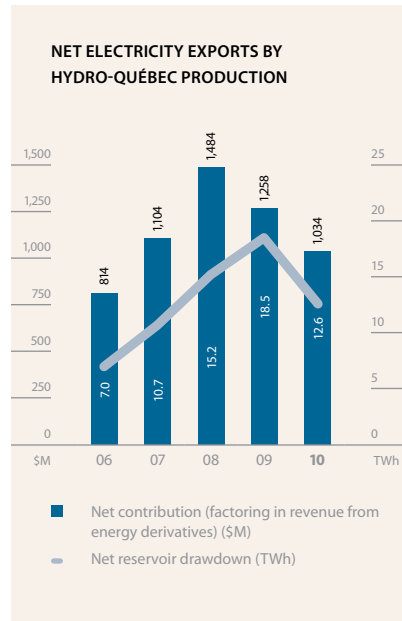
### MAKING THE MOST OF HYDROPOWER RESOURCES

*Hydro-Québec Production continually optimizes its generating capacity with the twofold purpose of meeting domestic requirements while maximizing profitability. Its main advantage resides in the operating flexibility afforded by large hydropower. Because of their storage capacity and the fact that they can be started up in a matter of minutes, our reservoir generating stations allow us to adjust output in accordance with demand on the domestic market, import electricity when prices are low on outside markets and export it when prices are higher.*

- Electricity sales to Hydro-Québec Distribution totaled 167.6 TWh in 2010, compared with 164.2 TWh in 2009. Heritage pool sales generated net income of \$1,075 million. Other deliveries and business transactions in Québec yielded net income of \$98 million.
- Electricity sales outside Québec brought in \$1,513 million for 23.3 TWh, versus \$1,495 million for 23.0 TWh in 2009. Net exports amounted to \$1,034 million for net reservoir drawdown of 12.6 TWh, compared with \$1,258 million and drawdown of 18.5 TWh in 2009. This reduction is attributable to two factors: prudent management of our reservoir storage to offset exceptionally low runoff, and the sale of a larger portion of our output to the Distributor to meet industrial demand. The unit contribution of our net exports increased to 8.2¢/kWh from 6.8¢/kWh in 2009. After considering the cost of generating, procurement and transmission, net exports yielded net income of \$432 million in 2010.



- We operate our facilities in such a way as to maintain a sufficient energy reserve at all times to offset a potential runoff deficit equivalent to 64 TWh over two consecutive years and 98 TWh over four consecutive years. We also keep a capacity reserve approximately 8% higher than our contractual commitments, in accordance with the industry's reliability criteria.
- Under an agreement signed in 2006, we offer Hydro-Québec Distribution two services to facilitate the integration of wind power supplied by private producers: a balancing service to mitigate the impact of hourly fluctuations in the quantity of wind power carried on the Hydro-Québec TransÉnergie system; and firming capacity equivalent to 35% of the contractual capacity of the wind farms in commercial operation. The terms of this agreement will be renegotiated when it expires in 2011, according to the wind farms' actual output.
- In June 2010, Vermont passed a law titled *An Act Relating to Renewable Energy* that recognizes hydroelectric generation of any capacity as a clean, renewable form of energy. This major event paved the way for the signing, in August, of a long-term (2012–2038) supply contract with two large Vermont-based power distributors.
- In October, Hydro Renewable Energy Inc. (HRE), an indirect wholly owned subsidiary of Hydro-Québec, signed a transmission service agreement with Northern Pass Transmission LLC (NPT), a New Hampshire company that is indirectly owned by two major New England power distributors: Northeast Utilities (75%) and NSTAR (25%). Under this agreement, NPT will sell HRE transmission rights for a 40-year period on a new 1,200-MW line to be built between the Canada–U.S. border and the city of Deerfield, New Hampshire. These rights will allow Hydro-Québec to increase its exports to New England. NPT submitted the agreement to the Federal Energy Regulatory Commission (FERC) and to the region's independent system operator, ISO New England, for approval in December, and the FERC approved it without modification in February 2011. NPT is working to obtain all other necessary permits and authorizations. If permitting goes according to schedule, construction should begin in 2013, with commissioning to take place in late 2015 or early 2016. Note that in October 2010, Northeast Utilities and NSTAR announced their intention to merge.



*In 2010, net exports by Hydro-Québec Production accounted for only 7% of net sales volume, but generated 27% of the division's net income and 17% of the company's net income.*

*The average cost of a kilowatt-hour was 2.14¢. This corresponds to the sum of our generating, procurement and sales costs divided by the net sales volume.*

*The first public hearing on the renewal of Gently-2 nuclear generating station's operating licence was held in December 2010, and the second one is scheduled for April 2011.*



**Opposite page** Analysts Loren Vazquez-Zubeita and Jean-Philippe Maldonado monitor trading operations on Hydro-Québec Production's energy trading floor.

◀ Commissioning of new spillway gate hoisting systems at Melville dam.

▼ La Tuque generating station regained its lustre following refurbishment.



■ In November, the National Association of Regulatory Utility Commissioners (NARUC) also recognized hydropower as a clean and renewable energy source. Because NARUC represents the state commissioners who regulate essential public services (energy, water, telecommunications, transportation) in the U.S., this decision will be instrumental in helping Québec promote the advantages of hydropower to American authorities.

#### **DEVELOPING OUR GENERATING FLEET**

*Under its ongoing program to develop Québec's hydropower potential, Hydro-Québec Production has inaugurated a number of facilities since 2004, for a total of 2,692 MW of installed capacity. Our infrastructure projects must meet three fundamental criteria in order to proceed: They must be profitable, environmentally acceptable and favorably received by the communities concerned.*

■ Construction of Eastmain-1-A and Sarcelle powerhouses (Baie-James) progressed at a steady pace. Following the start-up of the Rupert diversion in fall 2009, the eight weirs or other hydraulic structures designed to maintain water levels in the reduced-flow section of the Rupert were completed in 2010. The two powerhouses will be commissioned gradually; Eastmain-1-A will begin operations in 2011 and Sarcelle in 2011–2012. This project, costing \$5.0 billion to build, will add 918 MW in installed capacity and 8.7TWh in annual output, including additional output (5.3TWh) stemming from the diversion of part of the flow of the Rupert to the La Grande complex.

■ In the Minganie region, construction of the Romaine-2 development is moving ahead as scheduled. The \$6.5-billion Romaine project calls for the construction of four generating stations with a total capacity of 1,550 MW and annual output of 8.0 TWh on the Rivière Romaine, north of Havre-Saint-Pierre. The facilities will be commissioned in stages between 2014 and 2020.

■ As for the Petit-Mécatina project in the newly created regional county municipality of Le Golfe-du-Saint-Laurent (Basse-Côte-Nord), we have decided to prioritize the signing of partnering agreements with the communities concerned prior to mobilizing more resources for the draft-design studies begun in 2009. This project involves the construction of two generating stations with a combined capacity of 1,200 MW.

---

*Continued development of hydropower, a clean, renewable energy source, will allow Hydro-Québec to meet the energy needs of future generations.*

---

*We use water to generate 98% of our output.*

---

*The 64 generating stations operated by Hydro-Québec Production have a total installed capacity of 36.5 GW.*



◀ *Eastmain 1 reservoir, Baie-James. Four years after impoundment, the reservoir's gross greenhouse gas emissions are comparable to those of natural lakes.*

▼ *Raymond Lachance's mentoring efforts facilitated Jason Kistabish's integration into the team of power system electricians at Eastmain-1 generating station.*



## MAINTAINING AND UPGRADING OUR GENERATING FACILITIES

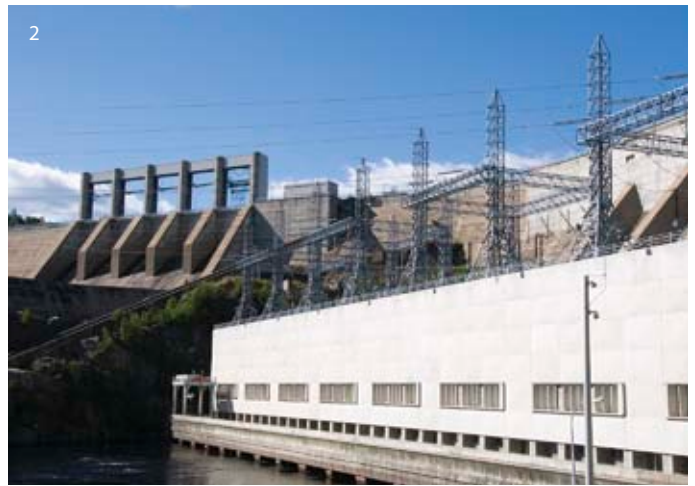
*In 2010, Hydro-Québec Production invested \$666 million in the refurbishment and refitting of its facilities to ensure their long-term operability and increase their generating capacity. This involves a detailed assessment of the condition of each facility by highly qualified employees.*

- In the Manicouagan region, rehabilitation of a generating unit at the Jean-Lesage facility (formerly Manic-2) is moving ahead as planned, with commissioning slated for 2013. This project will yield additional capacity of approximately 30 MW. In addition, the auxiliary equipment at Manic-1 and the spherical valves at Manic-5 are undergoing a major overhaul to ensure their long-term reliability.
- Rehabilitation at Beauharnois generating station in the Montérégie region is proceeding on schedule. This large-scale project will prolong the facility's useful life and increase its annual output considerably.
- Rehabilitation work at Rivière-des-Prairies generating station in Montréal is continuing.
- At Rapide-2 and Rapide-7 generating stations (Abitibi-Témiscamingue), we began replacing the turbine runners and certain mechanical components as part of a refitting project. This work is expected to yield additional capacity of about 12 MW for each generating station.

- Rehabilitation work at Bourque dam (Outaouais) and Melville dam (Mauricie) progressed as planned and is slated for completion in 2011. Work is ongoing at La Tuque dam (Mauricie), and Coteau-1, Coteau-3, Île-Juillet-1 and Île-Juillet-2 dams (Montérégie).
- In August, we decided to postpone refurbishing work at Gentilly-2 nuclear generating station from 2011 to 2012. This decision was driven by several factors. First, our main supplier and partner, Atomic Energy of Canada Limited (AECL), is unavailable due to delays in the refurbishment of CANDU-type generating stations at Point Lepreau, New Brunswick, and Wolsong, South Korea. Second, we intend to draw upon the valuable lessons these projects will provide and apply them to our own project. Furthermore, we would like to know the outcome of the sale of AECL by the Government of Canada before we proceed. In the meantime, we are going ahead with engineering and procurement activities for key components of the project. In 2010, we inaugurated the solid radioactive waste management facility for storing waste from the refurbishment.



1



2



3

## INNOVATING TO MAXIMIZE OUTPUT

*Our technological innovation efforts are geared towards improving the efficiency, availability, flexibility and useful life of our generating facilities with a view to sustainability. In 2010, we had a portfolio of 27 innovation projects worth nearly \$21 million.*

- We defined and consolidated technological innovation strategies with a 2020 horizon year, as set forth in the *Strategic Plan 2009–2013* and the master plans.
- We worked with Hydro-Québec's research institute (IREQ), industry partners and university researchers to develop various tools aimed at optimizing maintenance and rehabilitation projects. Here are some examples:
  - Ice loading on hydraulic structures: harmonization of ice load calculation criteria and development of an analysis model to assess structural safety with greater accuracy.
  - AUPALE project (generator uprating): multiphysical modeling (electromagnetic, thermal, mechanical and fluid) of generator response in order to increase capacity without compromising service life.
  - PREDDIT project (turbine damage prediction and integrated diagnostics): development of tools for diagnostic tests on turbines (cracking, cavitation and corrosion) and of optimized runner repair and welding methods. This project will allow us to reduce unscheduled shutdowns and plan our maintenance investments as a function of the actual condition of the turbines in our generating fleet.



4

1 Refurbishing is under way at La Grande-1 generating station.

2 and 3 Manic-2 and the underground Manic-3 were renamed Jean-Lesage and René-Lévesque generating stations, respectively, in 2010.

4 Hull-2 generating station celebrated its 90th anniversary in 2010.

# HYDRO-QUÉBEC TRANSÉNERGIE



Testing the LineScout robot on the line that crosses the Saint-Laurent at Chute Montmorency.



**Isabelle Courville**  
President, Hydro-Québec TransÉnergie

**OUR MISSION** Hydro-Québec TransÉnergie operates the most extensive transmission system in North America, marketing system capacity and managing power flows across Québec. Our Direction – Contrôle et exploitation du réseau acts as Reliability Coordinator for transmission systems in Québec.

**OUR FACILITIES** Our system comprises 33,453 km of lines and 514 substations, as well as interconnections allowing power interchanges with grids in the Atlantic provinces, Ontario and the U.S. Northeast. Our tariff, approved by the Régie de l'énergie, ensures non-discriminatory access to our system in compliance with North American regulatory requirements.

**OUR ACTIVITIES** To meet changing customer needs and ensure high-quality transmission service, Hydro-Québec TransÉnergie works diligently to ensure the development, reliability and long-term operability of its system. With a view to continuously improving its performance, the division also focuses particular attention on developing its expertise.

## 2010 IN FIGURES

Revenue	<b>\$3.1 billion</b>
Net income	<b>\$447 million</b>
Customers (% of revenue)	
<i>Hydro-Québec Distribution</i> (native-load transmission service)	<b>85%</b>
<i>North American wholesalers</i> (point-to-point transmission services)	<b>12%</b>
<i>Other</i>	<b>3%</b>
Property, plant and equipment as at December 31 (including work in progress)	<b>\$17.2 billion</b>
Investments in property, plant and equipment and intangible assets	<b>\$1.2 billion</b>



In 2010, Hydro-Québec TransÉnergie invested \$1.2 billion in the transmission system to meet native-load growth and integrate new generating capacity.

## An Ambitious Capital Program

This effort is part of an ambitious capital program launched by the division a few years ago to maintain a level of service in keeping with customer expectations. More specifically, we devoted \$825 million to asset sustainment (i.e., reliability and long-term operability) and invested \$423 million in expanding the grid to keep up with growth in demand. The results have been convincing: Our system reliability index showed our best performance in seven years.

This capital program reflects our two top priorities—power quality and security of supply—which form the basis of the international reputation enjoyed by our transmission system. Among other tools, we are counting on the use of advanced technologies to comply with the most stringent reliability standards in our industry. The IMAGINE project, for example, which calls for the rollout of a wide-ranging remote monitoring network, is already enabling us to target our maintenance operations more effectively, resulting in fewer equipment failures and improved system reliability.

One of the keys to our success is our operating efficiency. We can rely on highly skilled employees, including a number of experts who are world-renowned in their fields. To maintain this valuable knowledge capital, we are actively preparing the next generation in all job categories, with particular emphasis on preserving technical know-how and electrical engineering skills.

### EXPANDING THE TRANSMISSION SYSTEM

*In 2010, we invested \$423 million in expanding the system to keep pace with growth in transmission demand. We extended and reinforced our facilities to meet various needs, such as integrating new hydropower and wind farm output, carrying larger volumes of electricity on some transmission lines and improving security of supply to certain vulnerable regions. At the same time, we began implementing the development plan for the grid around the city of Québec.*

- In the Gaspésie and Bas-Saint-Laurent regions, we continued integrating 990 MW of wind power contracted for by Hydro-Québec Distribution further to a tender call issued in 2003. Construction of the 230-kV Goémon–Gros-Morne line (115 km) is well under way and should be completed in 2011.
- We continued construction of Sarcelle substation and its 315-kV tie line. We also added equipment to Eastmain-1 substation so that it will be able to handle the output from Sarcelle and Eastmain-1-A powerhouses as of 2011 (Baie-James).

■ In the same region, work proceeded on 161/25-kV Waconichi substation and a 46-km, 161-kV line that will link the Cree community of Mistissini to the Hydro-Québec transmission system in 2011.

■ We commissioned a 19-km, 120-kV line to supply the Canadian Malartic mining facilities of Osisko Mining Corporation (Abitibi-Témiscamingue).

■ A temporary double-circuit 161-kV line went into operation to supply the Romaine jobsites (Côte-Nord).

■ We completed the 315-kV Chénier–Outaouais line, which will reinforce Outaouais substation and improve security of supply to the region. This 115-km line is the final component in the 1,250-MW interconnection with Ontario.

■ Near the city of Québec, we commissioned 315/25-kV Anne-Hébert substation and a 13-km, 315-kV line—the first stage in the system development plan for this region.

*We handled a momentary peak load of 38,286 MW on January 24, 2011, at 7:38 a.m.*

*Hydro-Québec TransÉnergie is a world benchmark in the design, operation and maintenance of large power grids.*



◀ *Reduced-footprint towers lessen the impact of the Chénier–Outaouais line on surrounding farmland.*

▼ *Safety advisor Christian Provost and chief power system electrician Mario Lemieux at Châteauguay substation.*



*Our transmission system meets the most stringent reliability standards.*

*To pave the way for the smart grid of tomorrow, we are continuing to implement advanced information technologies (sensors and analysis systems), power electronics, remote maintenance equipment, etc.*

*Converting our facilities to digital technologies cuts the cost of work on the system and equipment outage time.*

■ The Régie de l'énergie approved 11 major projects in 2010, worth more than \$2 billion altogether. It also authorized the 2011 budget for individual projects costing less than \$25 million. Totalling \$532 million, this budget is used to maintain our assets, improve the quality of service, meet legal and regulatory requirements, and respond to growing needs.

■ In addition, the Régie approved a \$1.5-billion project for the integration of 2,000 MW of wind power contracted for by Hydro-Québec Distribution further to a tender call issued in 2005.

## ASSET SUSTAINMENT

*Hydro-Québec TransÉnergie provides high-quality transmission service throughout the province, a performance that calls for a sustained effort to maintain grid reliability and long-term operability of assets. In 2010, we invested \$825 million in upgrading, refurbishment and modernization projects designed to ensure system reliability and compliance with standards and regulatory requirements, meet customers' needs and facilitate cross-border interchanges.*

■ In its capacity as Reliability Coordinator for Québec, our Direction – Contrôle et exploitation du réseau (formerly Contrôle des mouvements d'énergie) filed the North American Electric Reliability Corporation (NERC) reliability standards with the Régie de l'énergie in 2009. In early October 2010, the Coordinator submitted to the Régie a revised framework for applying these standards, which reflects the specific characteristics of the Québec context. Later in October, the Régie heard the Coordinator and the other parties in the file regarding the adoption of the NERC standards. The Régie will be responsible for enforcing NERC's North America-wide mandatory standards in the province. The Coordinator also participated successfully in a NERC audit of the application of close to 50 reliability standards that affect functions performed by Hydro-Québec TransÉnergie.

### INVESTMENTS IN THE TRANSMISSION SYSTEM (\$M)

	2010	2009	2008	2007	2006
System growth	423	493	559	349	416
Asset sustainment (reliability and long-term operability)	825	703	540	497	527
Total	1,248	1,196	1,099	846	943



- We began work on a project running until 2012 to upgrade the main transmission system. The project involves increasing transmission capacity and improving power quality by adding static var compensators and series compensation equipment, replacing circuit breakers, modifying protections and performing various jobs on related equipment and on the telecommunication network.
- Refurbishment and expansion of 315/161/69-kV Hauterive substation are progressing as scheduled and should be completed in 2012 (Côte-Nord).
- We finished refurbishing Sorel (230/120/25 kV) and Saint-Basile (120/25 kV) substations, built over 50 years ago, to bring them up to current operating requirements (Montérégie).
- 120/25-kV Saint-Maxime substation was refurbished to meet regional load growth (Montérégie).
- Steady progress was made on a project in Laval to increase capacity and replace equipment at 315/120-kV Chomedey substation. This project, scheduled for completion in 2013, is also intended to keep up with regional load growth.
- Refurbishment of the two synchronous condensers—strategic equipment that helps maintain system stability—at 735/315/161-kV Abitibi substation continued. The project is set to end in 2011 (Abitibi-Témiscamingue).

**1** Chief power system electrician Jocelyn Roy makes a connection at Anne-Hébert substation.

**2** Power system electrician Simon Brassard in the Chibougamau overhaul shop.

**3** Operator Pierre-Luc Poirier inspects high-voltage circuit breakers at Montagnais substation.



## INNOVATING TO IMPROVE TRANSMISSION SERVICE

*In 2010, we invested \$17 million in technological innovation. Our goals: improve system performance and management; target inspection and maintenance operations more precisely; increase our simulation capability so that we can better understand system behavior; and pave the way for the smart grid. We carry out our innovation initiatives in collaboration with Hydro-Québec's research institute, IREQ, and with research centres and firms with complementary skills to ours.*

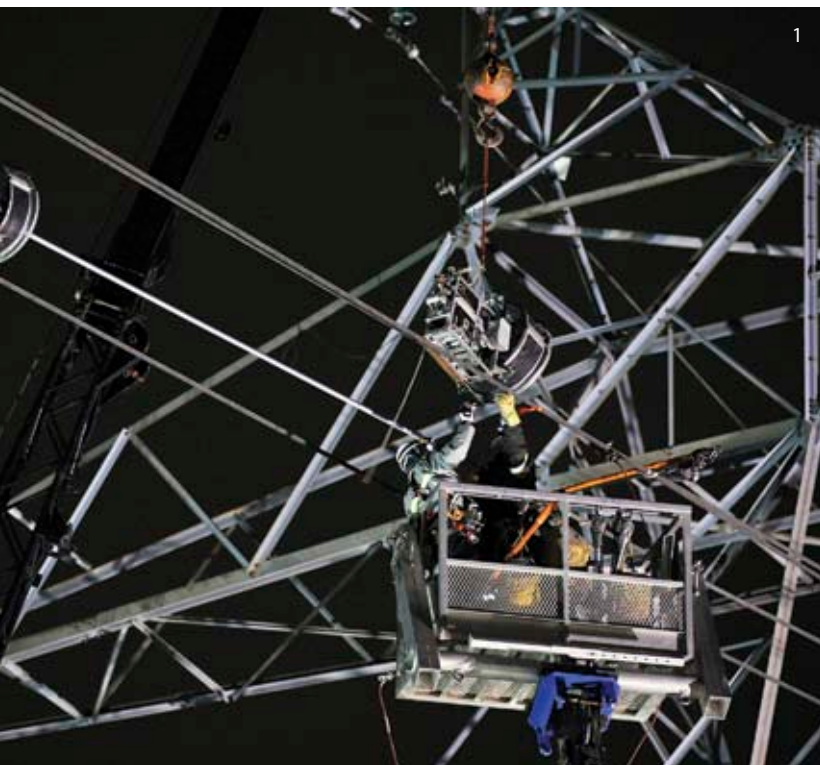
- In 2010, we completed the rollout of two tools designed to improve system management. The RALPH optimization model allows us to schedule hydroelectric output, study different system configurations and reduce response time to variations in generation and load. The RECRÉ software program can produce a system restoration plan based on the available equipment, enabling us to restore service faster in the event of power failures.

- In addition, we continued the IMAGINE project, which involves automated maintenance and enhanced processing of monitoring data. Altogether, 55 substations are now connected to our two remote maintenance centres. This project, which focuses first and foremost on transformers, will enable us to better target maintenance efforts to prevent equipment failures and improve system reliability. Our IMAGINE investment is over and above the budget for initiatives carried out with IREQ.

**1** Line workers Serge Tremblay and Vincent Morin replace insulators on the 315-kV line that runs across the Saguenay near Sacré-Coeur.

**2** Jarrod Lévesque, Manager – Transmission Equipment Maintenance at Nicolet substation, completed the GESTE manager training program, an innovative approach that focuses on learning by doing.

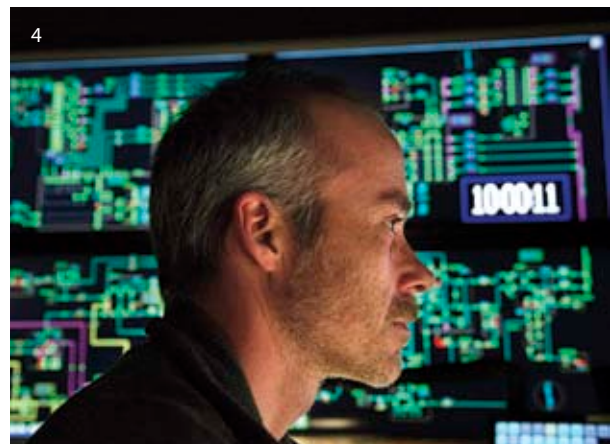
**3** The 315-kV line that connects the new Anne-Hébert substation to the main grid.



- Using the LineScout robot, which we developed in cooperation with IREQ, we inspected the transmission lines at 12 major river crossings at various sites, including Île d'Orléans. Hydro-Québec and British Columbia Transmission Corporation, with whom we worked to advance the technology, won the 2010 Edison Award for the LineScout's contribution to the power industry.

- We successfully used a portable, remotely operated de-icer actuated by cartridge (DAC) for an emergency de-icing operation on ground wires in the Saguenay and Matapédia areas. In concrete terms, DAC generates a mechanical force that moves along the ground wires, breaking the ice instantly. This technology enables us to maintain system reliability at a lower cost than conventional de-icing techniques.

- We are working with IREQ to prepare for the emergence of the smart grid. In 2010, we sketched out the main outlines of an adaptive grid that will be equipped with controllers, sensors, analysis systems and other devices necessary to monitor equipment continuously and manage it in real time. Related projects include the ACOR grid response improvement program, designed to increase system capacity, reliability and security by means of advanced protections and controls.



**1** Installation of an anti-icing system on 735-kV line conductors that overhang a major traffic intersection near Lévis substation.

**2** Cable workers Patrick Bigras and Jonathan Coupal roll out an underground cable at Landry substation.

**3** Line crew chief Bertrand Fortin shares his knowledge with junior line worker Maxime Bérubé-Jean during the installation of spiral rods near Lévis substation.

**4** Dispatcher Denis Gagnon in front of the mimic board at the Rouyn telecontrol centre.

# HYDRO-QUÉBEC DISTRIBUTION



Line worker Julien Desrochers installs a capacitor bank as part of the Addition 1,000 Mvar project.



**André Boulanger**

President, Hydro-Québec Distribution

**OUR MISSION** Hydro-Québec Distribution ensures a secure, reliable supply of electricity and delivers high-quality services to the Québec market.

**OUR FACILITIES** The division operates a distribution system comprising 112,089 km of lines, a multi-site customer relations centre providing telephone

and online services, and five distribution control centres, as well as one hydroelectric generating station and 24 thermal generating stations supplying customers on off-grid systems.

**OUR ACTIVITIES** To meet demand, Hydro-Québec Distribution relies primarily on the heritage pool of 165 TWh, which it purchases from Hydro-Québec Production. For demand beyond that volume, it purchases electricity under market conditions. The division ensures that the distribution system operates efficiently, reliably and safely at all times. It offers customers products and services tailored to their needs, as well as a wide range of energy efficiency programs.

## 2010 IN FIGURES

Revenue	<b>\$10.6 billion</b>
Net income	<b>\$453 million</b>
Customers (% of revenue from electricity sales)	
<i>Residential and farm</i>	<b>41%</b>
<i>Commercial and institutional</i>	<b>25%</b>
<i>Industrial</i>	<b>31%</b>
<i>Other</i>	<b>3%</b>
Property, plant and equipment as at December 31 (including work in progress)	<b>\$8.7 billion</b>
Investments	
<i>Property, plant and equipment and intangible assets</i>	<b>\$728 million</b>
<i>Energy Efficiency Plan</i>	<b>\$216 million</b>

## Customer Satisfaction: Our Constant Concern

In order to meet customer expectations as efficiently and cost-effectively as possible, Hydro-Québec Distribution strives to ensure the security of Québec's

electricity supply and to maintain a reliable power distribution system while providing a wide range of services and energy efficiency programs. This ambitious undertaking is made possible by our competent and highly committed personnel.

In 2010, we continued to diversify our supply sources according to a strategy that promotes renewable energy. At the same time, the economic slowdown and our ongoing energy efficiency efforts prompted us to lower our energy demand forecast for the next 10 years. The division has thus taken measures to improve the flexibility of its power purchases, making it easier to balance supply and demand.

On the energy efficiency front, we surpassed our energy savings target for 2010. Our goal for 2015 remains the same (11 TWh), and to reach it we will continue to innovate and adapt our programs so that they can benefit the greatest possible number of customers.

As in past years, we made significant investments to maintain and develop the distribution system, in line with our objective of continuously improving performance. We continue to rely on technological innovation to improve the energy efficiency and performance of our facilities.

### A FLEXIBLE SUPPLY STRATEGY

*Hydro-Québec Distribution's supply strategy is driven by two main imperatives: flexibility and diversification. With this approach, we can ensure reliable electrical service at least cost in spite of short-term fluctuations in demand.*

- On November 1, we filed the Electricity Supply Plan 2011–2020 with the Régie de l'énergie. This document outlines our supply strategies based on the demand forecast for Québec over the next 10 years. Compared to the previous forecast, filed with the Régie in October 2009, we anticipate slower growth in energy needs in the coming years. However, power needs will see a more sustained increase, in part because of rising demand from residential and farm customers in winter. To deal with this situation while maintaining maximum flexibility, Hydro-Québec Distribution will rely on agreements with its major suppliers that provide for adjustable electricity deliveries.
  - In July, the Régie de l'énergie approved our amended agreements with Hydro-Québec Production to defer a portion of contracted deliveries of baseload power (350 MW) and cycling power (250 MW). These amendments will enable us to achieve a better balance between market needs and our resources. For instance, the agreements were extended until 2027 and we

can now call in the deferred deliveries as needed on a monthly basis. There is also a firm-power clause that takes effect during winter peaks.

- Following a decision handed down by the Régie de l'énergie in August, we renewed the suspension of deliveries from TransCanada Energy's Bécancour generating station for another year (2011).

- In June, Hydro-Québec selected 13 projects totaling 149.7 MW under the power purchase program for 150 MW produced by hydroelectric facilities rated 50 MW or less, launched in July 2009. Ten of these projects will be carried out entirely by Aboriginal or other communities, and three will be built in partnership with the private sector.

- In July, the Régie de l'énergie approved the six contracts signed further to the 2009 call for 125 MW of electricity produced in Québec by new biomass cogeneration facilities. These projects total 52.9 MW, and deliveries are scheduled to begin on December 1, 2012.

- In December, the division announced that it had selected 12 bids totaling 291.4 MW in response to the 2009 call for two 250-MW blocks of wind power generated in Québec—one bid in connection with the block for Aboriginal projects (24.0 MW) and 11 (267.4 MW) with the block for community projects.

▼ Operator Carol Roy at the distribution control centre in Rimouski.

► Line worker Guillaume Laforest connects a new customer to the power grid in Montréal's West Island area.



### ONGOING EFFORTS IN ENERGY EFFICIENCY

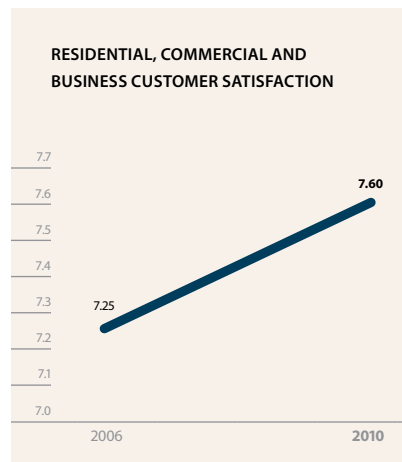
*Our energy efficiency programs generated new savings of 989 GWh in 2010, for a total of 5.3 TWh in annual savings achieved to date. Hydro-Québec Distribution still expects to meet its goal of 11 TWh in savings by 2015.*

- The RECYC-FRIGO Environnement™ program has yielded very positive results. Since its launch in March 2008, more than 290,000 energy-hungry refrigerators and freezers have been collected and recycled. As at December 31, 2010, the cumulative energy savings generated by this program had reached 207 GWh, enough energy to power approximately 11,700 average households for a year.
- Since the ENERGY WISE Home Diagnostic program began in 2004, we have sent out almost 1.2 million personalized recommendation reports, for 368 GWh in potential annual savings. Thanks to the community-based component of the program, which ended in November 2010, 973 communities received \$10.4 million to carry out local and regional projects.
- In September, we launched the SAVEnergyPro Program to help small businesses become more energy-efficient. Through this initiative, eligible customers can have their inefficient lighting products and bimetallic thermostats replaced with more efficient models, free of charge, thanks to Hydro-Québec. By the time the program ends in 2014, energy savings should reach some 575 GWh, which is equivalent to the annual consumption of 76,000 households, or the city of Brossard.
- In June, Natural Resources Canada awarded us the ENERGY STAR awards for Utility of the Year – Provincial and for Promotional Campaign of the Year. These honors testify to the company's significant contribution to promoting energy efficiency. Hydro-Québec has won eight ENERGY STAR awards over the last six years.

*Our supply strategy allows us to respond flexibly to the Québec market's electricity needs.*

*Energy efficiency is at the heart of Hydro-Québec's development strategy.*

*Our goal: provide customers with quality services tailored to their needs.*







◀ Line crew chief Jean-François Godin inspects a control box installed as part of the distribution automation program.

▼ Prototype of a remote manipulator designed to lift live 25-kV conductors.



## ADAPTING SERVICES TO OUR CUSTOMERS' NEEDS

*Hydro-Québec Distribution continually adjusts its services to meet customer expectations. To improve access to a broad range of services, it adopts industry best practices for its customer services.*

### RESIDENTIAL, COMMERCIAL AND BUSINESS CUSTOMERS

- Already one of the best-performing electric utilities in first-contact resolution, we continue to improve our telephone response time. In 2010, the average telephone response time stood at 137 seconds, down from 190 seconds in 2009. Our goal is for a response time of approximately 100 seconds, in line with the North American average in the electricity sector.
- For the last 10 years, Hydro-Québec has offered special payment arrangements to low-income customers who are having trouble paying their electricity bills. In 2010, we entered into 41,161 such arrangements, for arrears of \$213.6 million.
- In March 2010, the Régie approved an across-the-board rate increase of 0.35%, effective April 1, 2010. In August, Hydro-Québec Distribution filed its 2011–2012 rate application, which proposed that current rates be maintained for the 12 months beginning April 1, 2011.

### LARGE-POWER CUSTOMERS

Industrial, commercial and institutional customers with a power demand of 5 MW or more consume 38% of the electricity distributed in Québec.

- The Energy Savers' Circle welcomed its first Elite member in 2010: the Bécancour aluminum smelter. Hydro-Québec created the Energy Savers' Circle in 2005 to recognize large-power customers who take steps to reduce their energy consumption by at least 5%, or to save at least 50 GWh per year. These businesses must also have adopted an energy efficiency policy and put someone in charge of energy conservation. The Elite category, created in 2009, is reserved for customers who are committed to even more ambitious energy savings. The Energy Savers' Circle now has 48 members.

## INCREASING DISTRIBUTION SYSTEM RELIABILITY AND PERFORMANCE

*In 2010, Hydro-Québec Distribution continued to expand and maintain the system to improve reliability and performance in accordance with its system evolution plan, adopted in 2009.*

### HYDRO-QUÉBEC DISTRIBUTION'S INVESTMENTS, EXCLUDING THE EEP<sup>a</sup> (\$M)

	2010	2009	2008	2007	2006
Development	346	325	308	267	283
Asset sustainment (reliability and long-term operability)	382	384	356	457	409
Total	728	709	664	724	692

a) EEP: Energy Efficiency Plan

- We pursued the distribution automation program by installing remotely controlled equipment to reduce outage duration. As at December 31, 2010, we had deployed 72% of the 3,446 units of such equipment planned for all of Québec.



◀ Thanks to the CATVAR project, the distribution system in Saint-Hubert is now equipped with remotely monitored transformers.

▼ The new Val Notre-Dame abbey in Saint-Jean-de-Matha won the grand prize in the 2010 ENERGY WISE Competition of Excellence.



- The normalized system average interruption duration index was 120 minutes per customer in 2010, demonstrating our commitment to facility maintenance and system optimization.
- To contribute to the reliability of the transmission system during exceptional peak demand, in 2009 Hydro-Québec Distribution began to install manually operated capacitor banks on its system as part of the Addition 1,000 Mvar project. As at December 31, 2010, 350 of the 802 capacitor banks planned for installation by the end of 2011 had been deployed.
- In October 2010, the CATVAR project (voltage regulation and reactive power control) was submitted to the Régie de l'énergie for approval. The objective of the program is to reduce consumption and energy losses on the distribution system. By 2015, it will result in savings of almost 2 TWh through control of voltage on the load side of about 130 satellite substations supplying some 2,000 lines. A 2005 pilot project at Pierre-Boucher substation in Boucherville demonstrated the viability of this approach.
- We are now laying the groundwork for the remote meter reading (LAD) project to replace mechanical meters and deploy an advanced metering infrastructure starting in 2012 and continuing over some five years. Between March and September 2011, we will carry out final testing in certain municipalities to validate our technological choices and deployment strategy. The LAD project has three objectives: increase efficiency through automated meter reading, facilitate the bill collection process and ensure the long-term operability of meters. The results of the tests will be known in 2011, and the project will be submitted to the Régie de l'énergie for final approval during the same year.

- In 2010, we fulfilled close to 60,000 hookup requests for a total investment of \$205 million.
- Since workplace safety is a major concern, Hydro-Québec Distribution has bolstered efforts to identify, eliminate and manage the risk of accident. The accident frequency rate has been on the decline since 2008, and in 2010 we recorded our lowest-ever accident frequency: 2.99 per 200,000 hours worked, an excellent result.

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## INNOVATING TO IMPROVE DISTRIBUTION SERVICE AND ENERGY EFFICIENCY

*Hydro-Québec Distribution relies on innovation to improve system performance and reliability, ensure the long-time operability of its assets and improve customer energy efficiency as well as the efficiency of its facilities. In 2010, the division invested \$20 million in innovation projects in conjunction with Hydro-Québec's research institute, IREQ.*

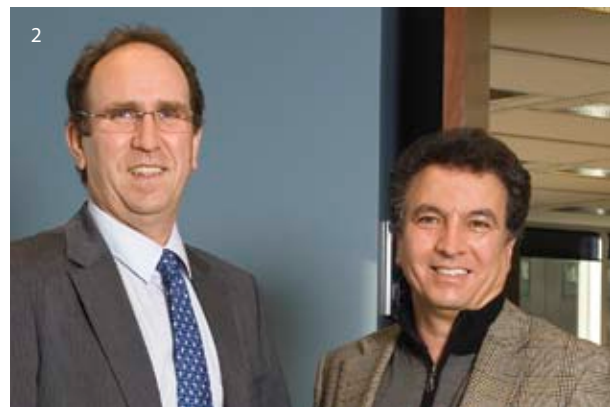
- In 2010, we finished deploying 15 SimLoc units on the underground network. This system, developed by IREQ, facilitates fault detection on long feeders and those with branch lines. It has helped reduce the time it takes to locate faults to less than two hours.
- In conjunction with IREQ, we conducted certification tests to validate the energy savings potential of new amorphous steel transformers manufactured by our suppliers. Given the performance of the nine units we tested, we have decided to gradually install this type of transformer on our network.



- In 2010, Hydro-Québec Distribution and IREQ obtained \$6 million in funding over five years from the Canadian government's Clean Energy Fund to create a smart grid zone in the South Shore area near Montréal. The goal of the project is to demonstrate new technologies and applications stemming from the modernization of electrical systems, for example, a charging infrastructure for electric vehicles and automated system restoration in case of outages.

- We have finished developing a prototype remote manipulator to lift live 25-kV conductors during certain types of operations, such as pole replacement. Three prototypes were validated in real-life conditions by line workers. These remote manipulators will allow us to carry out more operations without interrupting service.

- In 2009, IREQ's energy technologies laboratory, LTE, developed a simple diagnostic tool to help small and medium-sized industrial customers better manage consumption. Real-world testing was done in 2010, and the energy diagnostic for the industrial market is now being promoted by commercial delegates. Based on a questionnaire filled out by the customer, this tool automatically generates a consumption profile featuring tailored recommendations linked to Hydro-Québec's energy efficiency programs.



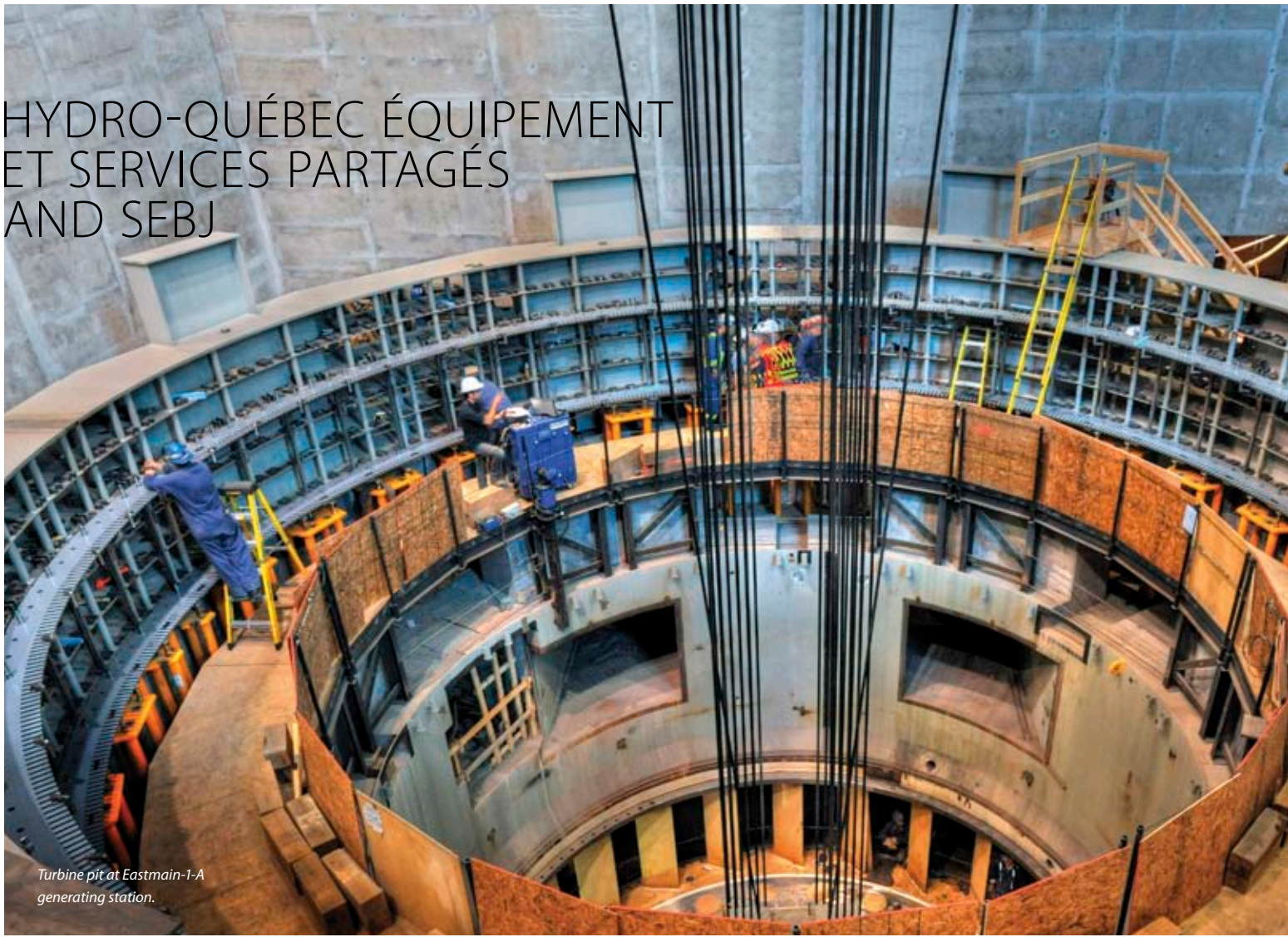
**1** Guide Marie-Ève Beaudet greets visitors to Hydro-Québec's booth at Complexe Desjardins during the World Energy Congress.

**2** Bruno Gingras, Vice President – Distribution System, congratulates engineer Hocine Krizou for his contribution to the development of an electrical safety standard (ULC-S801) for employees of power generation, transmission and distribution companies.

**3** Roger Perron, Regional Director, Alain Martel, Operations Manager, Reverend Benjamin Ariak and municipal councillor Jason Berthe gather around Sonny Inukpuk, Off-Grid System Worker, at the inauguration of Kuujjuaq generating station.

**4** Carol Buckley, Director General of Natural Resources Canada's Office of Energy Efficiency, presents a 2010 ENERGY STAR award to Dimitri Coll, Marketing Manager – Product-Related Programs.

# HYDRO-QUÉBEC ÉQUIPEMENT ET SERVICES PARTAGÉS AND SEBJ



Turbine pit at Eastmain-1-A generating station.



## Réal Laporte

President, Hydro-Québec Équipement et services partagés  
President and Chief Executive Officer, Société d'énergie de la Baie James

**OUR MISSION** Hydro-Québec Équipement et services partagés (HQESP) and Société d'énergie de la Baie James (SEBJ) design and carry out projects for the construction and refurbishment of generating and transmission facilities that optimally meet Hydro-Québec's

needs. Working in partnership with host communities and industry, we offer high-quality, cost-effective solutions that apply best practices in social and environmental acceptability. Furthermore, through the Centre de services partagés (shared services centre), our division offers real estate management, material management, procurement, transportation and other services to all Hydro-Québec divisions and units.

**OUR ACTIVITIES** Our services cover all project stages and aspects: project management, communications with the communities concerned, government permitting, field surveys and geomatics, biophysical and human environment studies, design and implementation of environmental measures, engineering, procurement, construction, in-plant and on-site quality assurance, and project

management up to handoff to the operator. We are constantly seeking new ways to maximize facility performance while reducing costs and construction time.

## 2010 IN FIGURES

Volume of activity	
Construction (HQESP and SEBJ)	<b>\$2.6 billion</b>
Shared services	<b>\$0.5 billion</b>
Main customers – Construction	
Hydro-Québec Production	<b>62%</b>
Hydro-Québec TransÉnergie	<b>38%</b>

## Commendable Performance

At Hydro-Québec Équipement et services partagés and Société d'énergie de la Baie James, our volume of activity totaled \$3.1 billion in 2010. Faced with a

heavy workload, our personnel once again turned in a remarkable performance, providing high-value-added services that reflect a genuine culture of innovation and a commitment to finding optimal solutions and the best means of implementing them.

Milestones were passed in a number of generation projects. In Baie-James, the Eastmain-1-A/Sarcelle/Rupert project progressed so well that the first Eastmain-1-A generating unit may be commissioned earlier than expected. In Minganie, we started construction of permanent structures at the Romaine-2 development. In Nunavik, a new power plant is now serving the Inuit community of Kuujjuaq.

As for transmission, we worked simultaneously on numerous projects involving either refurbishment of existing assets or construction of lines and substations needed to connect new generating facilities or increase transmission capacity. At the same time, we continued the permitting procedures for a transmission system expansion project in Minganie, which we hope to start in 2011.

### EQUAL TO THE CHALLENGES OF 2010

*We carry out projects that often pose major technical, material, human, social and environmental challenges. There is one key factor behind our success: the quality of our teams and partners, who undertake each project with the same spirit of collaboration and concern for excellence.*

#### VOLUME OF HQESP AND SEBJ ACTIVITY IN CONSTRUCTION (\$B, FINANCING EXCLUDED)

2010	2009	2008	2007	2006
2.6	2.6	2.4	2.2	2.0

#### KEY ACHIEVEMENTS IN GENERATION PROJECTS

- In Baie-James, construction of Eastmain-1-A powerhouse (part of the Eastmain-1-A/Sarcelle/Rupert project) progressed so smoothly that the first generating unit may be commissioned as early as spring 2011. In addition, we finished building the eight weirs or other hydraulic structures designed to maintain the water level along the reduced-flow section of the Rupert and thus protect fish habitat, allow navigation and preserve landscape

quality. This \$5.0-billion project, scheduled for completion in 2012, will boost Hydro-Québec's installed capacity by 918 MW and provide an annual output of 8.7 TWh.

- At the Romaine jobsite in Minganie, we opened Murailles work-camp, which at its peak will accommodate up to 1,800 people, and started construction of the permanent structures for Romaine-2, which will be the largest of the Romaine generating stations in terms of capacity (640 MW) and will also be the first to come on stream, with commissioning scheduled for 2014. This \$6.5-billion project, launched in spring 2009 and slated for completion in 2020, calls for the construction of four generating stations with a total installed capacity of 1,550 MW and an annual output of 8.0 TWh.
- In Nunavik, we commissioned the new Kuujjuaq thermal power plant. Nunavik power plants supply off-grid systems and are operated by Hydro-Québec Distribution.
- We completed the refurbishment of three dams: Farnham (Montérégie), Lacroix-1 and Castor (Outaouais).



◀ Rehabilitation work on the Melville dam spillway.

▼ Raising a tower for a 315-kV tap line.



#### KEY ACHIEVEMENTS IN TRANSMISSION PROJECTS

- In Outaouais, we finished deploying the 315-kV Chénier-Outaouais line.
- In Côte-Nord, we completed the 161-kV line supplying Murailles workcamp and the Romaine jobsites.
- Impact statements were filed with the competent authorities in September for projects included in a plan to upgrade the transmission system in the northeastern part of the Montréal metropolitan region. Work could begin in spring 2012, subject to the necessary approvals.
- We conducted an impact assessment on the construction of 315/25-kV Saint-Bruno-de-Montarville substation and its tap line, for which Hydro-Québec TransÉnergie subsequently received the go-ahead from the Régie de l'énergie. Work should begin in spring 2012.

#### GENERATION: WORK IN PROGRESS

*In 2010, our efforts were largely focused on two major hydro-electric developments: Eastmain-1-A/Sarcelle/Rupert and the Romaine complex. We also worked on more than 75 refitting or refurbishment projects designed to increase the capacity of generating assets or ensure their long-term operability. Altogether, our generation projects and studies totaled \$1.6 billion of activity.*

- For the Eastmain-1-A/Sarcelle/Rupert project, construction of both powerhouses progressed steadily.

- We completed all concreting at Eastmain-1-A (768 MW), excavated the tailrace canal, installed the intake gates and draft tube gates, and then proceeded with the initial filling of the water intake and tailrace canal. Installation of powerhouse electrical and mechanical systems is in progress, as is the assembly of the generating units. We also dismantled the temporary dike.

- At Sarcelle (150 MW), we finished erecting the powerhouse superstructure and concreting the water intake. We began to install the electrical and mechanical systems, as well as the bulb-type units. The control room and computer room were delivered.

- In 2010, \$670 million (financing excluded) was invested in the Eastmain-1-A/Sarcelle/Rupert project. Employment totaled 3,537 person-years, with Cree and Jamesian workers accounting for 11% of the workforce.

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*The Romaine and Eastmain-1-A/Sarcelle/Rupert projects are currently the largest construction sites in Canada.*

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*Thanks to the safety rules and programs we rigorously apply on our jobsites, the accident frequency rate was 9.8 per 200,000 hours worked, remaining below the target of 10 for the third year straight.*



1



2



3



4

- Work on the Romaine complex progressed in a number of areas.
  - We continued construction of Route de la Romaine, which already provides access to the Romaine-2 jobsite from Highway 138.
  - Excavation work began for a number of Romaine-2 structures: the temporary bypass tunnel, spillway, 5.5-km headrace tunnel, water intake and powerhouse. We also started to clear the site of the future reservoir.
  - We began the geological investigations and engineering for Romaine-1.
  - In 2010, \$344 million (financing excluded) was invested in the Romaine project. Employment rose to 819 person-years, with Côte-Nord and Innu workers accounting for 58% of the workforce. Contracts and spending generated spinoffs of \$122 million in the region.
- We continued the refurbishment and modernization of a number of hydropower stations in regions throughout Québec.
- Rehabilitation projects progressed as planned at the Melville dam spillway (Mauricie) and at Bourque dam (Abitibi-Témiscamingue). These projects will end in spring 2011.
- We began rehabilitation of other water-retaining structures, including those around Baskatong reservoir (Outaouais).
- At Bécancour (Centre-du-Québec), the shutdown of Gentilly-2 nuclear power plant (675 MW) was postponed to fall 2012, giving us a chance to integrate lessons learned from similar projects at Point Lepreau in New Brunswick and Wolsong in South Korea. Meanwhile, we completed construction of the facility for storing solid radioactive waste.

**1** Aerial view of the upstream portal of Romaine-2 generating station.

**2** Goémon-Gros-Morne line before conductor stringing.

**3** Waconichi substation is built on a new type of steel grillage foundation.

**4** The Francis turbine runners for Eastmain-1-A powerhouse were shipped from Brazil through the Arctic to Baie James.



◀ Installing vertical drains on the Jacques-Cartier substation site, a first for Hydro-Québec.

▼ Workers at the Romaine-2 spillway site.



## TRANSMISSION: WORK IN PROGRESS

*In 2010, the volume of our activities in transmission totaled \$1.0 billion, with more than one thousand projects aimed at refurbishing, reinforcing or extending the transmission grid, or integrating wind farm output.*

- In Baie-James, we continued construction of Sarcelle substation and the 315-kV line that will link it to Eastmain-1 substation. We also added equipment to Eastmain-1 substation so that it will be able to handle the output from Sarcelle and Eastmain-1-A powerhouses as of 2011.
- In Côte-Nord, refurbishment and expansion of 315/161/69-kV Hauterive substation progressed with the addition of a transformer and reorganization of the power lines.
- As part of the main transmission system upgrading project, we began refurbishment work and the addition of compensators at Chénier, Abitibi and Jacques-Cartier substations.
- In the Gaspésie and Bas-Saint-Laurent regions, construction of the 230-kV Goémon–Gros-Morne line is proceeding. The line will be used to integrate generation from wind farms.
- In Baie-James, we are continuing construction of 161/25-kV Waconichi substation and its 161-kV tie line. These facilities will link the Cree community of Mistissini to the Hydro-Québec transmission grid to ensure security of supply and meet the growth in demand.

- The permitting phase continued for a project to extend the transmission system in Minganie in order to connect the Romaine complex. The project involves building four substations and about 500 km of lines. The impact statement was submitted in 2009 and public hearings were held in 2010.

- We began or pursued several projects to connect future wind farms in various regions of Québec.

## INNOVATING TO ENHANCE PERFORMANCE

*We have a dual objective in all projects we undertake: meet the client's needs, especially in terms of facility performance, while minimizing cost and lead time. This aspiration, which relies on experience and on a desire to seize opportunities arising from technological advances or market conditions, is the driving force behind all our employees' efforts, whether in engineering, construction, environment, tendering, or any other aspect of our operations.*

- In 2010, we continued rolling out and implementing CATIA® V5 (Computer Aided Three-dimensional Interactive Application) as part of the shift to 3D design. We applied it at Sarcelle to support excavation, concreting of civil engineering structures, and mechanical and electrical work. At Manic-1 generating station, we used it in combination with DELMIA (Digital Enterprise Lean Manufacturing Interactive Application) to simulate and optimize the planning of refurbishment work.





- In a pilot project, we tested an electronic notebook enabling inspectors to enter information on site about workers and equipment. This kind of digital information is used to put together readily accessible jobsite records.
- We used the GBR (Geotechnical Baseline Report) method to prepare a number of tenders for the Romaine project. GBR enables us to provide bidders with a consistent interpretation of results from geological and geotechnical investigations.
- At Romaine-2, we used a GPS system to support vegetation clearing in the future reservoir.
- At Landry and Rivière-des-Prairies substations, we used prefabricated parts to build transformer water-oil separators instead of pouring concrete as is conventionally done.
- To minimize the impact of the 315-kV Chénier–Outaouais line on farmland, we designed a new type of small-footprint tower, a first at that voltage level.

**1** Grinding a scroll case section at Eastmain-1-A.

**2** An underground line between Landry and Rivière-des-Prairies substations provided an opportunity to use a new, Québec-designed winch capable of pulling runs of 1,500 m, compared to 900 m for conventional winches.

**3** Installing a prefabricated water-oil separator at Landry substation.

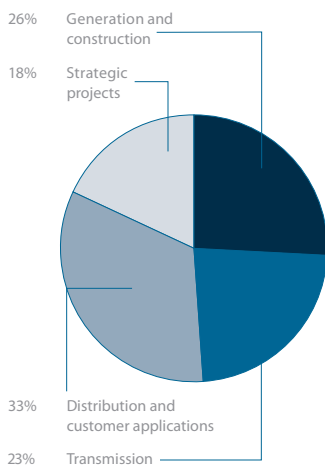
**4** Considerable time was saved by using prefabricated panels to build the superstructure of the Sarcelle powerhouse generating area.

# INNOVATION: AN ONGOING CHALLENGE

► A microwave tower overlooks the administrative buildings at Montagnais substation, one of the sites where the microwave links are being digitized under Project 3M.



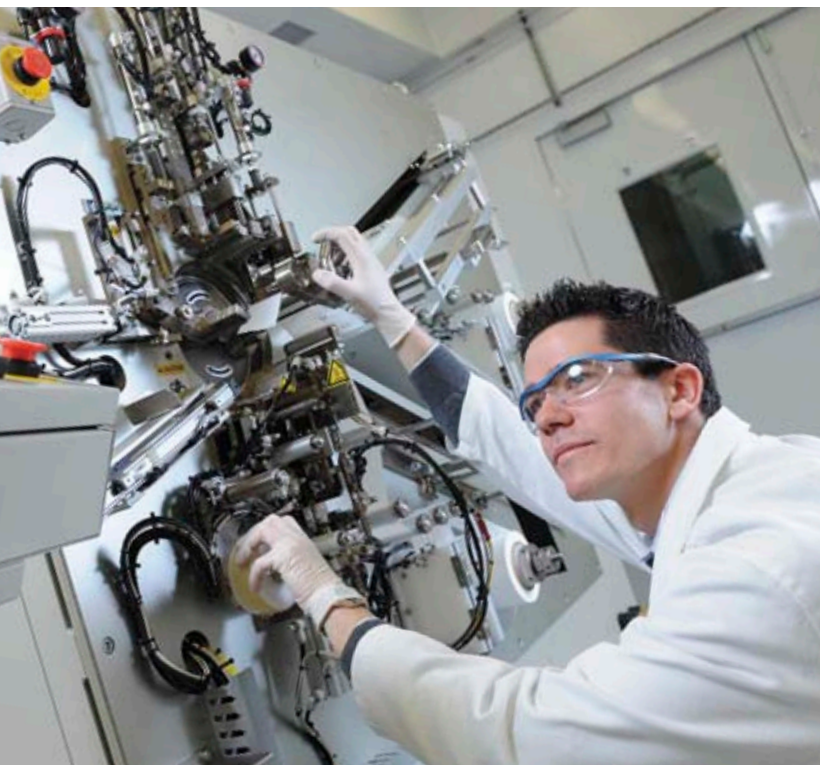
## BREAKDOWN OF INNOVATION EFFORTS BY HYDRO-QUÉBEC'S RESEARCH INSTITUTE IN 2010 (BY AMOUNT INVESTED)



To enhance the performance of its facilities, improve the quality of its services and develop engines for growth, Hydro-Québec invests heavily in innovation and new technologies. Thanks to the experience and advanced skills of its experts, the company is able to meet highly complex technical challenges not only in its core business, electricity, but also in the information and communication technologies underpinning power system operation.

Hydro-Québec's research institute, IREQ, which celebrated its fortieth anniversary in 2010, has an annual budget of some \$100 million. In 2010, IREQ continued its efforts in many areas: electrical facility performance, reliability and long-term operability, wind power integration, energy efficiency, tomorrow's smart grid and emerging renewable energy sources (e.g., hydrokinetic, salinity gradient and deep geothermal energy). It also stepped up work to meet a crucial environmental challenge: ground transportation electrification.

At the same time, Hydro-Québec continued digitizing its communication network and deploying an integrated architecture for the information and communication systems that play an increasingly important role in all of its activities. Computer security and cyber security were also the focus of several projects.



Simulations at IREQ's new energy storage laboratory.

◀ Chemical technician  
Martin Dontigny operating the  
winding machine in the dry room.

▼ Expert chemical technician  
Patrick Charest operating the  
mixer in the nanopowder room.



## ENERGY EFFICIENCY

*Improving the energy efficiency of Hydro-Québec's facilities and those of its customers remains a priority for IREQ, as illustrated by the projects below.*

- As part of the AUPALE project aimed at increasing the capacity of existing generators, numerical simulations of a unit at Beauharnois generating station and test measurements carried out in 2009 enabled us to collect groundbreaking data on generator performance. In 2010, we used the data to check the potential capacity gain for a few of the generators at Beauharnois and found it to be roughly 23% in summer and 21% in winter.
- At LTE, IREQ's energy technologies laboratory, two typical Québec homes with electric heating were built to develop and test comprehensive energy efficiency solutions. They were equipped with a number of measuring systems in order to study such factors as the dynamics of thermal masses and humidity. Tests were designed to assess comfort factors, better understand the effect of energy flux imbalance, find new opportunities for energy savings and guide large-scale efficiency efforts.

## WIND POWER AND NEW RENEWABLES

*Hydro-Québec, a world leader in hydropower generation, leverages the complementarity of large hydro and wind power to support wind generation in Québec. IREQ is at the forefront of research on integrating wind generation into large power grids.*

- In 2010, we continued our studies to quantify the impact of wind power integration on contingency provisions, i.e., capacity reserves calculated on the basis of operating risk arising from the uncertainty of forecasts concerning demand and equipment availability.

- Using our Hypersim simulator, we developed aggregated models for real-time studies of the behavior of individual wind farms and sets of wind farms connected to the power grid.
- We further improved wind and energy forecasting to maximize the contribution of wind without compromising power system reliability.
- Our leadership in wind power integration is attested to by our participation in international organizations active in promoting wind generation. In 2010, we collaborated in the work of IEA WIND Task 25, an International Energy Agency task force focusing on the design and operation of power systems carrying large amounts of wind power.
- In the area of new renewables, IREQ continued its research into the operation, potential and applications of hydrokinetic, salinity gradient (osmotic) and deep geothermal energy. We are participating in a Hydro-Québec Distribution pilot project in which two prototype hydrokinetic turbines are being deployed in the Saint-Laurent near Montréal. We are also collaborating in a research program with Statkraft, a Norwegian group that is operating the world's first prototype osmotic power plant in the port of Oslo. In addition, we are monitoring progress in thermal and photovoltaic solar energy, and other forms of energy, through partnerships and our technological intelligence activities.

▼ Carl Cyr, Expert Technician – Telecommunications and System Operation, at the telecommunications control centre in Montréal.

► In September, Hydro-Québec signed a three-year partnering agreement with Groupe RSW to assess the performance and efficiency of two prototype river hydrokinetic turbines in the Montréal area.



## SMART GRID

*In collaboration with industry, government authorities, universities and other organizations, our researchers and specialists in IT and communications are working closely with Hydro-Québec's divisions to develop an emerging smart grid. All three of the company's core businesses are involved:*

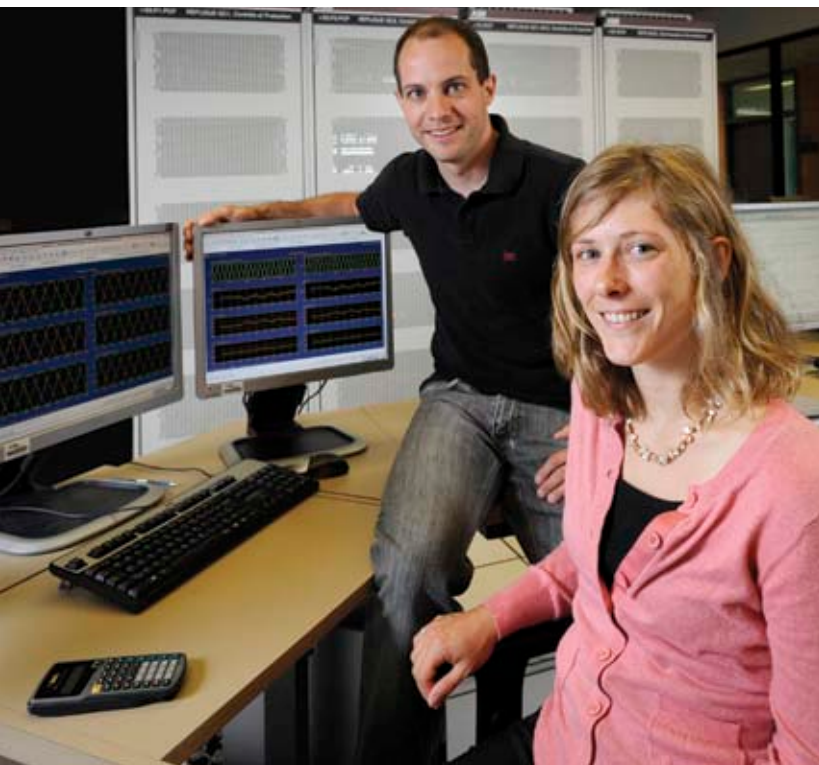
- **Generation.** Our efforts focus on optimal generation management to achieve generation/load balancing at the lowest possible cost. Research covers generating facility performance, reliability, security, cost-effectiveness and long-term operability.
- **Transmission.** Our efforts focus on developing a highly automated power grid capable of performing complex functions by collecting and processing real-time data on generation, demand and the condition of equipment, thus facilitating outage prevention, integration of intermittent distributed generation from renewable sources, etc.
- **Distribution.** Our efforts focus on integrating new information and communication technologies (advanced metering infrastructure, networked meters, remotely controlled equipment, etc.) that will support real-time facility and load management. To test the technologies and concepts that we intend to deploy, we make use of the IREQ test line and the smart grid project zone set up by Hydro-Québec Distribution in the South Shore area near Montréal.

## INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs)

*ICTs play a vital role at Hydro-Québec on two levels: supporting the work of some 23,000 employees, and transmitting the massive amounts of data needed to operate an increasingly complex and increasingly smart grid.*

*Development of the communication system parallels that of the power grid. Data transmission and communication requirements grow as Hydro-Québec moves forward with its automation projects, integrates new generation and intermittent energy sources, increases exports and implements new interconnections. Hence the need for initiatives like the deployment of an integrated architecture for information and communication systems, the move to a digital communication network and the implementation of NG-SONET/IP-MPLS.*

- We have continued modernizing the communication network by deploying digital microwave links between Bryson and Vignan substations and by completing the Lévis–Manic and Micoua–Chicoutimi projects.
- In the Côte-Nord region, we continued Project 3M, which consists in digitizing the 20 microwave links that form the communication network connecting the Manic-5 complex to Manicouagan, Arnaud and Montagnais substations. The project is slated for completion in 2013.
- We also continued deploying a next-generation synchronous optical network (NG-SONET) based on Internet protocol – Multiprotocol label switching (IP-MPLS). After the Montréal Centre link (2008), we commissioned the links in the Montréal–Québec corridor, which connect some 40 telecommunication sites.
- To support the interconnection with Ontario, we commissioned a digital link between Chénier and Outaouais substations.



◀ Engineers François Guay and Karine Gauthier using the Hypersim simulator to test the performance of protection and control systems before deployment on the transmission grid.

▼ TM4 MΦTIVE™, the latest-generation electric motor developed by our subsidiary TM4.



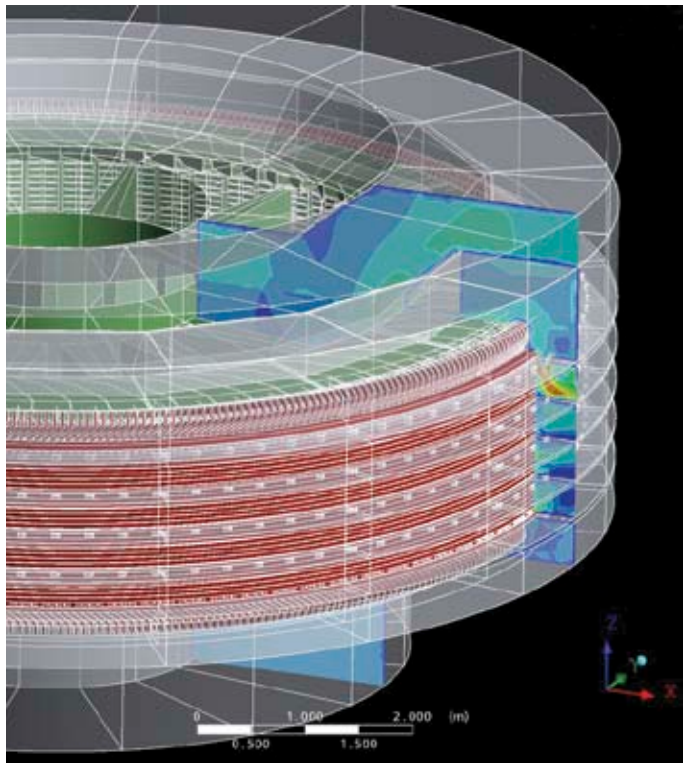
- We also continued the connection of Eastmain-1-A and Sarcelle powerhouses to the Hydro-Québec telecommunications network. In addition, we completed the connection of Murailles workcamp near the Romaine-2 jobsite.
- With a view to continuous improvement, we are aligning our methods and work processes with ICT best practices.
  - For the management, development and maintenance of systems and applications, we selected the CMMI (Capability Maturity Model Integration) framework. In 2010, we began implementing this framework after reviewing our software engineering and project management processes. For IT service management, we are turning to the ITIL (Information Technology Infrastructure Library) model and are now running a pilot project.
  - To reduce the number of platforms associated with information and communication systems, we have created a virtualization centre that runs some 720 virtual servers. Virtualization consists in partitioning each physical server into several virtual machines, thus maximizing the use of hardware.
  - Extensive effort was devoted to enterprise systems. We finished modernizing and optimizing SAP and related equipment, and introduced a self-serve approach for ID and access management. At the same time, we improved processes related to customer systems, including the billing process. These projects were conducted through a new external partnership approach that we adopted to save time and money.
- The expertise of our ICT personnel was called upon in Hydro-Québec Distribution's advanced metering infrastructure (AMI) project. Their work led to the selection and implementation of an MDMS (Meter Data Management System) solution.

- The security of information and communication systems is of paramount importance. In 2010, we successfully completed the last projects under the three-year corporate ICT security program launched in 2008 and developed a master plan for setting priorities for the 2011–2015 program.
- We continued working on projects to enhance the security of the communication network to ensure that it is in line with the requirements of industry (ISO 27001), the North American Electric Reliability Council and our own security standards.

## OPEN INNOVATION

*We use an R&D partnering approach to benefit from complementary expertise and new technologies, and to share resources and potential risks. In 2010, we pursued productive collaborative efforts with universities, public research agencies and industrial partners in and outside Québec.*

- Hydro-Québec contributed \$5.0 million to Québec universities for research contracts and 21 research chairs.
- In collaboration with the Ouranos consortium on regional climatology and adaptation to climate change, we produced a number of scenarios to assess the impact of climate change on electricity demand and available water resources. This work will help us develop real-world adaptation strategies.
- In 2010, we entered into 46 partnerships with public and private research groups. Such alliances provide us with real technical and operational benefits while giving exposure to Québec expertise and helping us gain insight into strategic issues in our field, as illustrated below.
  - With RSW, we will assess the performance and efficiency of two prototype river hydrokinetic turbines installed in the Saint-Laurent near Montréal. One of the turbines will be equipped with a generator custom-developed by subsidiary TM4.



◀ Numerical simulation of generator response at Beauharnois generating station as part of the AUPALE project, aimed at increasing generator capacity in Hydro-Québec's fleet.

▼ An experimental distribution line installed at the IREQ site to test the technologies and concepts deployed in the pilot interactive grid set up in the South Shore area near Montréal.



- With Alstom, we will assess how effectively the Scompi robot performs in-shop polishing to reduce hydrodynamic friction affecting turbine runner performance. If the results are favorable, we will study whether industrial development of the process is feasible. The IREQ-developed Scompi welding robot can perform a range of maintenance and repair jobs on turbines and gates.

- With EDF, we are studying transformer service life and performing dielectric tests.

- With the CANMET Energy Technology Centre – Varennes, we are working on waste heat recovery.

- As part of the PREDDIT project on integrated turbine diagnostics and degradation prediction, we formed a consortium with several partners: École de technologie supérieure, École Polytechnique de Montréal, Alstom, the Institute for Aerospace Research and the Aerospace Manufacturing Technology Centre.

- Hydro-Québec hosted major international scientific and technical meetings in 2010, particularly on energy storage and robotics.

- We hosted the 15th International Meeting on Lithium Batteries (IMLB). Chaired by IREQ's Karim Zaghbi, Manager – Energy Storage and Conversion, the event drew some 1,100 participants from around the world.

- We organized the 1st International Conference on Applied Robotics for the Power Industry, CARPI 2010. Chaired by IREQ's Serge Montambault, Project Coordinator – Robotics and Civil Engineering Expertise, the event attracted more than 150 attendees from 22 countries, representing power companies, research centres, universities and scientific organizations.

## GROUND TRANSPORTATION ELECTRIFICATION

*Hydro-Québec plays an active role in developing electric mobility, a crucial factor in curbing greenhouse gas emissions. In 2010, the company expanded its initiatives under its action plan for electric transportation, presented in the Strategic Plan 2009–2013. It was a year of many achievements: technological breakthroughs, new partnerships and commercial agreements in the field of battery materials, expanded production capacity for electric motors developed by TM4, participation in a number of electric vehicle trial programs, deployment of charging infrastructure, etc. We also had fruitful discussions at the 15th International Meeting on Lithium Batteries, held in Montréal in the summer on Hydro-Québec's initiative.*

- In the area of batteries, we made spectacular progress, particularly regarding charging time. IREQ demonstrated those achievements at the 21st World Energy Congress with the GreenRunner electric vehicle developed by Taiwan-based Pihsiang Energy Technology and equipped with a battery that uses processes and materials under Hydro-Québec licence. Key results:

- Full charging of a 16-kWh battery in four minutes, using a quick-charge station

- Enhanced energy and power performance

- Battery life increased from 20,000 to 30,000 charge/discharge cycles

- IREQ set up an energy storage laboratory primarily consisting of a dry room for assembling lithium-ion batteries and a nanopowder room for creating and using nanometre-sized particles.

- We entered into various international partnerships, including two for the development of new materials and three for the marketing of battery materials.

▼ *Demonstration of LineScout at the 1st International Conference on Applied Robotics for the Power Industry (CARPI), held in Montréal in October.*



▲ CREDIT: NORMAND HUBERDEAU

▼ *Hydro-Québec installed charging stations in Boucherville to study the behavior of drivers participating in Canada's largest all-electric vehicle pilot project. Testing began in December with the delivery of the first five Mitsubishi i-MiEVs.*



- We reached an agreement with our partners and joint holders of intellectual property rights over lithium iron phosphate and its carbon coating, a compound that can be used to manufacture lithium-ion batteries. Under the agreement, new licences will be granted to major industrial corporations, in addition to the licences already held by Sony and Süd-Chemie, a German firm. We anticipate that this technology will be widely used, particularly in ground transportation and energy storage.

- TM4 expanded its electric powertrain production capacity, which is now 5,000 units per year. As at December 31, 2010, it had delivered nearly 100 powertrains to Indian automaker Tata Motors for demonstration projects to be run in the United Kingdom and Norway starting in mid-March 2011.

- In 2010, Hydro-Québec and its partners made headlines by teaming up with automakers to run electric vehicle demonstration and test programs and install charging stations.

- In March, Hydro-Québec, with the Québec government and Université Laval, joined a Canadian program to test the Toyota Prius Plug-In Hybrid under real-world conditions.

- In June, Hydro-Québec signed a memorandum of understanding with the Renault-Nissan Alliance, the Québec government, the cities of Montréal and Québec, and Québec's Agence de l'efficacité énergétique to establish a working group that studied the planning of an electric vehicle charging infrastructure and the promotion of electric mobility in Québec. At the same time, Hydro-Québec undertook to roll out a charging infrastructure in the Montréal and Québec areas for the 50 Nissan LEAFs that will join the fleet of Communauto, one of the world's largest car-sharing services, in 2011.

- Hydro-Québec is the only Canadian electrical utility to participate in the North American test and demonstration program for plug-in hybrid electric vehicles (PHEVs) initiated by Ford and the Electric Power Research Institute. In July 2010, it began testing a second Ford Escape PHEV prototype.

- Under a partnership entered into with Chevrolet Canada in December 2010, Hydro-Québec will add 20 Chevrolet Volts to its fleet starting in summer 2011. The Volt is equipped with a lithium-ion battery backed up by a gasoline-powered generator, giving it a range of about 580 km. Through this initiative, the company will include extended-range vehicles in its tests in order to assess the impact such vehicles may have on reducing greenhouse gas emissions.

- Mitsubishi Canada, the city of Boucherville and Hydro-Québec launched Canada's largest all-electric vehicle pilot project. Over the next three years, as many as 50 Mitsubishi i-MiEVs will be tested under real-world conditions. Mitsubishi Canada delivered the first five cars in December and others will follow beginning in June 2011. Hydro-Québec has deployed charging stations in Boucherville and will document user charging patterns.

- Also in December, Hydro-Québec announced its participation in the rollout of charging facilities for customers of Le Centre Sheraton Montreal Hotel. This initiative by Sheraton is a first for Canada's hotel industry.

# A LONGSTANDING COMMITMENT TO SUSTAINABILITY

► The weir at kilometre point 170 on the Rupert helps maintain the water level in Lac Nemiscau—an important benefit for the lakeshore village of Vieux-Nemaska.



In 2010, we celebrated 40 years of environmental activities at Hydro-Québec. Today, sustainability is central to our strategy, which revolves around three main axes of development, namely renewable energies, energy efficiency and technological innovation.

Hydro-Québec's *Sustainable Development Action Plan 2009–2013* lays out 10 actions in support of Québec's *Government Sustainable Development Strategy 2008–2013*. Accompanying these actions, which are consistent with Hydro-Québec's business objectives, are targets and indicators for evaluating the company's performance in fulfilling its commitments (for the 2010 results, see page 41).

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## THE ENVIRONMENT: AN ONGOING FOCUS

*Preserving the environment is the focus of constant attention at Hydro-Québec. Because we know that every action counts, we apply the principles of sustainability both in our day-to-day operations and on our jobsites. Our efforts extend to every sphere: environmental impact assessments, environmental compliance monitoring at jobsites, site rehabilitation, management of the vehicle fleet and electrification of ground transportation, recycling and sustainable procurement, education of employees and the public about energy efficiency and environmental issues, etc.*

■ Hydro-Québec was named Utility of the Year by *Electric Light & Power* magazine. The company earned this honor for several reasons, including its environmental record—in particular, its contribution to the fight to reduce greenhouse gas (GHG) emissions—outstanding profitability, affordable rates and initiatives in the fields of energy efficiency and technological innovation.





◀ Archaeological excavations in preparation for the Romaine project.

▼ A telemetry station equipped with solar panels records salmon migration through Chutes-à-Charlie.



- We completed our study of net GHG emissions from Eastmain 1 reservoir (i.e., reservoir emissions less the GHGs that would have been emitted or absorbed by natural lakes and rivers over a 100-year period). This wide-ranging study ran for seven years and involved over 80 specialists and researchers at the Université du Québec à Montréal, McGill University and Environnement Illimité. Altogether, more than 100,000 measurements were recorded. The conclusion: A hydroelectric generating station located in a boreal region is one of the lowest-emitting generation options. In fact, in Québec, average GHG emissions from hydropower are comparable to those from wind power, and the level of gross emissions from reservoirs is similar to that of natural lakes.
- As part of the environmental monitoring program for the Romaine project, we used the laser-based IcthyoS fish counting system to survey the Atlantic salmon population in the Romaine and its tributaries. The IcthyoS system—the most advanced on the market—makes it possible not only to count the fish, but also to classify them according to size, determine the direction they are swimming in and establish the date and time they passed through. This information will allow an unprecedented level of precision in our follow-up studies.
- We installed an industrial composter at the workcamp at Kilometre 1 on the Route de la Romaine in fall 2009, and another one at Murailles workcamp in December 2010. Around 10 tonnes of cardboard and 21 tonnes of organic matter had been diverted from landfills by the end of 2010. The compost produced will be used in restoring the workcamp sites once construction on the Romaine project has been completed.

- On October 1, the vehicle repair shop operated by the Joliette shared services centre was awarded Silver Level CLÉ VERTE environmental certification. This certification by Nature-Action Québec recognizes auto shops that fulfill criteria based on environmental best practices and that exceed legal and regulatory requirements for management of such aspects as residual materials, processes and equipment (tanks, water-oil separators, etc.). Like all other CLÉ VERTE-certified shops, the Joliette facility proudly undertook to meet higher standards for environmental management.
- In 2010, our research institute, IREQ, and Hydro-Québec TransÉnergie purchased an air-bearing transporter for rail-shipping transformers weighing up to 400 tonnes from the ABB plant and Hydro-Québec TransÉnergie's maintenance and repair shop in Varennes to IREQ's high-voltage laboratory. Previously, transformers weighing more than 280 tonnes had to be shipped by truck, a process that called for huge quantities of abrasives to be spread on the road in winter to ensure perfect driving conditions. In addition, the trucks drove into the laboratory through a large door, causing considerable heat loss. Loads transported by rail, on the other hand, pass through an air lock before entering the main hall.
- In 2010, we replaced 236 of our light-duty vehicles—42% of those replaced during the year—with more energy-efficient models.
- The insulating oil used in our facilities is systematically decontaminated and recycled. Our rate of reuse was 91% in 2010, comparable to previous years.



◀ Nets are set out to evaluate the larval drift of lake sturgeon in the Rupert.

▼ Clément Napess and Bruce Lafontaine work for Société des entreprises Innues d'Ekuanitshit, which operates a composter at the Kilometre 1 workcamp on the Route de la Romaine.



- Last spring, construction began on the Centre for Sustainable Development in Montréal, on a Hydro-Québec property where an eco-park is also planned. The new building is being designed to the LEED Platinum standard and will provide a place for public forums, education and research on sustainable development. The official opening is slated for 2011.

- Hydro-Québec earned BOMA BEST certification for its head office in 2009 and for 15 other administrative buildings in 2010. BOMA BEST, a pioneering environmental certification program established by BOMA Canada, evaluates the environmental and energy performance of commercial buildings according to specific criteria.

- We published a revised and expanded French edition of Hydro-Québec's *Guide to Ornamental Trees and Shrubs*. The new edition presents 1,760 plant species and varieties found in Québec, along with advice on planting trees and shrubs near distribution lines.

- The *Canadian Business and Biodiversity Case Studies Compendium* (Volume 1, 2010) includes measures taken by Hydro-Québec to conserve biodiversity along its distribution lines. The compendium is published under the Canadian Business and Biodiversity Program, in which Hydro-Québec is a participant.

- We contributed to a guide to good landscaping practices, titled *Paysages du Québec – Manuel de bonnes pratiques*, put out by the organization Paysages estriens. The guide is intended for Québec land use planners, municipal officials and anyone else working to enhance and preserve landscapes. Among other things, we produced data sheets on transmission and distribution lines.

## PARTNERING FOR GREATER BENEFIT

*As a socially responsible company, Hydro-Québec supports various community initiatives to improve quality of life, preserve the natural heritage and develop a sustainability culture. The decisive role we play in regional land use, as a result of our major infrastructure projects, goes hand in hand with our desire to partner with host communities.*

- Hydro-Québec conducted a survey of regional county municipalities (RCMs), urban communities and other municipalities in Québec to determine their expectations and their satisfaction with the company's operations. The participation rate was 71.2%. The rate of general satisfaction reached 7.73 out of 10, up from 7.59 in 2007. Two points related to emergency situations (power failures) scored more than 8 out of 10: the introduction of a dedicated telephone line for municipal authorities and the regular transmission of updated information on the progress of work to restore service. The respondents also appreciated the quality of information provided on scheduled outages.

- In 2010, the Fondation Hydro-Québec pour l'environnement allocated nearly \$1 million to 15 projects in nine of the province's administrative regions. For example, we supported an initiative by the Musée du Fjord to restore, preserve and enhance the banks of the Rivière Ha! Ha! delta, which were severely affected by the torrential rains that struck the Saguenay region in July 1996. The Foundation also financed a project by the Sud-de-l'Estuaire ZIP Committee to increase public awareness of the richness and fragility of the coastal environment around the Baie de Rimouski.

▼ Weir at kilometre point 223 of the Rupert. Downstream, Hydro-Québec has set up a multispecies spawning ground for walleye, suckers and whitefish, as well as two fish passes.

► Hydro-Québec built two spawning grounds at kilometre point 290 of the Rupert: one downstream, for lake sturgeon, and one upstream, for brook trout.



■ Hydro-Québec contributes to Québec society in many ways. In 2010, we granted \$18.3 million in donations and sponsorships to support organizations and projects throughout the province. For more information, see our Web site at [www.hydroquebec.com/donations-sponsorships](http://www.hydroquebec.com/donations-sponsorships).

■ Under our Integrated Enhancement Program, the RCM of La Haute-Gaspésie and its eight municipalities will share \$1,133,559 to carry out various community initiatives (improving the environment, building sports and recreation facilities, etc.). This amount corresponds to 1% of the capitalized cost of the Goémon–Gros-Morne line.

### HYDRO-QUÉBEC'S SUSTAINABLE DEVELOPMENT ACTION PLAN 2009–2013

The *Sustainable Development Action Plan 2009–2013* consists of a series of actions to preserve the environment and promote social and economic development. They are consistent with the company's business objectives, which revolve around renewable energies, energy efficiency and technological innovation. Hydro-Québec reports formally on its performance with respect to the Action Plan in its *Sustainability Report 2010*.

Action	Indicator	Results as at December 31, 2010
1 Build hydropower projects and contribute to the development of wind power.	Capacity and energy available	138 MW <sup>a</sup>
2 Increase the capacity of existing hydroelectric generating stations.	Gains in peak capacity	52 MW <sup>a</sup>
3 Step up energy efficiency initiatives.	Recurring energy savings	5.3 TWh <sup>b</sup>
4 Continue to help low-income customers.	Number of arrangements <sup>c</sup> with low-income customers	41,161
5 Reduce transport-related GHG emissions.	Atmospheric emissions from the vehicle fleet	55,412 t CO <sub>2</sub> eq.
6 Promote reduction at source, reuse and recycling.	Number of at-source reduction or reclamation programs introduced or optimized	7 <sup>a</sup>
7 Establish specifications for sustainable procurement.	Number of product purchasing guides that include sustainable specifications	3 <sup>a</sup>
8 Inform and educate employees regarding sustainability and the company's approach. Help employees learn to apply sustainability principles to their daily activities.	Percentage of employees educated	56%
	Percentage of employees who have sufficient knowledge about sustainability	29% <sup>a</sup>
9 Improve vegetation control methods on the distribution system to better protect biodiversity.	Percentage of vegetation control operations per year with integrated measures for promoting biodiversity	82%
10 Organize sustainable events and promote responsible management of events sponsored by Hydro-Québec.	Average number of contributing measures implemented among the 25 measures selected for the sustainable management of events	12.9/25

a) Cumulative results for 2009 and 2010.

b) Savings achieved since the Energy Efficiency Program was launched in 2003.

c) Including long-term arrangements.

# A MAJOR PLAYER IN THE QUÉBEC ECONOMY

► New employees attending a course designed to familiarize them with Hydro-Québec: Yacine Elaguab, Civil Engineer – Lines, Hydro-Québec TransÉnergie; Gabrielle Tabbakh, Planning and Control Advisor, Hydro-Québec Production; Andréanne Turgeon, Assistant Contract Administrator, Hydro-Québec Équipement et services partagés; Niokhor Gueye, Customer Relations Officer, Hydro-Québec Distribution.



With facilities all over the province, Hydro-Québec plays a leading role in Québec's economy: as an employer, first of all, since it has about 23,000 employees at 150 different locations, but also as a project proponent, investing significantly in developing, modernizing and reinforcing the power system as well as in technological innovation. In 2010 alone, work was in progress at more than a thousand jobsites, large and small, representing a total capital investment of nearly \$4 billion.

In addition, we are involved in working groups and other initiatives of various national and international organizations active in the power industry. We also share our know-how with developing countries, under various cooperation projects.

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## **SKILLED, MOTIVATED EMPLOYEES**

*To fulfill its mission to the best of its capabilities, Hydro-Québec counts on skilled, motivated employees. That is why we take every possible measure to maintain a harmonious, safe, healthy work environment. At a time when we are experiencing large numbers of retirements, our priorities are recruitment, preservation of skills and know-how, and integration of new hires. We are therefore putting particular emphasis on targeted training programs to renew our knowledge capital. In addition, we have repositioned the company on the labor market to enhance its attractiveness as an employer.*



◀ *Gérald Fleurent, Technician – Protection and Control System Maintenance at Hydro-Québec TransÉnergie, mentored Mathieu Gagné during his internship in industrial electronics technology.*

▼ *After being promoted to a management position in 2009, Martin Charbonneau took part in an innovative induction and training program that will enable him to take up his new duties sooner.*



- In 2010, we renewed another collective agreement, and now have agreements with all eight of the company's unions. These agreements, which will remain in effect until either December 2013 or December 2014, will help maintain a positive working atmosphere, since 84% of Hydro-Québec's employees are unionized.
- Of the 3,145 permanent employees eligible for retirement in 2010, 1,157 left the company, compared with 1,072 out of 3,036 in 2009. In the last five years, retirements have totaled approximately 25% of the permanent workforce. According to our forecasts, retirements will peak in 2012 and then gradually decline. Altogether, more than 30% of the workforce is expected to retire between 2011 and 2015. In anticipation of this massive change, we have taken steps to preserve and renew the know-how required for management positions and key jobs in our core businesses. Our efforts so far have yielded favorable results.
- We carried out a number of activities to prepare the next generation of managers and strengthen leadership abilities. Among other things, we revised the skills profiles of managers at all levels to fit the company's needs, and incorporated them into the staffing, performance management and succession management processes. We also initiated a management skills development program for front-line managers.
- According to our annual survey, new hires rated their satisfaction with employee induction and integration procedures at 8.4 out of 10, the same result as in 2009. Of the 1,794 new hires in 2010, 70% were under the age of 35.

- Hydro-Québec is a founding partner of the Institute of Electrical Power Engineering (IEPE). In 2010, we awarded 15 general scholarships and 37 traveling scholarships to 41 IEPE students, for a total contribution of \$96,750. In all, 144 IEPE graduates—including 17 in 2010—have joined the company's ranks since the Institute was established in 2001.
- We offered internships to 330 university students in graduate and undergraduate programs. We also received 54 college-level trainees, most of them enrolled in industrial electronics.
- In 2010, we devoted 3.5% of the total payroll to training programs, and 16,620 employees took part in at least one training activity. While the many retirements mean greater employee mobility, and consequently increased training needs, we were able to reduce the costs involved in this process by optimizing our efforts during the year.
- Under our Equal Access to Employment Program, we launched several initiatives to foster greater openness to difference within the company, including specific training developed for managers and human resources personnel. The goal of the Equal Access to Employment Program is to bring the profile of our workforce into line with the market reality, based on the rates of availability established for the five groups targeted by the *Act respecting equal access to employment in public bodies*, namely women, Aboriginal people, ethnic minorities, visible minorities and people with disabilities.
- We implemented various measures to ensure that all employees remain vigilant and careful when it comes to workplace health and safety, and to encourage them to adopt safe behaviors.
- The frequency of work-related accidents decreased for the second year in a row, to 2.40 per 200,000 hours worked.



◀ Project engineer Junji Yamaguchi has been working on transmission and construction projects at Hydro-Québec Équipement et services partagés since August 2010.

▼ Philippe Desrosiers and Jean-Loïc Fontaine were presented with Hydro-Québec's Énergie award by Jean-Pierre Tardif, Advisor – Marketing Communications, for their magnetohydrodynamic propulsion project.



## COLLECTIVE BENEFITS

*Hydro-Québec is a driving force in regional economic development in Québec through its day-to-day operations, construction and innovation projects, purchases from independent power producers and procurement of goods and services. Every year, its spending and capital investments add up to billions of dollars and thousands of jobs. Once again, Hydro-Québec's jobsites made a significant contribution to the vitality of a number of regional economies in 2010.*

- The Eastmain-1-A/Sarcelle/Rupert project employed 2,371 people at the peak of construction in 2010.
- At the Romaine complex, 1,112 people were on the job at the peak of construction in 2010. Contracts and expenditures in the Côte-Nord region amounted to \$122 million. This project will ultimately generate \$3.5 billion in spinoffs in Québec, including \$1.3 billion for Côte-Nord. Between 2012 and 2016, the peak labor force will be in excess of 2,000 workers, most of whom will come from the region.
- As much as possible, Hydro-Québec spreads its purchasing throughout the province, while applying strict procurement criteria and promoting healthy competition so as to benefit from the best possible prices.

## PROCUREMENT OF GOODS AND SERVICES (\$B)<sup>a</sup>

2010	2009	2008	2007	2006
3.0	2.9	2.7	2.6	2.7

- Procurement of goods and services inside and outside Québec totaled \$2,998 million in 2010, compared with \$2,925 million in 2009. It can be broken down as follows:
  - \$1,321 million for the purchase of goods
  - \$25 million for rentals and leasing
  - \$1,174 million for specialized services and other work
  - \$478 million for professional services
- Goods and services procured from Québec-based companies totaled \$2,725 million, or 91% of all procurement.
- The number of jobs in Québec supported by our overall procurement of goods and services is estimated at 20,150, including 13,750 direct jobs.
- To ensure security of supply in goods and services, and benefit from favorable terms, we continued to diversify our sources. In addition, we signed agreements with our main suppliers, particularly for the goods and services needed to conduct our core operations and supply our jobsites.
- In 2010, our hydroelectric projects generated 3,944 construction site jobs,<sup>b</sup> not including Hydro-Québec employees.

a) Excluding procurement by Société d'énergie de la Baie James.

b) Including projects carried out by Société d'énergie de la Baie James.

▼ President and CEO Thierry Vandal and Ranzi Chahine, president of the Hydro-Québec engineers' union, sign a new labor agreement. In the background is a painting by Rita Letendre titled Tropiques II, on loan from the Musée national des beaux-arts du Québec. © Rita Letendre



▼ Eleven recent immigrants visited Hydro-Québec to take part in a professional networking day organized under the Equal Access to Employment Program.



#### REGIONAL SPINOFFS FROM HYDRO-QUÉBEC PROCUREMENT (\$'000)<sup>a</sup>

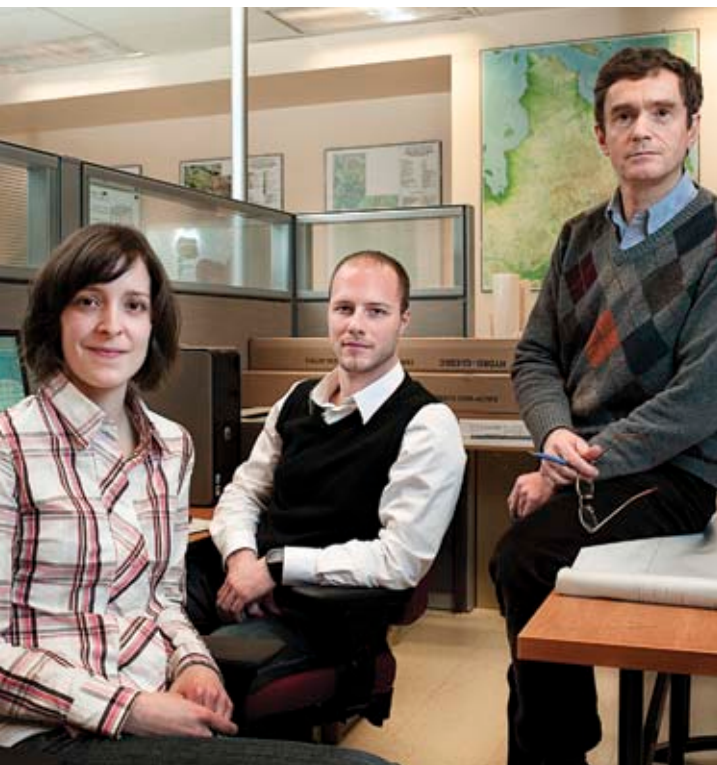
Administrative region	Procurement of services <sup>b</sup>	Procurement of goods <sup>c</sup>	Total
Abitibi-Témiscamingue (08)	15,821	9,018	<b>24,839</b>
Bas-Saint-Laurent (01)	15,806	4,614	<b>20,420</b>
Capitale-Nationale (03)	172,316	36,887	<b>209,203</b>
Centre-du-Québec (17)	106,991	35,998	<b>142,989</b>
Chaudière-Appalaches (12)	77,920	38,278	<b>116,198</b>
Côte-Nord (09)	111,529	9,869	<b>121,398</b>
Estrie (05)	12,420	18,924	<b>31,344</b>
Gaspésie-Îles-de-la-Madeleine (11) <sup>d</sup>	11,087	688	<b>11,775</b>
Lanaudière (14)	31,425	31,726	<b>63,151</b>
Laurentides (15)	44,714	20,219	<b>64,933</b>
Laval (13)	190,631	37,523	<b>228,154</b>
Mauricie (04)	133,021	50,641	<b>183,662</b>
Montérégie (16)	122,067	261,746	<b>383,813</b>
Montréal (06)	410,824	510,280	<b>921,104</b>
Nord-du-Québec (10)	20,357	2,425	<b>22,782</b>
Outaouais (07)	5,881	17,338	<b>23,219</b>
Saguenay-Lac-Saint-Jean (02)	127,974	28,347	<b>156,321</b>
Total	1,610,784	1,114,521	<b>2,725,305</b>

a) Amounts billed by suppliers located in the region, excluding procurement by Société d'énergie de la Baie James.

b) Specialized services, professional services and other work.

c) Purchases and rentals.

d) In the regional county municipality of Matane and the Gaspésie-Îles-de-la-Madeleine region, contracts awarded under Hydro-Québec Distribution's calls for wind power resulted in spinoffs estimated at \$105 million in 2010.



◀ Geography students Karine Grandmont and Éric Lesage completed an internship in the geomatics unit of Hydro-Québec Équipement et services partagés and SEBJ under the supervision of Étienne Govare.

▼ Angéline Canapé, who comes from the Innu community of Betsiamites, is an employment advisor at the Romaine-2 jobsite.



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

	2010	2009
Dividend (\$M)	<b>1,886</b>	2,168
Capital tax (\$M)	<b>51</b>	132
Public utilities tax (\$M)	<b>262</b>	188
Water-power royalties (\$M)	<b>557</b>	567
Municipal, school and other taxes (\$M)	<b>35</b>	35
Guarantee fees paid to the shareholder for debt securities (\$M)	<b>183</b>	174
Percentage of goods and services procured from Québec companies	<b>91</b>	87
Direct jobs supported by procurement, including procurement outside Québec (person-years)	<b>13,750</b>	12,333
Contributions and commitments under the Integrated Enhancement Program (\$M) <sup>a</sup>	<b>5.9</b>	1.7

a) Under the company's Integrated Enhancement Program, communities affected by new transmission projects receive grants equivalent to 1% of the value initially approved for facilities covered by this program.

### INTERNATIONAL INFLUENCE

*Hydro-Québec is involved in the activities of national and international organizations such as the Canadian Hydropower Association, the International Hydropower Association, the World Energy Council, the e8 and the International Council on Large Electric Systems (CIGRE). We also share our know-how in training and cooperation projects in various emerging countries in the French-speaking world.*

■ As co-organizer and principal sponsor, Hydro-Québec hosted the 21st World Energy Congress in Montréal from September 12 to 16. The event brought together more than 7,000 participants, 300 speakers and 150 exhibitors to address the topic *Responding Now to Global Challenges – Energy in Transition for a Living Planet*. The Congress afforded an opportunity for a number of important meetings, including one between energy ministers from French-speaking

countries. In the official Congress declaration, the World Energy Council presented a new road map focusing on sustainable growth of the energy industry and addressing the following issues: security of supply, environmental protection and climate change, and economic inequality and its corollary, energy poverty. The Council further defined the constraints and opportunities associated with current energy issues (including the energy-water-food connection) and laid out the changes required in terms of adjusting public policies and fostering international cooperation in the energy sector.

■ At the e8 summit in May, a working group headed up by Hydro-Québec submitted a report describing the e8 members' electric mobility projects and business models, along with the conditions required to speed up worldwide introduction of electric vehicles. Also for the e8, Hydro-Québec worked with the International Electrotechnical Commission to set up a strategic forum intended to accelerate the standardization process for electric vehicle charging systems.

■ In August, Hydro-Québec took part in the 43rd Session of the International Council on Large Electric Systems (CIGRE) in Paris. This event drew more than 4,000 delegates and visitors from the world over with a very full program: presentations on all aspects of large power systems, discussions of the technical reports of CIGRE's study committees, panels and round tables examining current issues, etc.

■ The Fonds Hydro-Québec pour la Francophonie renewed its financial support for the Institut de l'énergie et de l'environnement de la Francophonie for its energy and environmental capacity-building program. The fund financed a dozen projects in 2010, mainly in the area of environmental management training. The company also supported cooperation projects working toward the development of renewable energies in Haiti, Burkina Faso, Rwanda and Senegal.



# MANAGEMENT'S DISCUSSION AND ANALYSIS

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## FINANCIAL REVIEW

### MANAGEMENT'S DISCUSSION AND ANALYSIS

- 48 Overview
- 49 Consolidated Results
- 51 Financial Position
- 53 Segmented Information
- 63 Outlook
- 64 Integrated Enterprise Risk Management

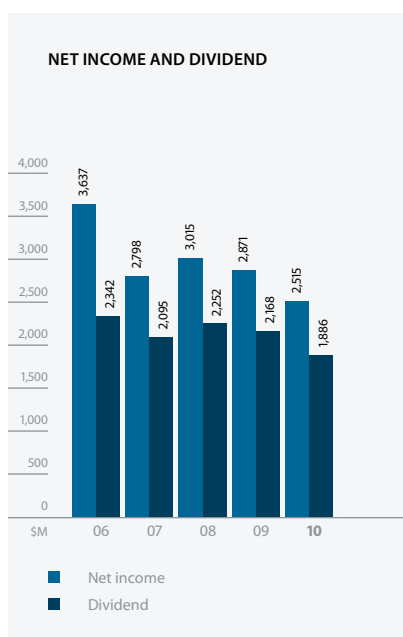
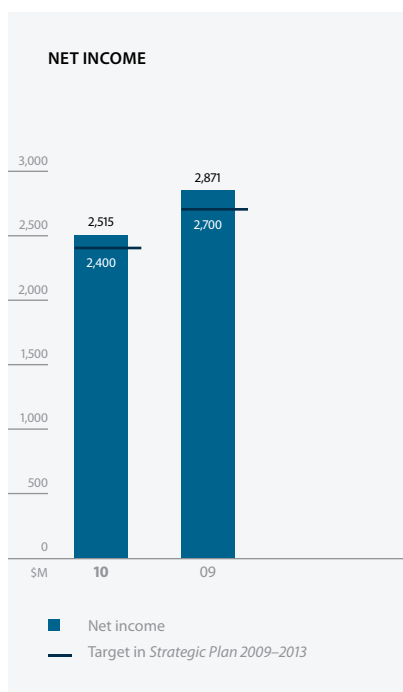
### CONSOLIDATED FINANCIAL STATEMENTS

- 68 Management Report
- 69 Independent Auditors' Report
- 70 Consolidated Statements of Operations
- 70 Consolidated Statements of Retained Earnings
- 71 Consolidated Balance Sheets
- 72 Consolidated Statements of Cash Flows
- 73 Consolidated Statements of Comprehensive Income
- 74 Notes to Consolidated Financial Statements
  
- 96 Five-Year Review
- 99 Consolidated Results by Quarter

The Management's Discussion and Analysis should be read in conjunction with the consolidated financial statements of Hydro-Québec and the notes thereto. The financial information and tabular amounts presented herein are expressed in Canadian dollars, unless otherwise indicated. The consolidated financial statements take into account certain accounting practices that are specific to enterprises subject to rate regulation. These practices are detailed in Note 3 to the consolidated financial statements.

Hydro-Québec would like to point out that this analysis, and especially the Outlook section, contains statements based on estimates and assumptions concerning future results and the course of events. Given the risks and uncertainties inherent in any forward-looking statements, Hydro-Québec's actual future results could differ materially from those anticipated. It should also be noted that certain financial and operating data for previous years have been restated due, among other things, to the adoption of the straight-line depreciation method, and some have been reclassified to respect the presentation adopted for the current year. Finally, the information contained herein takes into account any significant event that occurred on or before the date of publication of this Annual Report.

## Overview



Hydro-Québec earned **net income** of \$2,515 million in 2010, exceeding the \$2,400-million target in the *Strategic Plan 2009–2013*, in spite of difficult conditions as a result of precipitation levels considerably lower than the historic mean across the entire hydroelectric generating fleet. This positive result reflects strict control over operating expenses and higher-than-expected demand for electricity from industrial customers in Québec.

We achieved this result while maintaining prudent management of the company's reservoir storage: much of the shortfall in precipitation was offset during the year by a 50% reduction in the net electricity exports initially planned for 2010.

Net income decreased by \$356 million from \$2,871 million in 2009, among other things because Hydro-Québec Production limited its net exports, especially during the second half of the year. Revenue from net electricity exports therefore decreased by \$224 million to \$1,034 million in 2010. This result takes into account the \$260-million positive effect of hedging operations carried out by Hydro-Québec to counter the impact of lower energy prices and the appreciation of the Canadian dollar on its wholesale activities. This favorable effect demonstrates the effectiveness of the company's active management of market risks. Financial expenses, for their part, increased by \$128 million over 2009.

**Revenue** totaled \$12,338 million, which is comparable to the \$12,333 million recorded in 2009. Revenue from electricity sales amounted to \$12,019 million, versus \$12,055 million in 2009: it decreased by \$43 million in Québec and increased by \$7 million outside Québec. Other revenue was \$319 million, compared to \$278 million in 2009.

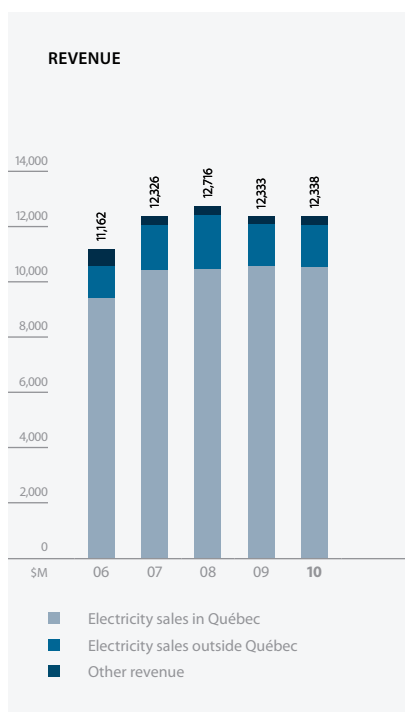
**Total expenditure** amounted to \$7,297 million, or \$233 million more than in 2009. The difference is due to a \$247-million increase in short-term electricity purchases by Hydro-Québec Production and a \$233-million increase in depreciation and amortization expense. These items were partly offset by an \$86-million decrease in electricity and fuel purchases by Hydro-Québec Distribution and by a \$218-million favorable change in regulatory deferrals, mainly due to the recognition of a \$144-million regulatory asset for revenue variances related to climate conditions as a result of the mild winter of 2010. Operating expenses totaled \$2,581 million, a \$54-million increase from 2009 that resulted from a \$62-million rise in doubtful accounts related to electricity sales in Québec.

**Financial expenses** totaled \$2,526 million, compared to \$2,398 million in 2009, for an increase of \$128 million, mainly because of a higher amount of long-term debt and a decrease in capitalized financial expenses due, among other things, to the start-up of the Rupert diversion in fall 2009.

**Cash from operating activities** totaled \$4.6 billion. This cash allowed the company, among other things, to pay the 2009 dividend of \$2,168 million and to finance a large portion of its investment program, which reached \$4.2 billion in 2010, compared to \$4.3 billion in 2009.

The **dividend** for 2010 amounts to \$1,886 million.

## Consolidated Results



Revenue totaled \$12,338 million, compared to \$12,333 million in 2009. Revenue from electricity sales decreased by \$36 million to \$12,019 million. Sales in Québec accounted for \$10,506 million of this amount, or \$43 million less than in 2009. On markets outside Québec, revenue from electricity sales totaled \$1,513 million, an increase of \$7 million. Other revenue totaled \$319 million, compared to \$278 million in 2009. This \$41-million increase is partly due to higher revenue from point-to-point transmission services provided to external customers. The \$43-million decrease in revenue from electricity sales in Québec resulted from a 3.2-TWh drop in volume related to the mild temperatures in winter 2010, which was offset by a 3.7-TWh increase in demand not associated with special contracts, primarily from industrial customers, and by the April 1, 2009 and 2010, rate adjustments. Demand associated with special contracts with certain large industrial customers increased by 1.3 TWh in 2010. However, the increase in revenue from these sales was counterbalanced by the less favorable impact than in 2009 of hedging operations related to exchange rates and aluminum prices. Risks related to special contracts are absorbed by Hydro-Québec Production. Hydro-Québec also recorded sales of 1.4 TWh or \$48 million as a result of the 60% interest it acquired in December 2009 in Manicouagan Power Limited Partnership, which owns and operates McCormick generating station.

The \$7-million increase in revenue from electricity sales on markets outside Québec is due to a slight increase in sales volume at Hydro-Québec Production.

Total expenditure was \$7,297 million, or \$233 million more than in 2009.

Operating expenses totaled \$2,581 million, a \$54-million increase from 2009 that resulted from a \$62-million rise in doubtful accounts related to electricity sales in Québec. The efficiency gains achieved by the company were sufficient to offset indexing and annual inflation as well as the additional expenses related to growth in operations, stemming notably from the expansion of the transmission and distribution systems.

Electricity and fuel purchases totaled \$1,390 million in 2010, compared to \$1,207 million in 2009, a \$183-million increase due mainly to a \$247-million rise in the volume of short-term electricity purchases made by Hydro-Québec Production. This increase was partly offset by an \$86-million decrease in electricity and fuel purchases made by Hydro-Québec Distribution as a result of the mild temperatures in winter 2010.

Depreciation and amortization expense totaled \$2,605 million, an increase of \$233 million from 2009. The difference is due to a \$423-million increase in the depreciation of property, plant and equipment, mainly because of the adoption of the straight-line depreciation method, which was applied prospectively to assets related to regulated activities in accordance with a decision made by the Régie de l'énergie, as well as to the impact of the commissioning of capital assets, including the Rupert diversion, in fall 2009. The amortization expense related to regulatory assets and liabilities, recognized in accordance with the conditions established by the Régie, decreased by \$199 million as a result of a \$168-million reduction in amortization of the regulatory asset in connection with the net costs related to retirement of property, plant and equipment and intangible assets, given that only the costs related to Des Cantons substation remained to be amortized in 2010. It should be noted that amortization of regulatory assets and liabilities was taken into account in setting the electricity transmission and distribution rates.

Taxes were \$909 million, compared to \$928 million in 2009. This decrease resulted, among other things, from a reduction in water-power royalties paid by Hydro-Québec Production, due to a lower production volume.

The change in the amounts recognized as regulatory deferrals compared to 2009 resulted in a \$218-million decrease in expenditure, mainly because of revenue variances related to climate conditions and variances in supply costs for electricity in excess of the heritage pool.

Revenue variances related to climate conditions correspond to differences between Hydro-Québec Distribution's actual transmission and distribution revenue and the revenue forecasts established on the basis of the climate normal for rate application purposes. On account of the mild temperatures in winter 2010, the regulatory asset recognized in this regard amounted to \$144 million in 2010, compared to \$10 million in 2009, for a positive variance of \$134 million.

As for variances in supply costs for electricity in excess of the heritage pool, a \$56-million regulatory asset was recorded in 2010 to take into account the fact that the actual supply costs were higher than the costs forecasted for the purpose of rate-setting by the Régie de l'énergie. In 2009, a \$31-million regulatory liability had been recognized in this regard, for an \$87-million positive variance.

#### REGULATORY DEFERRALS – IMPACT ON INCOME (\$M)

	2010		2009		Variance	
Regulatory deferrals	<b>188</b>	↑	30	↓	218	↑
Revenue variances related to climate conditions	<b>144</b>	↑	10	↑	134	↑
Variances in supply costs for electricity in excess of the heritage pool	<b>56</b>	↑	31	↓	87	↑
Other deferrals	<b>12</b>	↓	9	↓	3	↓

Financial expenses totaled \$2,526 million, compared to \$2,398 million in 2009, a \$128-million increase due mainly to a higher amount of long-term debt and a decrease in capitalized financial expenses, presented as a reduction against financial expenses. The decrease in capitalized financial expenses is due in particular to the start-up of the Rupert diversion in fall 2009.

	2010	2009
<b>OPERATIONS AND DIVIDEND (\$M)</b>		
Revenue	<b>12,338</b>	12,333
Operating income	<b>5,041</b>	5,269
Net income	<b>2,515</b>	2,871
Dividend	<b>1,886</b>	2,168
<b>BALANCE SHEETS (\$M)</b>		
Total assets	<b>65,898</b>	64,992
Property, plant and equipment	<b>55,512</b>	53,824
Long-term debt, including current portion and perpetual debt	<b>38,660</b>	37,943
Equity	<b>18,566</b>	18,419
<b>RATIOS</b>		
Interest coverage	<b>1.92</b>	2.11
Return on equity (%)	<b>14.0</b>	16.5
Profit margin (%)	<b>20.4</b>	23.3
Capitalization (%)	<b>32.1</b>	32.6
Self-financing (%)	<b>46.8</b>	41.3

Note: The comparative data include adjustments mainly associated with the change in the accounting policy regarding the depreciation method for property, plant and equipment. This change is described in Note 2 to the consolidated financial statements. In addition, certain comparative figures have been reclassified to reflect the presentation adopted for 2010.

# Financial Position

## OPERATING ACTIVITIES

Cash from operating activities totaled \$4.6 billion in 2010, compared to \$4.8 billion in 2009. These funds were mainly used to pay the dividend for 2009 and to finance a large portion of the investment program.

## INVESTING ACTIVITIES

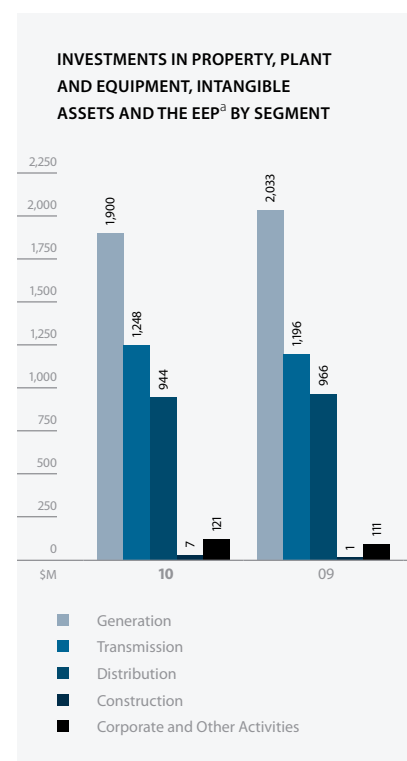
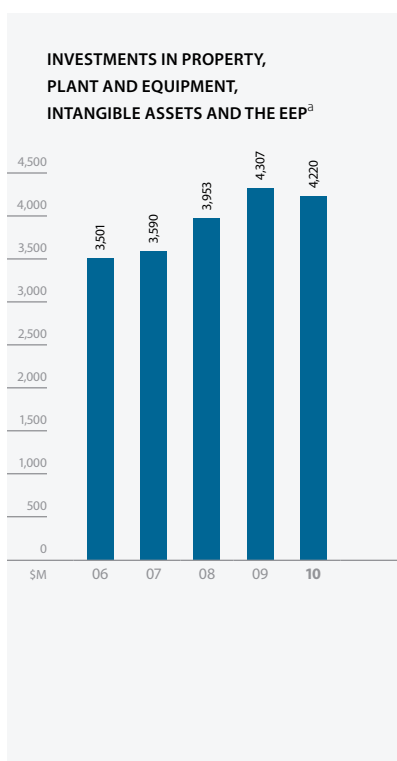
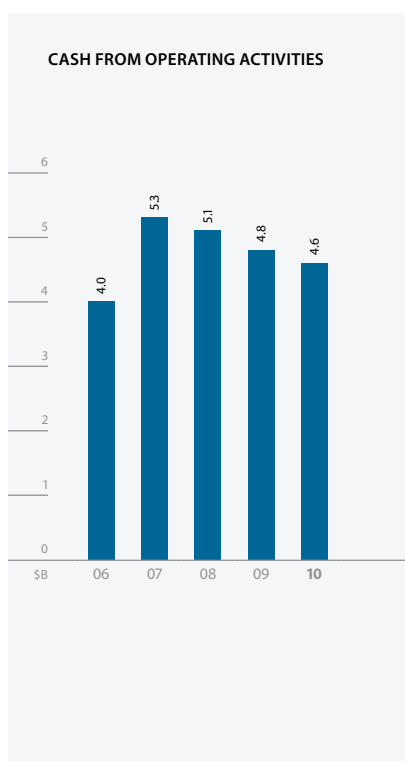
In 2010, Hydro-Québec invested \$4.2 billion in property, plant and equipment, intangible assets and the Energy Efficiency Plan (EEP), compared to \$4.3 billion in 2009. Of this total, \$2.0 billion was invested in development projects and \$2.0 billion in maintaining or improving the quality of assets, while \$0.2 billion went to the EEP.

Hydro-Québec Production invested a total of \$1,900 million in 2010, compared to \$2,033 million in 2009. As expected, a large portion of this amount, \$1,234 million, was invested in development projects such as Eastmain-1-A/Sarcelle/Rupert and the Romaine complex. The amounts allocated to asset maintenance and improvement totaled \$666 million. Among other things, rehabilitation continued at Beauharnois generating station, the La Tuque development and the Manicouagan complex during 2010.

Capital spending at Hydro-Québec TransÉnergie totaled \$1,248 million in 2010, with 34% used to increase transmission capacity and integrate the output from new hydroelectric and wind power facilities. These projects include ongoing work to connect Eastmain-1-A and Sarcelle powerhouses, the completion of Anne-Hébert substation and the Chénier–Outaouais line (the final link in the 1,250-MW interconnection with Ontario) and the continuing work to integrate output from wind farms in the Gaspésie region. The remainder was devoted to long-term transmission system operability, including the project to upgrade the main transmission system, which will extend until 2012.

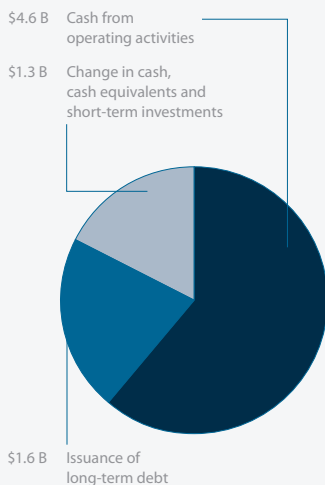
Hydro-Québec Distribution invested \$728 million in order to handle its growing customer base, ensure the long-term operability of the distribution system and enhance service quality. An additional \$216 million was allocated to the EEP.

Hydro-Québec Équipement et services partagés and Société d'énergie de la Baie James carry out engineering, construction and refurbishment projects for Hydro-Québec Production and Hydro-Québec TransÉnergie. Hydro-Québec Équipement et services partagés also offers real estate management, material management, procurement, transportation and other services to all Hydro-Québec divisions and units.

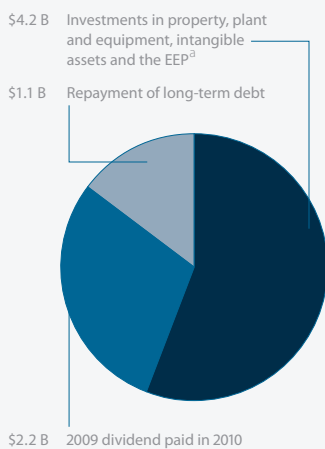


a) EEP: Energy Efficiency Plan

### SOURCES OF FUNDS IN 2010



### USES OF FUNDS IN 2010



a) EEP: Energy Efficiency Plan

## FINANCING ACTIVITIES

Bond issues made on the Canadian market in February, August and October 2010, maturing in February 2050, raised \$1.6 billion at an average rate of 4.50%. The proceeds were used to finance a portion of the investment program and repay maturing debt.

### SOURCES OF FINANCING

Type of financing	Amount authorized by the Board of Directors	Market	Outstanding as at December 31, 2010
Credit lines	C\$500 million <sup>a</sup> or US\$500 million <sup>a</sup>		C\$5 million
Credit facility <sup>b</sup>	US\$2,000 million		–
Commercial paper <sup>b</sup>	US\$2,250 million or equivalent in C\$	United States or Canada	C\$8 million
Medium-term notes <sup>b</sup>	US\$3,000 million or equivalent in other currencies C\$20,000 million or equivalent in US\$	United States Canada	US\$400 million C\$12,256 million

a) Of this amount, \$367 million is covered by operating credit line agreements with financial institutions.

b) Guaranteed by the Québec government.

### CREDIT RATINGS

	2010		2009	
	Commercial paper	Long-term	Commercial paper	Long-term
U.S. agencies				
Moody's	<b>P-1</b>	<b>Aa2 stable</b>	P-1	Aa2 stable
Fitch Ratings	<b>F1+</b>	<b>AA- stable</b>	F1+	AA- stable
Standard & Poor's	<b>A-1+</b>	<b>A+</b>	A-1+	A+
Canadian agency				
DBRS	<b>R-1 (middle)</b>	<b>A (high) stable</b>	R-1 (middle)	A (high) stable

## DIVIDEND AND CAPITALIZATION RATE

The dividend for 2010 amounts to \$1,886 million. Once this dividend is factored in, the capitalization rate was 32.1% as at December 31, 2010.

## Segmented Information

As in 2009, Hydro-Québec had four operating segments in 2010, namely Generation, Transmission, Distribution and Construction, as well as activities grouped under Corporate and Other Activities.

Segmented financial information (\$M)	2010					
	Generation	Transmission	Distribution	Construction	Corporate and Other Activities	Hydro-Québec <sup>a</sup>
Revenue	6,535	3,117	10,603	2,607	1,375	12,338
Net income (loss)	1,605	447	453	–	(2)	2,515
Total assets	30,609	18,072	12,746	449	4,306	65,898

Segmented financial information (\$M)	2009					
	Generation	Transmission	Distribution	Construction	Corporate and Other Activities	Hydro-Québec <sup>a</sup>
Revenue	6,407	2,929	10,717	2,645	1,306	12,333
Net income	2,053	435	363	–	8	2,871
Total assets	29,249	17,677	12,383	423	5,571	64,992

a) Includes the intersegment eliminations presented in Note 23 to the consolidated financial statements.

Note: The comparative data include adjustments mainly associated with the change in the accounting policy regarding the depreciation method for property, plant and equipment. This change is described in Note 2 to the consolidated financial statements. In addition, certain comparative figures have been reclassified to reflect the presentation adopted for 2010.

### SEGMENT HIGHLIGHTS

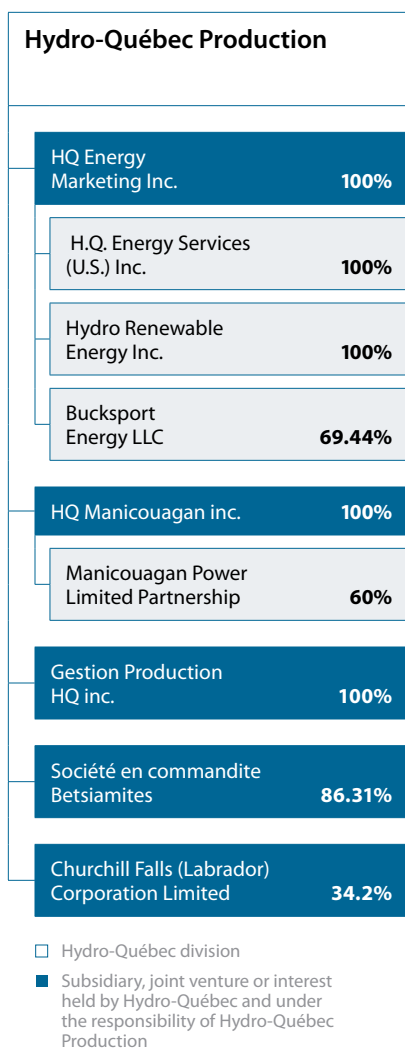
The **Generation** segment recorded net income of \$1,605 million, compared to \$2,053 million in 2009, a decrease of \$448 million. As a result of precipitation levels considerably lower than the historic mean across the entire hydroelectric generating fleet, the division limited its net exports in 2010, especially in the second half of the year. Net reservoir drawdown went from 18.5 TWh in 2009 to 12.6 TWh in 2010, a 32% decrease. However, the contribution made by net exports rose from 6.8¢/kWh in 2009 to 8.2¢/kWh in 2010. Revenue from net electricity exports consequently decreased by \$224 million from 2009. The negative impact of special contracts signed with certain large industrial customers in Québec under conditions agreed to some 20 years ago decreased by \$95 million, from \$254 million in 2009 to \$159 million in 2010 as a result, among other things, of an increase in aluminum prices. Furthermore, the impact of these contracts was more than offset by the positive effect, totaling \$214 million, compared to \$391 million in 2009, of hedging operations carried out by the company on exchange rates and aluminum prices. Transmission system reservation costs paid to Hydro-Québec TransÉnergie increased by \$107 million, most of which was related to long-term point-to-point transmission services. Financial expenses increased by \$100 million.

The **Transmission** segment recorded net income of \$447 million, an increase of \$12 million from \$435 million in 2009. Revenue from native load transmission service increased by \$76 million. Depreciation and amortization expense increased by \$170 million, mainly because of the adoption of the straight-line depreciation method, which was applied prospectively to assets related to regulated activities in accordance with a decision made by the Régie de l'énergie. Revenue from point-to-point transmission services provided to Hydro-Québec Production increased by \$107 million.

The **Distribution** segment recorded net income of \$453 million, compared to \$363 million in 2009, an increase of \$90 million. The decrease in revenue from electricity sales resulting from the mild temperatures in winter 2010 and the increase in transmission costs, net of electricity and fuel purchases, were offset by a positive variance in regulatory deferrals, mainly for revenue variances related to climate conditions and variances in supply costs for electricity in excess of the heritage pool. Operating expenses were higher because of an increase in doubtful accounts related to electricity sales in Québec.

The **Construction** segment recorded a volume of activity of \$2,607 million, compared to \$2,645 million in 2009. As in 2009, this high volume stemmed from work on several major projects.

# Generation



Under the *Act respecting the Régie de l'énergie*, Hydro-Québec Production is required to provide Hydro-Québec Distribution with up to 165 TWh a year of heritage pool electricity. The division sells its excess output on deregulated markets in northeastern North America, including Québec, at market prices. It may also compete for contracts under Hydro-Québec Distribution's open tendering process.

The division operates 64 generating stations. Its capital projects serve a twofold objective: to ensure the long-term operability of existing facilities and to continue development of Québec's hydroelectric potential.

## OPERATING RESULTS

Hydro-Québec Production recorded net income of \$1,605 million, compared to \$2,053 million in 2009, a decrease of \$448 million. As a result of precipitation levels considerably lower than the historic mean across the entire hydroelectric generating fleet, the division limited its net exports in 2010, especially in the second half of the year. Net reservoir drawdown went from 18.5 TWh in 2009 to 12.6 TWh in 2010, a 32% decrease. However, the contribution made by net exports rose from 6.8¢/kWh in 2009 to 8.2¢/kWh in 2010. Revenue from net electricity exports consequently decreased by \$224 million from 2009. The negative impact of special contracts signed with certain large industrial customers in Québec under conditions agreed to some 20 years ago decreased by \$95 million, from \$254 million in 2009 to \$159 million in 2010 as a result, among other things, of an increase in aluminum prices. Furthermore, the impact of these contracts was more than offset by the positive effect, totaling \$214 million, compared to \$391 million in 2009, of hedging operations carried out by the company on exchange rates and aluminum prices. Transmission system reservation costs paid to Hydro-Québec TransÉnergie increased by \$107 million, most of which was related to long-term point-to-point transmission services. Financial expenses increased by \$100 million.

## Electricity sales in Québec

### Sales to Hydro-Québec Distribution

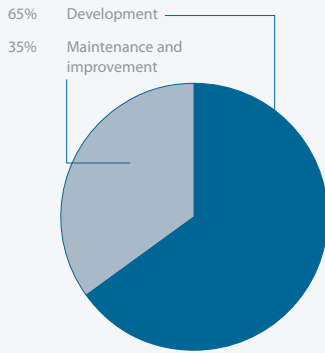
In 2010, the total volume of electricity sales to Hydro-Québec Distribution was 167.6 TWh, compared to 164.2 TWh in 2009, an increase of 3.4 TWh. Revenue generated by these sales increased by \$103 million to \$4,735 million, mainly due to higher industrial demand.

### Special contracts between Hydro-Québec Distribution and large industrial customers

The risks related to Hydro-Québec Distribution's special contracts with certain large industrial customers in Québec are absorbed by Hydro-Québec Production. In 2010, revenue from these contracts increased by \$99 million to a total of \$842 million because of higher aluminum prices and growth in demand, mainly from a customer who was also affected by the low runoff; these two factors were partly offset by the appreciation of the Canadian dollar. Special contracts nonetheless had a \$159-million negative impact on net income, which is \$95 million less than in 2009. Hedging operations carried out by the company, as part of its risk management strategy related to aluminum prices and exchange rates, generated a \$214-million positive impact in 2010, compared to \$391 million in 2009.



**BREAKDOWN OF 2010 INVESTMENTS  
BY HYDRO-QUÉBEC PRODUCTION**



**Sales by HQ Manicouagan**

In December 2009, Hydro-Québec, through its subsidiary HQ Manicouagan, acquired a 60% interest in Manicouagan Power Limited Partnership, which owns and operates McCormick generating station. In 2010, Hydro-Québec Production recorded electricity sales of 1.4 TWh or \$48 million as a result of this interest.

**Electricity sales outside Québec**

Electricity sales outside Québec generated revenue of \$1,513 million for 23.3 TWh in 2010, compared to \$1,495 million for 23.0 TWh in 2009. Short-term electricity sales earned \$1,266 million for 20.6 TWh, compared to \$1,239 million for 20.4 TWh in 2009.

Net electricity exports earned \$1,034 million in 2010 for a net reservoir drawdown of 12.6 TWh, compared to \$1,258 million for 18.5 TWh in 2009. This represented a unit contribution of 8.2¢/kWh in 2010, against 6.8¢/kWh in 2009.

As at December 31, 2010, reservoir storage stood at 99.4 TWh, compared to 112.9 TWh a year earlier. This decrease is because natural water inflows were approximately 23 TWh below the historic mean. Reservoir storage continues to meet the criteria set for management of risks related to security of the energy supply.

**Electricity and fuel purchases and transmission costs**

Electricity and fuel purchases totaled \$1,443 million in 2010, an increase of \$400 million from 2009 that resulted from a rise in purchase volume. Specifically, short-term purchases amounted to \$470 million for 9.9 TWh, compared to \$223 million for 3.7 TWh in 2009. Transmission system reservation costs paid to Hydro-Québec TransÉnergie increased by \$107 million; most of this increase is attributable to long-term point-to-point transmission services.

**Depreciation and amortization**

Depreciation and amortization expense totaled \$725 million, compared to \$667 million in 2009, a \$58-million increase. The difference is due, among other things, to the start-up of the Rupert diversion in fall 2009.

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**INVESTING ACTIVITIES**

Investments in property, plant and equipment and intangible assets affecting cash totaled \$1,900 million in 2010. Of this amount, \$1,234 million went toward development activities, including work on the Eastmain-1-A/Sarcelle/Rupert and Romaine hydroelectric projects. Hydro-Québec Production also invested \$666 million in refitting and asset sustainment initiatives. Among other things, it carried out rehabilitation work at Beauharnois generating station, the La Tuque development and the Manicouagan complex.

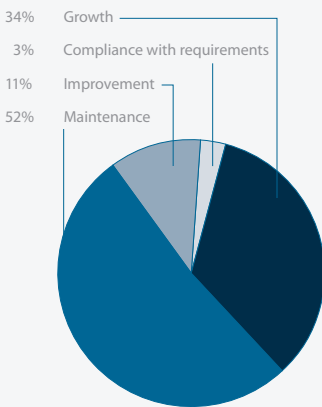
# Transmission

## Hydro-Québec TransÉnergie

Cedars Rapids Transmission Company, Limited 100%

- Hydro-Québec division
- Subsidiary held by Hydro-Québec and under the responsibility of Hydro-Québec TransÉnergie

### BREAKDOWN OF 2010 INVESTMENTS BY HYDRO-QUÉBEC TRANSÉNERGIE



Hydro-Québec TransÉnergie operates and develops Hydro-Québec's power transmission system. It markets system capacity and manages power flows throughout Québec.

The operations of Hydro-Québec TransÉnergie are regulated by the Régie de l'énergie.

### RATE CASE

For 2010, the revenue authorized by the Régie de l'énergie for transmission rate-setting purposes totaled \$2,999 million, including \$2,651 million in native load transmission revenue (representing a \$76-million increase over 2009) and \$348 million for short- and long-term point-to-point transmission services.

### OPERATING RESULTS

Hydro-Québec TransÉnergie recorded net income of \$447 million, a \$12-million increase from \$435 million in 2009. Revenue from native load transmission service increased by \$76 million. Depreciation and amortization expense increased by \$170 million, mainly because of the adoption of the straight-line depreciation method, which was applied prospectively to assets related to regulated activities in accordance with a decision made by the Régie. Revenue from point-to-point transmission services provided to Hydro-Québec Production increased by \$107 million.

### INVESTING ACTIVITIES

In 2010, Hydro-Québec TransÉnergie invested \$1,248 million in property, plant and equipment and intangible assets affecting cash, namely \$423 million for growth projects and \$825 million for asset sustainment projects. The purpose of growth projects is to increase transmission capacity and bring new hydropower plants and wind farms onto the grid. The asset sustainment projects involve maintaining facilities, improving service quality and complying with the legal and regulatory requirements for operating a power transmission system.

Under growth projects, the division invested \$85 million in connecting Eastmain-1-A and Sarcelle powerhouses, work that will be completed in 2011. It also devoted \$64 million to the 1,250-MW interconnection project with Ontario, including the completion of the Chénier-Outaouais line, which was commissioned during the second quarter. At the same time, it finished construction of Anne-Hébert substation and continued work to integrate the output from wind farms in the Gaspésie region.

Under asset sustainment projects, which represented 66% of the division's investments in 2010, Hydro-Québec TransÉnergie invested \$653 million in replacing equipment and modernizing facilities. It also devoted \$134 million to improving service quality. In addition, the division undertook an upgrade of the main transmission system.

# Distribution

## Hydro-Québec Distribution

□ Hydro-Québec division

Hydro-Québec Distribution provides electricity to the Québec market and delivers reliable power and quality services to its customers with a view to efficiency and sustainable development. In this context, it also promotes energy-saving measures among its customers.

The division's activities are regulated by the Régie de l'énergie, which has exclusive jurisdiction to set electricity rates.

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### RATE CASE

In March 2010, the Régie de l'énergie approved an across-the-board rate increase of 0.35%, effective April 1, 2010. In the rate application filed with the Régie in August 2010, Hydro-Québec Distribution did not propose any electricity rate increase for the period from April 1, 2011, to March 31, 2012.

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### SUPPLYING THE QUÉBEC MARKET

Hydro-Québec Distribution relies on various sources to supply the Québec market. To meet requirements in excess of the heritage pool (165 TWh) reserved for it by Hydro-Québec Production, the division issues short- and long-term calls for tenders. For requirements of less than three months, it may also buy electricity directly on the market, without tendering, under an exemption granted by the Régie de l'énergie. For unforeseen needs that cannot be met otherwise, the division relies on a framework agreement with Hydro-Québec Production that covers the period from January 1, 2009, to December 31, 2013. The agreement was approved by the Régie in 2009.

In 2010, Hydro-Québec Distribution filed the Electricity Supply Plan 2011–2020 with the Régie de l'énergie. Compared to the most recent progress report on the previous plan, which was submitted in October 2009, the 2011–2020 Plan forecasts slower growth in the Québec market's energy requirements due, among other things, to lower demand from industrial customers, particularly in the pulp and paper sector, as well as to continued measures to improve energy efficiency.

To balance supply and demand, Hydro-Québec Distribution extended to 2011 the suspension of deliveries of power from the TransCanada Energy generating station in Bécancour. It also amended the agreements signed with Hydro-Québec Production to defer a portion of the baseload and cycling deliveries contracted for. Among other things, the amendments extend the term of the agreements and allow the deferred deliveries to be called in as needed. Both these measures were approved by the Régie de l'énergie in 2010.

Finally, Hydro-Québec Distribution is continuing its efforts to promote energy efficiency. In 2010, its programs generated new energy savings of 989 GWh, for a total of 5.3 TWh of annual savings achieved to date. The division has a target of 11 TWh by 2015.

## OPERATING RESULTS

Hydro-Québec Distribution recorded net income of \$453 million, compared to \$363 million in 2009, an increase of \$90 million. The decrease in revenue from electricity sales resulting from the mild temperatures in winter 2010 and the increase in transmission costs, net of electricity and fuel purchases, were offset by a positive variance in regulatory deferrals, mainly concerning revenue variances related to climate conditions and variances in supply costs for electricity in excess of the heritage pool. Operating expenses were higher because of an increase in doubtful accounts related to electricity sales in Québec.

### Electricity sales in Québec

Revenue from electricity sales totaled \$10,417 million, a \$124-million decrease from 2009. The effect of the mild temperatures in winter 2010 was offset by higher industrial demand and the April 1, 2009 and 2010, rate adjustments. Revenue from special contracts with certain large industrial customers decreased because of the less favorable impact than in 2009 of hedging operations related to exchange rates and aluminum prices. Risks related to special contracts are absorbed by Hydro-Québec Production.

Sales volume rose 1.8 TWh to 166.9 TWh, compared to 165.1 TWh in 2009, largely due to a 5.0-TWh increase in demand, for the most part from industrial customers and mainly as a result of the gradual recovery of operations in the pulp and paper and smelting and refining sectors after a year of temporary plant closures and production stoppages in 2009. Sales to industrial customers returned to the same level as before the 2009 economic slowdown. However, the mild temperatures in winter 2010 reduced sales by 3.2 TWh. The decrease was mainly attributable to the Residential and farm category, which is more sensitive to climate variations because of its heating requirements.

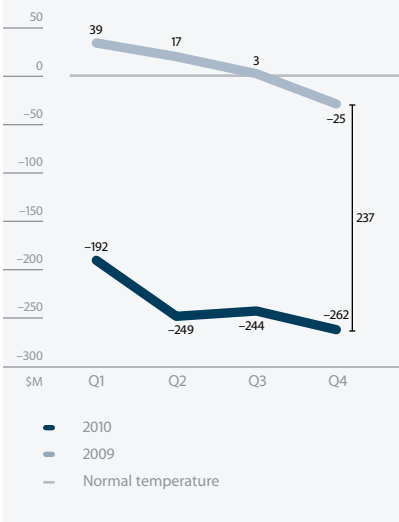
### ELECTRICITY SALES IN QUÉBEC BY CATEGORY

Customer category	Sales volume			Sales revenue		
	2010	2010–2009 change		2010	2010–2009 change	
	TWh	TWh	%	\$M	\$M	%
Residential and farm	<b>59.5</b>	(3.0)	(4.8)	<b>4,302</b>	(198)	(4.4)
Commercial and institutional	<b>33.9</b>	(0.2)	(0.6)	<b>2,648</b>	(14)	(0.5)
Industrial	<b>68.4</b>	5.1	8.1	<b>3,185</b>	93	3.0
Other	<b>5.1</b>	(0.1)	(1.9)	<b>282</b>	(5)	(1.7)
Total	<b>166.9</b>	1.8	1.1	<b>10,417</b>	(124)	(1.2)

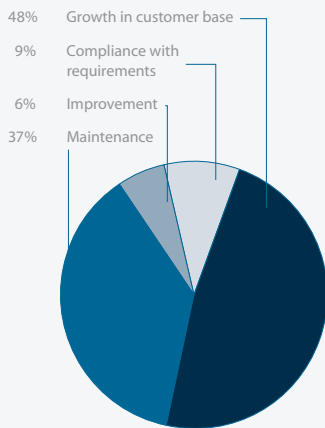
### FACTORS IN THE 2010–2009 CHANGE IN SALES BY CATEGORY

Customer category	Volume effects					Price effects			Total
	Baseload demand		Temperatures		Total	Rate adjustments	Other	Total	
	TWh	\$M	TWh	\$M					
Residential and farm	(0.5)	(34)	(2.5)	(197)	<b>(231)</b>	30	3	<b>33</b>	<b>(198)</b>
Commercial and institutional	0.3	22	(0.5)	(35)	<b>(13)</b>	16	(17)	<b>(1)</b>	<b>(14)</b>
Industrial	5.2	225	(0.1)	(2)	<b>223</b>	15	(145)	<b>(130)</b>	<b>93</b>
Other	–	4	(0.1)	(3)	<b>1</b>	1	(7)	<b>(6)</b>	<b>(5)</b>
Total	5.0	217	(3.2)	(237)	<b>(20)</b>	62	(166)	<b>(104)</b>	<b>(124)</b>

**CUMULATIVE IMPACT OF TEMPERATURES COMPARED TO NORMAL**



**BREAKDOWN OF 2010 INVESTMENTS BY HYDRO-QUÉBEC DISTRIBUTION (EXCLUDING THE EEP<sup>a)</sup>)**



a) EEP: Energy Efficiency Plan

**Electricity and fuel purchases and transmission costs**

Net electricity and fuel purchases decreased by \$19 million from 2009, while the cost of native load transmission service increased by \$76 million.

**Depreciation and amortization**

Depreciation and amortization expense totaled \$859 million, compared to \$868 million in 2009, a \$9-million decrease due in part to a \$151-million reduction in amortization for regulatory assets and liabilities recognized in accordance with the conditions set by the Régie de l'énergie. The balance of the regulatory asset in connection with the net costs related to retirement of property, plant and equipment and intangible assets was fully amortized in 2009. Depreciation expense for property, plant and equipment increased by \$145 million, mainly because of the adoption of the straight-line depreciation method, which was applied prospectively to assets related to regulated activities in accordance with a decision by the Régie de l'énergie.

**Regulatory deferrals**

The change in the amounts recognized as regulatory deferrals compared to 2009 decreased expenditure by \$230 million, primarily as a result of revenue variances related to climate conditions and variances in supply costs for electricity in excess of the heritage pool.

Revenue variances related to climate conditions correspond to differences between Hydro-Québec Distribution's actual transmission and distribution revenue and the revenue forecasts established on the basis of the climate normal for rate application purposes. Because of the mild temperatures in winter 2010, the regulatory asset recognized in this regard was \$144 million in 2010, compared to \$10 million in 2009, for a positive variance of \$134 million.

As for variances in supply costs for electricity in excess of the heritage pool, a \$56-million regulatory asset was recorded in 2010 to take into account the fact that the actual supply costs were higher than the costs forecasted for the purpose of rate-setting by the Régie de l'énergie. In 2009, a \$31-million regulatory liability had been recognized in this regard, for an \$87-million positive variance.

**INVESTING ACTIVITIES**

In 2010, Hydro-Québec Distribution's investments in property, plant and equipment and intangible assets affecting cash totaled \$728 million.

Of this amount, \$346 million went toward handling the growth of its Québec customer base, including \$205 million for new customer hookups. The division also invested \$272 million in asset sustainment and \$43 million to improve service quality, including \$32 million for the distribution automation program, which will permit remote monitoring of equipment and improvements in system reliability indicators.

Hydro-Québec Distribution also invested \$216 million in the Energy Efficiency Plan.

# Construction

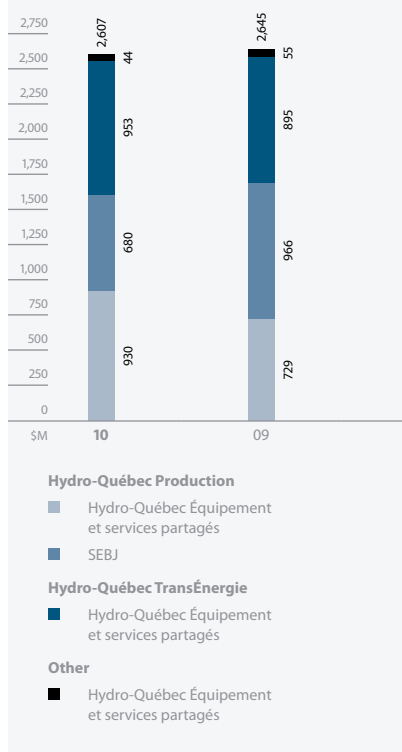
## Hydro-Québec Équipement et services partagés

Société d'énergie de la Baie James

100%

- Hydro-Québec division
- Subsidiary held by Hydro-Québec and under the responsibility of Hydro-Québec Équipement et services partagés

### BREAKDOWN OF CONSTRUCTION SEGMENT ACTIVITIES



The Construction segment includes activities related to the projects carried out by Hydro-Québec Équipement et services partagés<sup>a</sup> and by Société d'énergie de la Baie James (SEBJ). Hydro-Québec Équipement et services partagés is responsible for construction and refurbishment projects throughout Québec, except in the territory governed by the *James Bay and Northern Québec Agreement* (JBNQA). SEBJ builds generating facilities in the territory governed by the JBNQA (north of the 49th parallel) and may carry out projects outside Québec.

As engineering and environmental specialists, Hydro-Québec Équipement et services partagés and SEBJ also offer Hydro-Québec Production and Hydro-Québec TransÉnergie a variety of services needed for draft-design studies, impact assessments and other undertakings in the context of energy-related projects. These services include technical and scientific surveys, planning, cost estimates, design, architecture, geomatics and quality control.

### VOLUME OF ACTIVITY

Hydro-Québec Équipement et services partagés and SEBJ carried out activities worth a total of \$2,607 million in 2010, compared to \$2,645 million in the previous year. As in 2009, the high volume can be attributed to several large-scale projects. Work done for Hydro-Québec Production totaled \$1,610 million, compared to \$1,695 million in 2009, while work done for Hydro-Québec TransÉnergie totaled \$953 million, compared to \$895 million in 2009.

### Hydro-Québec Équipement et services partagés

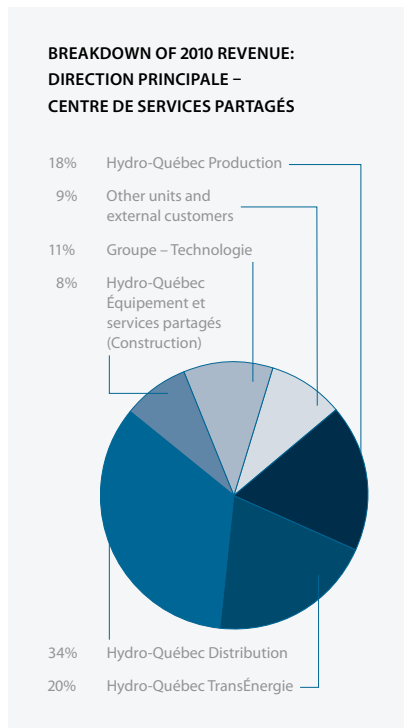
In 2010, power generation and transmission projects worth a total of \$1,927 million were carried out by Hydro-Québec Équipement et services partagés, compared to \$1,679 million in 2009. Work done for Hydro-Québec Production included the Romaine project as well as the rehabilitation of several facilities, such as Beauharnois generating station and some equipment at the Manicouagan complex. For Hydro-Québec TransÉnergie, the division undertook several projects related to the connection of Eastmain-1-A and Sarcelle powerhouses and the upgrade of the main transmission system. At the same time, it completed the construction of the 315-kV Chénier–Outaouais line. It also continued work on projects designed to integrate the output from wind farms in the Gaspésie region or to increase transmission system capacity.

### Société d'énergie de la Baie James

SEBJ's activities, carried out on behalf of Hydro-Québec Production, represented a total of \$680 million, compared to \$966 million in 2009. The main work took place at Eastmain-1-A (generating unit assembly and excavation of the tailrace canal and temporary dike) and Sarcelle (generating unit assembly and concreting of the powerhouse). Following the start-up of the Rupert diversion in fall 2009, SEBJ also completed the hydraulic structures on the reduced-flow section of the Rivière Rupert.

a) The operations of the Direction principale – Centre de services partagés are included under Corporate and Other Activities.

## Corporate and Other Activities



This heading includes corporate activities, the Direction principale – Centre de services partagés and the Groupe – Technologie.

### RESULTS

The results posted by Corporate and Other Activities were \$10 million lower than in 2009.

#### Corporate activities

Corporate activities consist of the Vice-présidence – Ressources humaines; financial services, which are divided into two departments; and the Groupe – Affaires corporatives et secrétariat général.

The Vice-présidence – Ressources humaines develops strategies, guidelines, frameworks, corporate programs and objectives in matters pertaining to human resources and skills development. Its mission includes providing certain products and services in these areas to the entire company. In addition, it ensures that Management can count on optimum human resources conditions.

The Vice-présidence – Comptabilité et contrôle is responsible for overseeing financial, regulatory and management accounting as well as integrated enterprise risk management. It also has the task of producing and analyzing the company's consolidated financial statements. Its other duties include financial planning, taxation, financial control and disbursements related to payroll and accounts payable.

The Vice-présidence – Financement, trésorerie et caisse de retraite is in charge of meeting the company's financing requirements, managing its treasury and maintaining relations with Hydro-Québec bondholders and rating agencies. It also acts as trustee of Hydro-Québec's pension fund. In 2010, Hydro-Québec's pension fund posted a very good return: 13.7%. The 2009 return was 16.4%. The value of the pension fund's assets exceeded the \$14-billion mark for the first time in 2010, partly as a result of solid performance over the past two years.

The Groupe – Affaires corporatives et secrétariat général provides support services and strategic consulting in the areas of communications, public affairs, environment, ethics and government relations. It is also responsible for services and expertise related to legal affairs as well as safety and security of persons and property. In addition, it coordinates strategic planning and the company's contribution to the electrification of ground transportation. The Secretary General assists the President and Chief Executive Officer in carrying out the company's mandate and acts as Secretary to the Board of Directors and the Board committees at Hydro-Québec and its subsidiaries.

#### Direction principale – Centre de services partagés

The Direction principale – Centre de services partagés, which has been part of Hydro-Québec Équipement et services partagés since January 1, 2010, develops strategies, guidelines and frameworks pertaining to procurement and services common to the entire company. It provides divisions and corporate units with support services, at least cost and adapted to their needs, so that they can focus on their core activities. These services include procurement of goods and services, real estate management, document management, material management and transportation services.

Its revenue totaled \$474 million in 2010, compared to \$460 million in 2009, a 3% increase.

## Groupe – Technologie

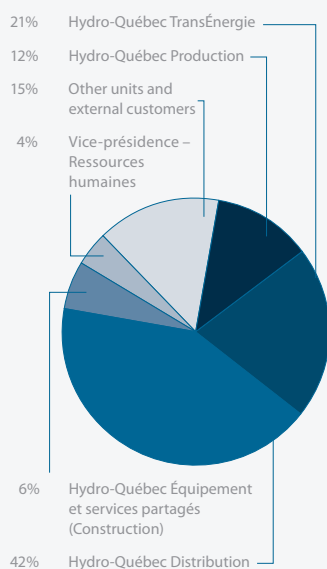
Hydro-Québec  
IndusTech inc. 100%

Hydro-Québec  
CapiTech inc. 100%

■ Corporate unit

■ Subsidiary held by Hydro-Québec  
and under the responsibility of  
Groupe – Technologie

### BREAKDOWN OF 2010 REVENUE RELATED TO INFORMATION AND COMMUNICATION TECHNOLOGY ACTIVITIES



## Groupe – Technologie

The Groupe – Technologie is composed primarily of the Direction principale – Télécommunications, the Direction principale – Technologie de l'information, Hydro-Québec's research institute and the subsidiaries Hydro-Québec IndusTech and Hydro-Québec CapiTech. The group's mandate is to ensure the integrated management of technological innovation and the optimal management of telecommunications and information technology infrastructure. With this in mind, it has continued to implement an overall vision for systems governance, architecture and security in order to capitalize on the convergence of technologies.

### *Direction principale – Télécommunications and Direction principale – Technologie de l'information*

The Direction principale – Télécommunications and the Direction principale – Technologie de l'information enhance the efficiency of divisions and corporate units by offering technology solutions in line with Hydro-Québec's business priorities.

In 2010, these two units recorded revenue of \$519 million, compared to \$491 million in 2009.

### *Research institute*

Hydro-Québec's research institute provides technical assistance to the divisions and carries out technological innovation projects to support their operations and ensure the long-term development of Hydro-Québec. The company allocates approximately \$100 million annually to the institute's activities.

### *Hydro-Québec IndusTech*

The mission of Hydro-Québec IndusTech is to partner with the private sector in industrializing and marketing technologies resulting from Hydro-Québec's research activities. Among other things, it is responsible for TM4 inc., a company active in the field of electric powertrain systems. As at December 31, 2010, TM4 had delivered close to 100 units of its MΦTIVE™ system to the Indian automaker Tata Motors for the Indica Vista electric cars that will be used in a demonstration program in Europe as of mid-March 2011.

### *INVESTING ACTIVITIES*

In 2010, the Groupe – Technologie's investments totaled \$85 million, of which \$76 million was earmarked for maintaining asset quality and \$9 million for meeting growth in demand.



## Outlook

In 2011, Hydro-Québec expects to earn net income of \$2,400 million, consistent with the *Strategic Plan 2009–2013*, in spite of a business environment that will be more difficult than anticipated: prices will drop sharply on markets outside Québec (the effect of shale gas), and low runoff in 2010 will limit the volume of sales outside Québec in 2011 for a second consecutive year. A reduction in financial expenses compared to the level anticipated in the Strategic Plan and strict control of operating expenses are the main factors that will enable the company to reach the projected level of net income in 2011.

Furthermore, Hydro-Québec will do its utmost to make an additional contribution, in accordance with the provisions of the Québec government's budget.

The company plans to invest over \$4.5 billion in 2011. More than half of this amount will be devoted to development and growth activities and to the Energy Efficiency Plan. The remainder will go toward facility maintenance and improvements.

**Hydro-Québec Production** will continue its major hydroelectric development projects, including the commissioning of Eastmain-1-A powerhouse and the first generating unit at Sarcelle powerhouse. At the same time, it will be working on several fronts at the Romaine jobsites: carrying on with the engineering work at the Romaine-1 and Romaine-3 developments, starting construction on the dam and dikes at Romaine-2 and extending the road up to the Romaine-3 site. The four generating stations in this complex will be commissioned between 2014 and 2020.

**Hydro-Québec TransÉnergie** will invest a considerable amount in development to integrate new hydroelectric and wind capacity in Québec. It will therefore continue connecting new generating facilities, in particular Eastmain-1-A and Sarcelle powerhouses and the wind farms built in response to Hydro-Québec Distribution's calls for tenders. The division will also continue to invest in maintenance and improvement activities to ensure the reliability and long-term operability of its transmission assets and enhance service quality. These activities include the project to upgrade the main transmission system, which involves boosting system performance and reinforcing the supply of energy to major load centres in order to reduce energy losses and make system management more flexible.

**Hydro-Québec Distribution** will continue to deliver reliable power and high-quality services to its Québec customers. It will make further investments to handle the growth of its Québec customer base and to maintain and improve its facilities, especially those involved in distribution automation. It will also continue to implement the Energy Efficiency Plan, which includes measures for low-income households, to achieve the objective of 11 TWh in energy savings set for 2015. In addition, it will complete the deployment of some 800 capacitor banks under the Addition 1,000 Mvar project, aimed at improving transmission system reliability during periods of exceptional peak demand in Québec.

# Integrated Enterprise Risk Management

For a number of years, Hydro-Québec has applied an integrated enterprise risk management process that is now part of its ongoing business practices. This process is supported by various control, communication and assessment mechanisms that enable it to monitor risk developments on a dynamic basis.

Hydro-Québec's divisions and corporate units are central to the process. As part of their ongoing activities, they manage the risks to which they are exposed and reassess them on a regular basis, daily in some cases. In concrete terms, each division or corporate unit must determine and assess its main risks and then develop and apply mitigation measures to ensure that residual risks are at a level acceptable to Hydro-Québec. During the annual planning process, this exercise results in a consolidated portfolio of enterprise risks. This consolidated portfolio is presented to the Board of Directors with the Strategic Plan or the annual Business Plan, which include an analysis of the sensitivity of net income to the principal risks. The divisions and corporate units report on their risk management follow-up and activities to the Management Committee, which then acts as a risk management committee to provide overall monitoring of enterprise risks.

## ANNUAL INTEGRATED RISK MANAGEMENT PROCESS

		January 1	April 30	August 31	December 31
		1st four-month period		2nd four-month period	
				3rd four-month period	
				Business Plan	Strategic Plan
Hydro-Québec Units	Division or group monitoring plans covering main business risks				
	Division or group risk management reports – April review in the form of highlights	Division or group risk management reports – August review in the form of highlights			
		Identification of risks and validation by division/group president		Preparation or revision of division or group business risk portfolios – Supporting documents for evaluation	
Hydro-Québec Management	<b>Management Committee and Segment Committees</b> (in risk management mode)	<b>Management Committee and Segment Committees</b> (in risk management mode)		<b>Management Committee and Segment Committees</b> (in risk management mode)	
	Review of risk management reports	Review of risk management reports		Review of each division's or group's risk portfolio and discussion	
				<b>Management Committee acting as the Risk Management Committee with the President and CEO as CRO</b>	
Board of Directors				<b>Finance Committee</b>	
				Presentation of consolidated enterprise risk portfolio, risk map, probability of reaching net income	
				<b>Audit Committee</b>	
				President and CEO's report on integrated enterprise business risk management process	
				<b>Board of Directors</b>	
				Presentation of consolidated enterprise risk portfolio, risk map, probability of reaching net income	

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## FINANCIAL RISKS

In the course of its operations, Hydro-Québec carries out transactions that expose it to certain financial risks, such as market and credit risk. Rigorous follow-up and the adoption of strategies that include the use of derivative instruments considerably reduce exposure to such risks and their impact on results.

### Market risk

Hydro-Québec's results are subject to different types of market risk associated mainly with fluctuations in the Canadian dollar's exchange rate compared to the U.S. dollar as well as fluctuations in interest rates and aluminum prices. Exchange rate fluctuations affect revenue from sales denominated in U.S. dollars as well as the cost of U.S. dollar-denominated debt and swaps. Interest rate fluctuations affect financial expenses, pension costs and the authorized return on equity of regulated divisions. Aluminum price fluctuations have an impact on the revenue from special contracts with certain large industrial customers in Québec.

The three types of market risk are subject to active integrated management, in particular through derivative financial products. The purpose of such management is to limit the impact of market risk on Hydro-Québec's short-term results, according to strategies and criteria established based on the company's risk tolerance. Furthermore, Hydro-Québec can count on certain offsetting factors that mitigate its market risk over the medium and long term. For example, it holds debt and swaps denominated in U.S. dollars as a hedge against sales in that currency. The effect of exchange rate fluctuations on sales is thus offset by exchange gains or losses on debt in U.S. dollars. There is also an offsetting effect between the impact of a general increase or decrease in interest rates on financial expenses, on the one hand, and the impact of such an increase or decrease on pension costs and the authorized return on equity of regulated divisions, on the other.

### Credit risk

Credit risk is the risk that a counterparty may not meet its contractual obligations. Hydro-Québec is exposed to credit risk related to receivables through ongoing energy sales in Québec. These sales are billed at rates that provide for cost recovery according to conditions approved by the Régie de l'énergie. The company is also exposed to credit risk related to the cash equivalents, short-term investments and derivative instruments traded with financial institutions and other issuers and, to a lesser extent, with North American energy companies under Hydro-Québec Distribution supply contracts and Hydro-Québec Production energy transactions on markets outside Québec.

Exposure to credit risk is mitigated by the implementation of limits and frameworks for risk concentration and level of exposure by counterparty. To ensure compliance with such limits and frameworks, Hydro-Québec takes a proactive approach based on various controls and monitoring reports. These enable it to react quickly to any event that could have an impact on the financial condition of its counterparties. In addition, the company generally does business with counterparties that have a high credit rating. It also enters into agreements to limit the market value of the main portfolios of derivative instruments.

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## OPERATIONAL RISKS

### Generation

One of the principal uncertainties that Hydro-Québec faces relates to natural water inflows. Hydro-Québec Production must ensure that it is able to meet its commitments to supply the annual heritage pool of 165 TWh to Hydro-Québec Distribution and fulfill its contractual obligations. In concrete terms, this means being able to cover a natural inflow deficit of 64 TWh over two consecutive years, and 98 TWh over four consecutive years. To meet this requirement, the division applies a variety of mitigation measures and closely monitors them. It therefore manages its reservoir storage on a multiyear basis and maintains an adequate margin between its generating capacity and its commitments. This allows the division to compensate for variations in runoff, replenish its reserves or take advantage of business opportunities. Hydro-Québec regularly reports to the Régie de l'énergie on its generating capacity and the energy reserve of Hydro-Québec Production. Beyond runoff uncertainties and credit risk, Hydro-Québec Production's wholesale activities are subject to market risk and the risk of unavailability of generating and transmission equipment. Market risk results from fluctuations in electricity and fuel prices, and is mitigated by ongoing monitoring of trends in wholesale markets and the use of hedging derivative instruments. The risk of unavailability of generating and transmission equipment is maintained at a level deemed acceptable through maintenance and upgrade programs.

The risks related to Hydro-Québec Production's wholesale activities are quantified in an integrated fashion by a team of specialists that is independent of the group carrying out the transactions. This team sees to the application of controls, presents daily reports to Senior Management and ensures compliance with the limits approved by Management and the Board of Directors.

### Transmission

Several factors, such as extreme weather and equipment failure, may cause service interruptions or result in the unavailability of part of the transmission system. The multifaceted strategy adopted by Hydro-Québec TransÉnergie to prevent these problems includes implementing the standards of the North American Electric Reliability Corporation and the Northeast Power Coordinating Council, as well as measures to maintain and improve transmission facilities and extend their useful life. In 2007, the Régie de l'énergie confirmed the reliability expertise of Hydro-Québec TransÉnergie by designating its Direction – Contrôle des mouvements d'énergie (now the Direction – Contrôle et exploitation du réseau), the unit responsible for system control, as Reliability Coordinator for Québec. In this capacity, the Direction filed the reliability standards applicable to generating facilities and transmission systems in Québec, as well as a register of entities subject to these standards, with the Régie in June 2009.

Hydro-Québec TransÉnergie must ensure adequate transmission capacity to supply Hydro-Québec Distribution and other customers, as well as transmission system security and reliability. To do so, the division relies, among other things, on a strategy of ensuring long-term operability of transmission assets and on optimal management of annual peak load.

### Distribution

Hydro-Québec Distribution's activities are subject to uncertainty related to fluctuations in demand (under normal climate conditions) due to the economic and energy situation, which have an impact on results. When demand is lower than the forecasts made in the rate application, the division cannot recover from customers all the costs related to power distribution, power transmission through the Hydro-Québec TransÉnergie system and customer services. To counter the impact of this risk, the division constantly fine-tunes its method of forecasting demand for electricity.

In addition, Hydro-Québec Distribution applies a series of measures to ensure long-term operability of the distribution system, and hence service quality. These measures include compliance with applicable standards for overhead and underground systems, the implementation of an asset maintenance program and a strategy for asset renewal, as well as vegetation control.

In order to promote better energy use, the division is also pursuing its efforts in the area of energy efficiency.

## **Construction**

One of the principal risks that Hydro-Québec Équipement et services partagés must deal with is pressure on project costs, due to the rising cost of labor in the construction industry and higher prices for steel, petroleum products and components manufactured outside Canada, among other things. In this regard, the ongoing consolidation of electrical equipment suppliers could affect the medium- and long-term price or availability of such equipment.

To meet its commitments and continue to apply high quality and safety standards, Hydro-Québec Équipement et services partagés has implemented a number of management measures that reduce its risk exposure. For instance, the division monitors key indicators for trends in prices and the rate of activity in the construction industry. It has also developed procurement strategies that promote competition or maintaining expertise in most markets and it adjusts its project completion strategies according to economic conditions, in consultation with its customers.

## **Corporate and Other Activities**

Environmental protection and conservation are among Hydro-Québec's central concerns. Most activities that have a significant impact on the environment are governed by an ISO 14001-certified environmental management system. In addition, every year, the company reviews its management of environmental issues and details them in its Sustainability Report.

Hydro-Québec is also concerned with information security and the risks associated with confidentiality and with the loss of availability or integrity of systems and data as a result of malicious acts, error or natural disaster. It regularly assesses how well its information systems are protected against these threats and implements the necessary security measures. These measures include an information and communication technologies security program, an antivirus expertise centre, Internet filtering, a security monitoring centre, managing of identities and access, and managing of incidents and vulnerabilities.

Finally, Hydro-Québec has a corporate emergency response plan to ensure the continuity of its operations and its mission in case of an exceptional event. The plan defines the material, technical and organizational means required to restore electrical service. It also provides for effective coordination of all internal and external responders, including public authorities.

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## **CHANGEOVER TO INTERNATIONAL FINANCIAL REPORTING STANDARDS**

On February 13, 2008, the Canadian Accounting Standards Board (AcSB) confirmed that publicly accountable enterprises would be required to apply International Financial Reporting Standards (IFRS) in their interim and annual financial statements relating to fiscal years beginning on or after January 1, 2011, with comparative information presented for fiscal 2010. On October 28, 2009, the Public Sector Accounting Board confirmed that government business enterprises such as Hydro-Québec would be required to comply with the standards applicable to publicly accountable enterprises.

At its meeting of September 7 and 8, 2010, the AcSB approved an amendment to provide an optional one-year deferral of the mandatory date for adoption of IFRS for entities with activities subject to cost-based rate regulation, whatever the outcome of the International Accounting Standards Board project concerning rate-regulated activities.

Because it is subject to rate regulation in its power transmission and distribution activities and it recognizes regulatory assets and liabilities in this regard, Hydro-Québec may use this deferral.

# MANAGEMENT REPORT

Hydro-Québec's consolidated financial statements and all additional financial information contained in this Annual Report are the responsibility of Management and are approved by the Board of Directors. The consolidated financial statements have been prepared by Management in accordance with Canadian generally accepted accounting principles and take into account the decisions handed down by the Régie de l'énergie with respect to the transmission and distribution of electricity. They include amounts determined based on Management's best estimates and judgment. Financial information presented elsewhere in the Annual Report is consistent with the information provided in the consolidated financial statements.

Management maintains an internal control system which includes communicating Hydro-Québec's code of ethics and code of conduct to employees, primarily to ensure the proper management of resources and the orderly conduct of business. The objective of this system is to provide reasonable assurance that the financial information is pertinent and reliable and that the assets of Hydro-Québec are adequately recorded and safeguarded. An internal auditing process allows evaluation of the sufficiency and effectiveness of control, as well as of Hydro-Québec's policies and procedures. Recommendations ensuing from this process are submitted to Management and the Audit Committee.

The Board of Directors is responsible for corporate governance. It assumes its responsibility for the consolidated financial statements principally through its Audit Committee, composed solely of independent directors, who do not hold full-time positions within Hydro-Québec or in one of its subsidiaries. The Audit Committee's mandate is to ensure that the consolidated financial statements present fairly Hydro-Québec's financial position, operating results and cash flows, and to recommend the financial statements to the Board of Directors for approval. The Audit Committee meets with Management, the Internal Auditor and the external auditors to discuss the results of their audits and the resulting findings with respect to the integrity and the quality of Hydro-Québec's financial reporting as well as the effectiveness of its internal control system. The Internal Auditor and the external auditors have full and unrestricted access to the Audit Committee, with or without Management present.

The 2010 consolidated financial statements have been audited jointly by the Auditor General of Québec, KPMG LLP and Ernst & Young LLP. The 2009 consolidated financial statements were audited jointly by KPMG LLP and Ernst & Young LLP.



**Michael L. Turcotte**  
Chairman of the Board



**Thierry Vandal**  
President and Chief Executive Officer



**Lise Croteau**  
Vice President –  
Accounting and Control

Montréal, Québec  
February 18, 2011

# INDEPENDENT AUDITORS' REPORT

To the Minister of Finance of Québec:

## Report on Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Hydro-Québec, which comprise the consolidated balance sheet as at December 31, 2010, and the consolidated statements of operations, retained earnings, cash flows and comprehensive income for the year then ended, and a summary of significant accounting policies and other explanatory information.

### MANAGEMENT'S RESPONSIBILITY FOR THE CONSOLIDATED FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Canadian generally accepted accounting principles, and for such internal control as Management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### AUDITORS' RESPONSIBILITY

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by Management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### OPINION

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of Hydro-Québec as at December 31, 2010, and the results of its operations and its cash flows for the year then ended, in accordance with Canadian generally accepted accounting principles.

### OTHER MATTER

The consolidated financial statements of Hydro-Québec for the year ended December 31, 2009, were audited jointly by KPMG LLP and Ernst & Young LLP, who expressed an unmodified opinion on those statements on February 5, 2010.

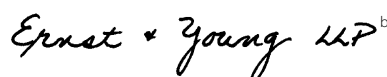
## Report on Other Legal and Regulatory Requirements

As required by the *Auditor General Act* (R.S.Q., c. V-5.01), we report that, in our opinion, except for the application of the changes in accounting policies described in Note 2 to the consolidated financial statements, these principles have been applied on a basis consistent with that of the preceding year.




**KPMG LLP**

Chartered Accountants



**Ernst & Young LLP**

Chartered Accountants



**Renaud Lachance, FCA auditor**

Auditor General of Québec

Montréal, Québec

February 18, 2011

a) CA auditor permit No. 6992

b) CA auditor permit No. 13764

# CONSOLIDATED FINANCIAL STATEMENTS

## CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31 In millions of Canadian dollars	Notes	2010	2009 (restated, Note 2)
<b>Revenue</b>		<b>12,338</b>	12,333
<b>Expenditure</b>			
Operations		2,581	2,527
Electricity and fuel purchases		1,390	1,207
Depreciation and amortization	4	2,605	2,372
Taxes	5	909	928
Regulatory deferrals	3	(188)	30
		<b>7,297</b>	7,064
<b>Operating income</b>		<b>5,041</b>	5,269
Financial expenses	6	2,526	2,398
<b>Net income</b>		<b>2,515</b>	2,871

## CONSOLIDATED STATEMENTS OF RETAINED EARNINGS

Years ended December 31 In millions of Canadian dollars	Notes	2010	2009
Balance, beginning of year, reported		17,312	16,445
Adjustments	2	(3,976)	(3,812)
Balance, beginning of year, restated		13,336	12,633
Net income		2,515	2,871
		<b>15,851</b>	15,504
Dividend	18	1,886	2,168
Balance, end of year		<b>13,965</b>	13,336

The accompanying notes are an integral part of the consolidated financial statements.



## CONSOLIDATED BALANCE SHEETS

As at December 31 In millions of Canadian dollars	Notes	2010	2009 (restated, Note 2)
<b>ASSETS</b>			
<b>Current assets</b>			
Cash and cash equivalents		80	472
Short-term investments		1,230	2,117
Accounts receivable and other receivables	15	1,813	1,955
Derivative instruments	15	889	1,324
Regulatory assets	3	43	71
Materials, fuel and supplies		321	339
		<b>4,376</b>	6,278
Property, plant and equipment	7	55,512	53,824
Goodwill and intangible assets	8	1,235	1,212
Investments	9	114	109
Derivative instruments	15	952	753
Regulatory assets	3	1,144	883
Other assets	10	2,565	1,933
		<b>65,898</b>	64,992
<b>LIABILITIES</b>			
<b>Current liabilities</b>			
Borrowings		18	29
Accounts payable and accrued liabilities		2,017	2,009
Dividend payable	18	1,886	2,168
Accrued interest		909	899
Derivative instruments	15	308	246
Regulatory liabilities	3	58	3
Current portion of long-term debt	11	1,933	586
		<b>7,129</b>	5,940
Long-term debt	11	36,439	37,054
Asset retirement obligations	12	504	467
Derivative instruments	15	2,114	1,960
Regulatory liabilities	3	1	23
Other long-term liabilities	13	857	826
Perpetual debt	14	288	303
		<b>47,332</b>	46,573
<b>EQUITY</b>			
Share capital	18	4,374	4,374
Retained earnings		13,965	13,336
Accumulated other comprehensive income		227	709
		<b>14,192</b>	14,045
		<b>18,566</b>	18,419
		<b>65,898</b>	64,992
Commitments and contingencies	22		

The accompanying notes are an integral part of the consolidated financial statements.

On behalf of the Board of Directors,



**Jacques Leblanc**

Chair of the Audit Committee



**Michael L. Turcotte**

Chairman of the Board

## CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31 In millions of Canadian dollars	Notes	2010	2009 (restated, Note 2)
<b>Operating activities</b>			
Net income		2,515	2,871
Adjustments to determine net cash flows from operating activities			
Depreciation and amortization	4	2,605	2,372
Amortization of premiums, discounts and issue expenses related to debt securities	6	127	117
Regulatory deferrals	3	(188)	30
Other		27	(6)
Change in non-cash working capital items	20	122	(36)
Net change in accrued benefit assets and liabilities		(569)	(561)
		<b>4,639</b>	<b>4,787</b>
<b>Investing activities</b>			
Additions to property, plant and equipment		(3,916)	(3,989)
Additions to intangible assets	8	(88)	(61)
Cash receipts from the government reimbursement for the 1998 ice storm		9	19
Disposal (acquisition) of investments		10	(15)
Acquisition of an interest	16	–	(580)
Costs related to Energy Efficiency Plan		(216)	(257)
Net disposal of short-term investments		891	1,430
Other		8	(22)
		<b>(3,302)</b>	<b>(3,475)</b>
<b>Financing activities</b>			
Issuance of long-term debt		1,593	4,135
Repayment of long-term debt		(1,083)	(1,233)
Cash receipts arising from credit risk management	15	2,322	1,125
Cash payments arising from credit risk management	15	(2,374)	(2,950)
Net change in short-term borrowings		(13)	(32)
Dividend paid		(2,168)	(2,252)
Other		(2)	(2)
		<b>(1,725)</b>	<b>(1,209)</b>
<b>Foreign currency effect on cash and cash equivalents</b>		<b>(4)</b>	<b>(16)</b>
<b>Net change in cash and cash equivalents</b>		<b>(392)</b>	<b>87</b>
<b>Cash and cash equivalents, beginning of year</b>		<b>472</b>	<b>385</b>
<b>Cash and cash equivalents, end of year</b>		<b>80</b>	<b>472</b>
Supplementary cash flow information	20		

The accompanying notes are an integral part of the consolidated financial statements.

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years ended December 31 In millions of Canadian dollars	2010	2009 (restated, Note 2)
<b>Net income</b>	<b>2,515</b>	2,871
<b>Other comprehensive income</b>		
Change in deferred (losses) gains on items designated as cash flow hedges	<b>(38)</b>	9
Reclassification to operations of deferred gains on items designated as cash flow hedges	<b>(444)</b>	(543)
	<b>(482)</b>	(534)
<b>Comprehensive income</b>	<b>2,033</b>	2,337

The accompanying notes are an integral part of the consolidated financial statements.

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Years ended December 31, 2010 and 2009

Amounts in tables are in millions of Canadian dollars, unless otherwise indicated.

*Under the provisions of the Hydro-Québec Act, Hydro-Québec is mandated to supply power and to pursue endeavors in energy-related research and promotion, energy conversion and conservation, and any field connected with or related to power or energy. Hydro-Québec is required, in particular, to supply a base volume of up to 165 TWh a year of heritage pool electricity for the Québec market, as set out in the Act respecting the Régie de l'énergie. As a government corporation, Hydro-Québec is exempt from paying income taxes.*

## Note 1 Significant Accounting Policies

The consolidated financial statements have been prepared in accordance with Canadian generally accepted accounting principles (GAAP) and reflect the decisions of the Régie de l'énergie (the "Régie"). These decisions affect the timing of the recognition of certain transactions in the consolidated operations, resulting in the recognition of regulatory assets and liabilities, which Hydro-Québec considers it is likely to recover or settle subsequently through the rate-setting process.

### REGULATION

The *Act respecting the Régie de l'énergie* grants the Régie exclusive authority to determine or modify the rates and conditions under which electricity is transmitted and distributed by Hydro-Québec. Hydro-Québec's electricity transmission and distribution activities in Québec are therefore regulated. Under this legislation, rates are set by reasoned decision of three commissioners after public hearings. Moreover, the Act stipulates that rates are determined on a basis that allows for recovery of the cost of service plus a reasonable return on the rate base.

The Régie and Hydro-Québec are both part of the Québec government reporting entity. However, the Régie is an independent, quasi-judicial economic regulatory agency accountable to the National Assembly of Québec through the Minister of Natural Resources and Wildlife.

### Transmission

Hydro-Québec's power transmission rates for 2010 and 2009 were determined in Régie decisions D-2010-041 and D-2009-023, respectively, and became effective on January 1, 2010, and January 1, 2009, respectively. The authorized return on the rate base was set at 7.44% in 2010 and 7.65% in 2009, assuming a capitalization with 30% equity.

### Distribution

Hydro-Québec's electricity rates were determined in decisions D-2010-035 and D-2009-021, in which the Régie granted across-the-board rate increases of 0.35% and 1.22%, effective April 1, 2010, and April 1, 2009, respectively. The authorized return on the rate base was set at 7.54% in 2010 and 7.42% in 2009, assuming a capitalization with 35% equity.

### SCOPE OF CONSOLIDATION

The consolidated financial statements include the accounts of Hydro-Québec, its subsidiaries and its joint ventures. Interests in joint ventures are accounted for using the proportionate consolidation method.

### USE OF ESTIMATES

The preparation of consolidated financial statements in accordance with GAAP requires that Management make estimates and assumptions that affect the amounts recognized as assets and liabilities, the disclosures regarding contingent assets and liabilities at the date of the consolidated financial statements and the amounts recognized as revenue and expenditure for the years at issue. The estimates relate to revenue, depreciation and amortization expenses, asset retirement obligations and employee future benefits, among other things. Actual results could differ from those estimates.

### REVENUE

Substantially all the revenue comes from electricity sales. Revenue from these sales is recognized on the basis of cyclical billings. It also includes estimated amounts for electricity delivered but not billed.

### FOREIGN CURRENCY TRANSLATION

#### *Self-sustaining foreign operations*

The financial statements of foreign operations that are self-sustaining in terms of financial and operational management are translated according to the current rate method using the foreign currency as the measuring unit. Under this method, assets and liabilities are translated into Canadian dollars at the exchange rate in effect at the balance sheet date, and revenue and expenditure are translated at the average exchange rate in effect during the period. The exchange gains or losses resulting from the translation of the financial statements of these foreign operations are presented in Accumulated other comprehensive income under Equity on the balance sheet.

#### *Integrated foreign operations and foreign currency transactions*

In the case of foreign operations that are integrated in terms of financial and operational management, as well as foreign currency transactions, accounts stated in foreign currencies are translated according to the temporal method. Under this method, monetary assets and liabilities are translated into Canadian dollars at the exchange rate in effect at the balance sheet date, and non-monetary items are translated at the historical rate. Revenue and expenditure arising from foreign currency transactions are translated into Canadian dollars at the exchange rate in effect at the transaction date. The exchange gains or losses resulting from the translation of monetary items are included in operations, unless they relate to hedging items for future sales in U.S. dollars, in which case they are recognized in Other comprehensive income until the year in which such sales are made.

### FINANCIAL INSTRUMENTS

Financial instruments are measured at fair value on initial recognition. Their measurement in subsequent periods and the recognition of any changes in fair value depend on the category in which they are classified.

The following table presents the classification of financial instruments in the various categories:

Category	Financial Instruments
Financial assets and liabilities held for trading	
Designated	Cash and cash equivalents (with initial maturities of three months or less)
Classified	Derivative instruments
Available-for-sale financial assets	Short-term investments (maturing in more than three months)
Loans and receivables	Accounts receivable and other receivables Government reimbursement for the 1998 ice storm (presented in Other assets)
Other financial liabilities	Borrowings Accounts payable and accrued liabilities Dividend payable Accrued interest Current portion of long-term debt Long-term debt Perpetual debt

Financial assets and liabilities are offset when certain conditions are met. The net amount is therefore reported on the balance sheet when Hydro-Québec has a legally enforceable right to set off the recognized amounts and it intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously. Moreover, futures or forward contracts on non-financial items that can be settled net are recorded at the date of settlement if there is a probability of receipt or delivery in accordance with expected requirements.

Financial assets and liabilities held for trading are recorded at fair value at the balance sheet date. Changes in fair value are recognized in operations for the period during which they occur, except in the case of derivative instruments designated as hedges in a cash flow hedging relationship.

Available-for-sale financial assets are recorded at fair value at the balance sheet date. Changes in fair value are recorded in Other comprehensive income until they are realized, at which time they are reclassified to operations.

Loans and receivables, less any impairment losses, as well as other financial liabilities are measured at amortized cost using the effective interest method.

As part of its integrated enterprise risk management, Hydro-Québec uses various financial instruments to manage its market risk, consisting of currency risk, interest rate risk and risk resulting from fluctuating energy and aluminum prices. Hydro-Québec applies cash flow or fair value hedge accounting to the eligible hedging relationships. It formally documents all relationships between hedging instruments and hedged items. This process involves associating all derivative instruments with specific assets and liabilities on the balance sheet, or with probable anticipated transactions. Hydro-Québec also measures the effectiveness of hedging relationships initially and then monthly thereafter. In addition, for hedges of anticipated transactions, it regularly assesses the probability of the occurrence of those transactions designated as hedged items.

In the case of a cash flow hedge, the effective portion of changes in the fair value of an instrument designated as a hedge is recognized under Other comprehensive income, while the ineffective portion is immediately recognized in operations, under the line item affected by the hedged

item. Amounts included in Accumulated other comprehensive income are reclassified to operations, also under the line item affected by the hedged item, during the periods in which the change in cash flows attributable to the hedged item affects operations. If a derivative instrument no longer satisfies hedging conditions or is sold or liquidated, or if Hydro-Québec terminates its designation as a hedging item, hedge accounting ceases to be applied on a prospective basis. Previously recognized gains and losses continue to be carried forward to be recognized in operations during the same period as the hedged item. If the hedged item ceases to exist, the gains or losses carried forward are immediately reclassified to operations.

In the case of a fair value hedge, the derivative instrument is recorded at fair value, and changes in the fair value, including those related to the ineffective portion of the hedge, are recognized in operations under the line item affected by the hedged item. Changes in the fair value of the hedged item attributable to the hedged risk are recorded as adjustments to the hedged item's carrying amount and are offset against operations.

In addition, an embedded derivative must be separated from its host contract and recognized at fair value on the balance sheet if certain conditions are met. Hydro-Québec has opted to apply this accounting treatment to all host contracts issued, acquired or substantively amended on or after January 1, 2003.

Hydro-Québec must classify the fair value measurements of financial instruments according to a three-level hierarchy, based on the type of inputs used in making these measurements:

- Level 1: Quoted prices in active markets for identical instruments;
- Level 2: Significant inputs and value drivers that are observable in active markets; and
- Level 3: One or more significant inputs or value drivers that are not observable market data.

Cash, cash equivalents, short-term investments and derivative instruments are recognized at fair value.

Except for cash and measurements of exchange-traded derivative instruments, which are Level 1 measurements, fair value measurements for financial instruments are Level 2 measurements. These measurements are obtained by discounting future cash flows, which are estimated on the basis of the spot rates or the forward rates or prices (foreign exchange rates, interest rates, and energy or aluminum prices) in effect on the balance sheet date, and take into account the credit risk assessment. The valuation techniques make use of observable market data.

## MATERIALS, FUEL AND SUPPLIES

Inventories of materials, fuel and supplies are valued at the lower of cost and net realizable value. Cost is determined by the weighted average cost method.

## PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are carried at cost, which comprises materials, labor, other costs directly related to construction activities, and financial expenses capitalized during construction. Property, plant and equipment also include draft-design costs for projects whose technical feasibility has been demonstrated, whose profitability has been estimated, and for which Management deems that it will in all likelihood have the necessary resources for completion. The discounted value of retirement obligations related to property, plant and equipment is added to the carrying amount. Moreover, contributions from third parties are applied against the cost of the related property, plant and equipment.

Financial expenses capitalized to property, plant and equipment under construction are determined using the average cost of Hydro-Québec's long-term debt. When the property, plant and equipment under construction relate to regulated transmission and distribution activities, such financial expenses take return on equity into account. The portion that corresponds to return on equity is included in Revenue in the consolidated operations.

## Note 1 Significant Accounting Policies (continued)

Property, plant and equipment are depreciated over their useful life, using the straight-line method. In 2009, the sinking fund method was used at a rate of 3% for assets related to regulated activities, as explained in Note 2, Changes to Accounting Policies. The depreciation periods for the principal categories of property, plant and equipment are as follows:

Hydraulic generation	40 to 100 years
Thermal generation, including nuclear	15 to 50 years
Transmission substations and lines	30 to 50 years
Distribution substations and lines	25 to 40 years
Other property, plant and equipment	3 to 50 years

When property, plant and equipment are retired, their cost, net of accumulated depreciation and salvage value, is charged to operations for the year. Information concerning the recognition of the net retirement costs of property, plant and equipment related to regulated activities is provided in Note 3, Effects of Rate Regulation on the Consolidated Financial Statements.

Maintenance and repair costs are recognized in operations when incurred.

### INTANGIBLE ASSETS

Intangible assets are recorded at cost. Financial expenses are capitalized over the development period.

Internally developed computer software and development costs are capitalized when they meet capitalization criteria. Development costs that are not capitalizable and research costs are recognized in operations as incurred.

Intangible assets with an indefinite useful life are not amortized. These assets are tested for impairment annually or more frequently if events indicate a potential impairment loss. The excess of the carrying amount over the fair value is recognized in operations for the period in which the impairment is determined.

Intangible assets with a finite useful life are amortized over their useful life according to the straight-line method over the following periods:

Software and licences	3 to 10 years
Development costs	5 years
Patents	20 years

### IMPAIRMENT OF LONG-LIVED ASSETS

Hydro-Québec reviews the carrying amount of its property, plant and equipment and its amortizable intangible assets whenever events or changes in circumstances indicate that the expected undiscounted net cash flows could be lower than the carrying amount of the property and assets. An impairment loss corresponding to the amount by which the carrying amount exceeds fair value is recognized, if applicable.

### INVESTMENTS

Investments in companies over which Hydro-Québec can exercise significant influence are accounted for on an equity basis.

### EMPLOYEE FUTURE BENEFITS

Hydro-Québec offers all its employees a contributory defined-benefit pension plan based on final pay, as well as other post-retirement and post-employment benefits.

The cost of pension benefits and other post-retirement benefits provided in exchange for current service is calculated using the projected benefit method prorated on years of service. It is based on Management's best assumptions of the discount rate, the expected return on plan assets, salary escalation, the increase in health care costs, retirement ages of employees and other actuarial factors.

In order to establish its employee future benefit obligations, Hydro-Québec has adopted the following policies:

- Past service costs arising from plan amendments and transitional balances relating to the pension plan and post-retirement benefits as at January 1, 1999, are amortized using the straight-line method over periods not exceeding active employees' average remaining years of service, which was 12 years as at January 1, 2010 and 2009.

- Amortization of actuarial gains or losses is recognized in operations for the year if the unamortized net actuarial gain or loss at the beginning of the year exceeds 10% of the value of the accrued benefit obligations or 10% of the market-related value of the plan assets, whichever is greater. The amortization corresponds to the excess divided by active employees' average remaining years of service.

- The expected return on pension plan assets is based on a market-related value determined by using a five-year moving average value for equity securities and by measuring other asset classes at fair value.

### ASSET RETIREMENT OBLIGATIONS

Hydro-Québec accounts for asset retirement obligations in the period in which these legal obligations are incurred when a reasonable estimate of their fair value can be made. The corresponding costs of asset retirement are added to the carrying amount of the related long-lived asset and are amortized over its useful life. In subsequent financial years, any change due to the passage of time is recognized in operating expenses for the current year (accretion expense) and the corresponding amount is added to the carrying amount of the liability. Changes resulting from revisions to the timing or the amount of the undiscounted cash flows are recognized as an increase or decrease in the carrying amount of the liability arising from asset retirement obligations, and the related asset retirement cost is capitalized as part of the carrying amount of the related asset.

The cash flows required to settle asset retirement obligations are estimated on the basis of studies that use various assumptions concerning the methods and timing to be adopted for the retirement. Hydro-Québec periodically reviews estimates of these cash flows in light of the underlying assumptions and estimates, potential technological advances, and changes in applicable standards, laws and regulations.

### AGREEMENTS WITH LOCAL COMMUNITIES

Hydro-Québec has entered into various agreements with the local communities concerned by certain capital projects and intangible asset investment projects. The amounts under these agreements are recognized in Long-term debt if they fall within the definition of a liability, and the offsetting item is recognized in Property, plant and equipment or Intangible assets, as the case may be.

### RELATED PARTY TRANSACTIONS

In the normal course of business, Hydro-Québec enters into various business transactions, including electricity sales, with the Québec government and its agencies, as well as with other government corporations. These business transactions are measured at the exchange amount.

## Note 2 Changes to Accounting Policies

### RECENT CHANGES

#### 2010

##### *Depreciation method for property, plant and equipment and related issues*

On January 1, 2010, Hydro-Québec amended the accounting policy on the depreciation of property, plant and equipment in order to adopt the straight-line method. Property, plant and equipment were previously depreciated using the sinking fund method, at a rate of 3%. Management believes that the straight-line method of depreciation best reflects the rate at which Hydro-Québec expects to consume the future economic benefits of these assets.

Hydro-Québec has applied this change in accounting policy retrospectively with restatement of prior periods for assets related to non-regulated activities. For assets related to regulated activities, Hydro-Québec has applied the change prospectively in compliance with the U.S. Financial Accounting Standards Board's *Accounting Standards Codification (ASC) 980, "Regulated Operations,"* which is the reference accounting standard for the evaluation and measurement of the effects of rate regulation. In decision D-2010-020, the Régie approved the change in the depreciation method for property, plant and equipment applied by the Transmission Provider and the Distributor.

The retrospective application of this change in accounting policy resulted in a decrease of \$3,885 million in property, plant and equipment and retained earnings as at January 1, 2010 (\$3,728 million as at January 1, 2009). The change in accounting policy led to an increase in depreciation expense and a decrease in property, plant and equipment of \$466 million in 2010 (\$157 million in 2009).

Furthermore, in 2010 Hydro-Québec recognized obligations essentially related to the dismantling of thermal generating stations. These obligations were recognized retrospectively, resulting in the following changes as at January 1, 2010: a \$91-million decrease in retained earnings (\$84 million as at January 1, 2009), a \$19-million increase in property, plant and equipment (\$21 million as at January 1, 2009), a \$96-million increase in asset retirement obligations (\$93 million as at January 1, 2009) and a \$14-million increase in other long-term liabilities (\$12 million as at January 1, 2009). Their recognition also reduced net income by \$7 million in 2010 (\$7 million in 2009).

#### 2009

##### *Goodwill and intangible assets*

On January 1, 2009, Hydro-Québec adopted the recommendations of Section 3064 of the *Canadian Institute of Chartered Accountants (CICA) Handbook, "Goodwill and Intangible Assets,"* which superseded Section 3062, "Goodwill and Other Intangible Assets," and Section 3450, "Research and Development Costs." Section 3064 establishes standards for the recognition, measurement, presentation and disclosure of goodwill and intangible assets. The adoption of these recommendations had no material impact on the consolidated financial statements.

##### *Rate-regulated activities*

On January 1, 2009, the temporary exemption provided for in *CICA Handbook* Section 1100, "Generally Accepted Accounting Principles," which allowed the recognition and measurement of regulatory assets and liabilities, was withdrawn. Pursuant to a practice allowed by Canadian GAAP, however, Hydro-Québec has relied on *ASC 980* to maintain its established accounting treatment for regulatory assets and liabilities. The withdrawal of the exemption therefore had no impact on the consolidated financial statements.

##### *Credit risk and the fair value of financial assets and financial liabilities*

On January 20, 2009, the Emerging Issues Committee (EIC) of the CICA issued *Abstract of Issue Discussed EIC-173, "Credit Risk and the Fair Value of Financial Assets and Financial Liabilities."* EIC-173 clarifies that an entity's own credit risk and the credit risk of the counterparty should be taken into account in determining the fair value of financial assets and financial liabilities, including derivative instruments. The adoption of the recommendations in this abstract had no impact on the consolidated financial statements.

##### *Financial instruments – Disclosures*

In June 2009, the CICA amended *CICA Handbook* Section 3862, "Financial Instruments – Disclosures." The purpose of the amendments was to improve disclosures about fair value measurements and the liquidity risk associated with financial instruments. The information required is provided in Note 1, Significant Accounting Policies – Financial Instruments, and Note 15, Financial Instruments.

### FUTURE CHANGES

##### *Business combinations*

In January 2009, the CICA issued Section 1582, "Business Combinations," which superseded Section 1581, "Business Combinations." Section 1582 establishes the principles and requirements for how the acquirer recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree. It will apply prospectively to business combinations for which the acquisition date is in a fiscal year beginning on or after January 1, 2011.

##### *Consolidated financial statements and non-controlling interests*

In January 2009, the CICA issued Section 1601, "Consolidated Financial Statements," and Section 1602, "Non-Controlling Interests," which superseded Section 1600, "Consolidated Financial Statements." Section 1601 establishes standards for the preparation of consolidated financial statements. Section 1602 establishes standards for accounting for a non-controlling interest in a subsidiary in consolidated financial statements subsequent to a business combination. These sections will apply to interim and annual financial statements relating to fiscal years beginning on or after January 1, 2011.

## Note 3 Effects of Rate Regulation on the Consolidated Financial Statements

The following information describes the impact on the consolidated financial statements of accounting methods and practices adopted by Hydro-Québec in accordance with the Régie's decisions with respect to regulated activities.

### REGULATORY ASSETS AND LIABILITIES

#### *Costs related to the Energy Efficiency Plan (EEP)*

The costs related to implementation of the EEP, such as specific energy conservation programs, are recognized in a separate account and amortized over 10 years on a straight-line basis, except for the costs incurred prior to January 1, 2006, which are amortized over five years. The amortization period begins in the year after the costs were recorded. Financial expenses arising from these costs are capitalized at the rate of return authorized by the Régie on the rate base until such time as they are included in the rate base and amortization begins. This accounting practice was authorized by the Régie in decisions D-2002-25, D-2002-288, D-2003-93 and D-2006-56, which relate to Hydro-Québec's power distribution activities. Were these activities not regulated, certain costs not associated with intangible assets as defined in the accounting standards would be recognized in operations for the year in which they are incurred. Had none of the costs incurred been related to an intangible asset, net income for 2010 would have been \$121 million lower (\$178 million in 2009).

#### *Net costs related to retirement of property, plant and equipment and intangible assets*

In decisions D-2009-023 and D-2009-021, the Régie accepted the Distributor's and the Transmission Provider's proposal to recognize net retirement costs for property, plant and equipment and intangible assets, except for the costs related to Des Cantons substation, in operations for the year in which they are incurred. Most of the balance in the related account, which totaled \$267 million as at December 31, 2008, was therefore expensed in 2009. In decision D-2010-041, the Régie accepted the Transmission Provider's proposal to recognize retirement costs of \$51 million for assets at Des Cantons substation in operations for 2010.

#### *Revenue variances related to climate conditions*

Variances between the Distributor's actual transmission and distribution revenue and the revenue forecasts established on the basis of the climate normal for rate application purposes are recognized in a separate account and amortized on a straight-line basis over a five-year period, except for \$62 million related to a review of the climate normal, which was expensed in 2009. Financial expenses arising from these variances are capitalized at the rate of return authorized by the Régie on the rate base until such time as they are included in the rate base and amortization begins. This accounting practice was authorized by the Régie in decisions D-2006-34 and D-2009-016, which relate to Hydro-Québec's power distribution activities. Were these activities not regulated, expenditure would have been higher and net income lower by \$136 million in 2010 (expenditure lower and net income higher by \$65 million in 2009).

#### *Variances in annual cost of transmission service for native load*

Variances resulting from any modification of the annual cost of native load transmission service that has not been taken into account in the setting of electricity rates are recognized in a separate account and amortized according to conditions set by the Régie. Financial expenses arising from these costs are capitalized at the rate of return authorized by the Régie on the rate base until such time as amortization begins. This accounting practice was authorized by the Régie in decisions D-2003-93, D-2006-34, D-2007-12 and D-2008-024, which relate to Hydro-Québec's power distribution activities. Were these activities not regulated, expenditure would have been higher and net income lower by \$17 million in 2010 (expenditure lower and net income higher by \$104 million in 2009).

#### *Costs incurred until the rescission of dual-energy Rate BT*

The costs incurred until the rescission of dual-energy Rate BT were charged to a separate account and have been amortized on a straight-line basis over five years since the rescission date of April 1, 2006. These costs mainly include the deficit resulting from the variance between the supply cost recognized by the Régie and energy prices in effect, multiplied by the quantity of electricity delivered to customers at Rate BT between January 1, 2004, and March 31, 2006. Financial expenses arising from these costs were capitalized at the rate of return authorized by the Régie on the rate base until March 31, 2006. This accounting practice was authorized by the Régie in decisions D-2004-47, D-2004-170 and D-2006-34, which relate to Hydro-Québec's power distribution activities. Were these activities not regulated, the costs would have been recognized in operations for the year in which they were incurred, and net income would have been \$30 million higher in 2010 (\$29 million in 2009).

#### *Costs related to the de-icing system at Lévis substation*

Certain costs related to the Lévis substation de-icing system, designed in the wake of the 1998 ice storm to secure the transmission lines supplying the greater Québec area, were recognized in a separate account. These costs have been depreciated using the straight-line method starting from the date of commissioning of the de-icing system, over a period corresponding to the average remaining useful life of the assets enhanced by the system. Financial expenses arising from these costs were capitalized at the rate of return authorized by the Régie on the rate base until such time as they were included in the rate base and amortization began. The Régie authorized this accounting practice in decision D-2004-175, which relates to Hydro-Québec's power transmission activities. Were these activities not regulated, the costs would have been recognized in operations for the year in which they were incurred, and net income would have been \$1 million higher in 2010 (\$1 million in 2009).

#### *Variances in supply costs for electricity in excess of the heritage pool*

Volume and price variances between the actual supply costs for electricity in excess of the heritage pool and the costs forecasted in the rate cases and accepted by the Régie for rate-setting purposes are recognized in a separate account and amortized according to conditions set by the Régie. Financial expenses arising from these variances are capitalized at the rate of return authorized by the Régie on the rate base until such time as amortization begins. This accounting practice was authorized by the Régie in decisions D-2005-34, D-2005-132, D-2006-34, D-2007-12 and D-2008-024, which relate to Hydro-Québec's power distribution activities. Were these activities not regulated, the actual costs would be recognized in operations for the year in which they are incurred, and net income would have been \$42 million lower in 2010 (\$63 million in 2009).

#### *Variances in supply costs for fuel*

Variances between the actual costs of fuel purchases and the costs forecasted in the rate cases and accepted by the Régie for rate-setting purposes are recognized in a separate account and amortized according to conditions set by the Régie. Financial expenses arising from these variances are capitalized at the rate of return authorized by the Régie on the rate base until such time as amortization begins. This accounting practice was authorized by the Régie in decision D-2009-016, which relates to Hydro-Québec's power distribution activities. Were these activities not regulated, the actual costs would be recognized in operations for the year in which they are incurred, and net income would have been \$13 million higher in 2010 (\$10 million lower in 2009).

#### *Variances in revenue from point-to-point transmission services*

Variances between actual revenue from point-to-point transmission services and revenue forecasted in the rate cases and accepted by the Régie for rate-setting purposes are recognized in a separate account and amortized according to conditions set by the Régie. Financial expenses arising from these variances are capitalized at the rate of return authorized by the Régie on the rate base until such time as amortization begins. This accounting practice was authorized by the Régie in decisions D-2007-08 and D-2008-019, which relate to Hydro-Québec's power transmission activities. Were these activities not regulated, Hydro-Québec's expenditure would have been lower and net income higher by \$30 million in 2010 (expenditure lower and net income higher by \$17 million in 2009).



## REGULATORY ASSETS

	Expected years of amortization	2010	2009
Costs related to EEP	2011–2020	858	737
Net costs related to retirement of property, plant and equipment and intangible assets	–	–	51
Revenue variances related to climate conditions <sup>a</sup>	2011–2016	212	76
Variances in annual cost of transmission service for native load <sup>a</sup>	2011	17	–
Costs incurred until rescission of dual-energy Rate BT	2011	7	37
Costs related to de-icing system at Lévis substation	2011–2047	11	12
Variances in supply costs for electricity in excess of heritage pool <sup>a</sup>	2011–2012	52	10
Variances in supply costs for fuel <sup>a</sup>	–	–	10
Other <sup>a</sup>	2011–2030	30	21
		<b>1,187</b>	954
Current portion		<b>43</b>	71
		<b>1,144</b>	883

## REGULATORY LIABILITIES

	Expected years of amortization	2010	2009
Variances in supply costs for fuel <sup>a</sup>	2011	(3)	–
Variances in revenue from point-to-point transmission services <sup>a</sup>	2011–2012	(56)	(26)
		<b>(59)</b>	(26)
Current portion		<b>(58)</b>	(3)
		<b>(1)</b>	(23)

a) The change in the variance accounts, net of an amortization expense of \$39 million (\$87 million in 2009) and capitalized financial expenses of \$7 million (\$4 million in 2009), as well as an amount of \$4 million under Other (nil in 2009), are recognized under Regulatory deferrals in the Consolidated Statements of Operations, and led to a \$188-million decrease in expenditure (\$30-million increase in 2009).

### Risks and uncertainties

The risks and uncertainties related to the above regulatory assets and liabilities are subject to periodic monitoring and assessment. Once Hydro-Québec considers that it is no longer likely that the net carrying amount of a regulatory asset or liability will be taken into account in setting future rates, this amount is recognized in operations for the year in which the conclusion is reached.

### OTHER REGULATORY PRACTICES

Under Régie decisions D-2002-95 and D-2003-93, the compensation granted by the Québec government for the 1998 ice storm was applied against the cost of newly constructed property, plant and equipment; it is amortized over the remaining life of the retired assets, with the exception of the portion equivalent to the unamortized cost of these assets, which is amortized over 10 years. The straight-line method is used in both cases. Were these activities not regulated, the compensation would be amortized over the useful life of the newly constructed property, plant and equipment.

In decisions D-2002-95 and D-2004-47, the Régie prescribed capitalizing financial expenses to property, plant and equipment under construction and intangible assets under development according to the authorized rates of return on the rate bases. These rates, which are set using methods approved by the Régie, take into account a component associated with

the cost of the debt and a component associated with the return on equity. Were these activities not regulated, financial expenses would be capitalized using the average cost of Hydro-Québec's long-term debt.

Under Régie decisions D-2002-95 and D-2003-93, the cost of dismantling assets that were retired and replaced, net of the salvage value, is added to the cost of the newly constructed assets. Were these activities not regulated, these costs would be recognized in operations.

Under Régie decisions D-2006-76 and D-2006-76R, contributions received for relocation or modification projects relating to certain transmission grid assets are recognized in a separate account and applied against property, plant and equipment. These contributions are amortized over the average useful life of assets for each project, using the straight-line method. Were these activities not regulated, the contributions would be amortized over the useful life of each fixed asset concerned.

In decision D-2009-125, the Régie authorized an agreement whereby energy deliveries provided for in a power purchase contract with an independent power producer were suspended for 2010. As at December 31, 2009, a \$49-million commitment regarding this agreement was recorded on the balance sheet but had no impact on operating results for 2009. In decision D-2010-109, the Régie authorized the continued suspension in 2011 of the energy deliveries provided for in that contract. As at December 31, 2010, a \$46-million commitment was recorded on the balance sheet but had no impact on 2010 results.

## Note 4 Depreciation and Amortization

	2010	2009 (restated, Note 2)
Property, plant and equipment <sup>a</sup>	2,265	1,842
Intangible assets	97	97
Regulatory assets and liabilities	220	419
Write-offs	23	14
	<b>2,605</b>	<b>2,372</b>

a) Revision of the useful life of property, plant and equipment resulted in a \$138-million decrease in depreciation expense in 2009. In the case of some property, plant and equipment used for hydroelectric generation, this revision increased the maximum depreciation period from 50 to 100 years. The revision of the useful life of property, plant and equipment had no significant impact on depreciation and amortization expense for 2010.

## Note 5 Taxes

	2010	2009
Water-power royalties <sup>a</sup>	561	573
Public utilities tax <sup>b</sup>	262	188
Capital tax <sup>b</sup>	51	132
Municipal, school and other taxes	35	35
	<b>909</b>	<b>928</b>

a) Water-power royalties of \$557 million (\$567 million in 2009) payable to the Québec government were recognized in 2010.

b) The public utilities tax and capital tax are paid to the Québec government.

## Note 6 Financial Expenses

	2010	2009
<b>Interest</b>		
Interest on debt securities	2,495	2,411
Amortization of premiums, discounts and issue expenses related to debt securities	127	117
	<b>2,622</b>	<b>2,528</b>
<b>Net exchange loss</b>	<b>7</b>	<b>40</b>
<b>Guarantee fees related to debt securities<sup>a</sup></b>	<b>183</b>	<b>174</b>
	<b>190</b>	<b>214</b>
Less		
Capitalized financial expenses	276	318
Net investment income	10	26
	<b>286</b>	<b>344</b>
	<b>2,526</b>	<b>2,398</b>

a) Guarantee fees related to debt securities are paid to the Québec government.

## Note 7 Property, Plant and Equipment

	<b>2010</b>			
	In service	Accumulated depreciation	Under construction	Net carrying amount
<b>Generation</b>				
Hydraulic	37,990	13,549	3,107	<b>27,548</b>
Thermal, including nuclear	2,697	2,171	690	<b>1,216</b>
Other	757	432	20	<b>345</b>
	<b>41,444</b>	<b>16,152</b>	<b>3,817</b>	<b>29,109</b>
<b>Transmission</b>				
Substations and lines	23,519	8,091	791	<b>16,219</b>
Other	2,188	1,272	66	<b>982</b>
	<b>25,707</b>	<b>9,363</b>	<b>857</b>	<b>17,201</b>
<b>Distribution</b>				
Substations and lines	12,661	5,216	334	<b>7,779</b>
Other	1,927	1,072	84	<b>939</b>
	<b>14,588</b>	<b>6,288</b>	<b>418</b>	<b>8,718</b>
<b>Construction</b>	28	17	3	<b>14</b>
<b>Corporate and Other Activities</b>	1,136	720	54	<b>470</b>
	<b>82,903</b>	<b>32,540</b>	<b>5,149</b>	<b>55,512</b>

	2009 (restated, Note 2)			
	In service	Accumulated depreciation	Under construction	Net carrying amount
<b>Generation</b>				
Hydraulic	36,865	12,950	2,627	26,542
Thermal, including nuclear	2,649	2,139	449	959
Other	753	408	6	351
	<b>40,267</b>	<b>15,497</b>	<b>3,082</b>	<b>27,852</b>
<b>Transmission</b>				
Substations and lines	22,607	7,409	698	15,896
Other	2,108	1,214	69	963
	<b>24,715</b>	<b>8,623</b>	<b>767</b>	<b>16,859</b>
<b>Distribution</b>				
Substations and lines	12,325	4,907	301	7,719
Other	1,891	1,039	91	943
	<b>14,216</b>	<b>5,946</b>	<b>392</b>	<b>8,662</b>
<b>Construction</b>	28	17	–	11
<b>Corporate and Other Activities</b>	1,078	693	55	440
	<b>80,304</b>	<b>30,776</b>	<b>4,296</b>	<b>53,824</b>

## Note 8 Goodwill and Intangible Assets

	2010			2009		
	Cost	Accumulated amortization	Net carrying amount	Cost	Accumulated amortization	Net carrying amount
<b>Intangible assets</b>						
<b>Subject to amortization<sup>a</sup></b>						
Software and licences	1,385	841	<b>544</b>	1,296	754	542
Development costs	45	23	<b>22</b>	36	18	18
Patents	11	5	<b>6</b>	11	5	6
	<b>1,441</b>	<b>869</b>	<b>572</b>	<b>1,343</b>	<b>777</b>	<b>566</b>
<b>Not subject to amortization</b>						
Servitudes <sup>a</sup>			<b>371</b>			354
Water-power rights			<b>282</b>			282 <sup>b</sup>
			<b>653</b>			636
<b>Goodwill</b>			<b>10</b>			10
			<b>1,235</b>			1,212

a) Additions for the year totaled \$88 million as at December 31, 2010 (\$61 million as at December 31, 2009), including \$82 million (\$56 million as at December 31, 2009) in internal development costs.

b) The amount indicated is the fair value of the water-power rights upon allocation of the purchase price of the Manicouagan Power Limited Partnership. Information concerning this acquisition is presented in Note 16, Acquisition of an Interest.

## Note 9 Investments

	2010	2009
<b>At equity</b>		
Churchill Falls (Labrador) Corporation Limited	<b>97</b>	86
CITEQ inc.	<b>(5)</b>	(5)
	<b>92</b>	81
<b>Other</b>	<b>22</b>	28
	<b>114</b>	109

## Note 10 Other Assets

	Note	2010	2009
Accrued benefit assets	21	<b>2,361</b>	1,736
Government reimbursement for the 1998 ice storm <sup>a</sup>		<b>74</b>	71
Other		<b>130</b>	126
		<b>2,565</b>	1,933

a) Payable in quarterly installments of \$6 million until January 15, 2010, followed by quarterly installments of \$3 million between April 15, 2010, and October 15, 2019, and a final installment of \$0.4 million on January 15, 2020. These installments include interest at an annual rate of 7.2%. The current portion, presented under Accounts receivable and other receivables, amounted to \$8 million as at December 31, 2010 (\$20 million as at December 31, 2009). The fair value of this financial asset, including the current portion, totaled \$99 million as at December 31, 2010 (\$100 million as at December 31, 2009).

## Note 11 Long-Term Debt

Long-term debt is mainly composed of bonds, medium-term notes and the balance of liabilities under agreements entered into with local communities. The following table presents the debt at amortized cost, including the current portion, by currency at the time of issue and at the time of repayment. Swaps related to long-term debt were taken into account in determining the percentages of debt by currency at the time of repayment.

	2010						2009		
	At time of issue			At time of repayment			At time of issue		At time of repayment
	In Canadian dollars and other currencies	At closing exchange rates as at the balance sheet date	%				%	%	
<b>Hydro-Québec's debt</b>									
Canadian dollars	29,869	<b>29,869</b>	<b>78</b>	<b>96</b>	28,801	28,801	77	96	
U.S. dollars	8,047	<b>7,989</b>	<b>21</b>	<b>4<sup>a</sup></b>	8,050	8,410	22	4 <sup>a</sup>	
Other currencies									
Euros	60	<b>80</b>	–	–	59	89	–	–	
Yen	2,002	<b>24</b>	–	–	2,004	22	–	–	
Pounds sterling	239	<b>370</b>	<b>1</b>	–	238	403	1	–	
		<b>38,332</b>				<b>37,725</b>			
Plus									
Adjustment for fair-value hedged risk		<b>20</b>	–	–		(109)	–	–	
<b>Subsidiaries' debt</b>									
U.S. dollars	20	<b>20</b>	–	–	23	24	–	–	
		<b>38,372</b>	<b>100</b>	<b>100</b>		<b>37,640</b>	<b>100</b>	<b>100</b>	
Less									
Current portion		<b>1,933</b>				586			
		<b>36,439</b>				<b>37,054</b>			

a) Of this amount, 99.4% was used to hedge sales in U.S. dollars as at December 31, 2010 and 2009.

### INTEREST RATES

The following table shows interest rates, which take into account stated interest rates on debt securities, including premiums and discounts, as well as the effect of swaps related to long-term debt:

%	2010				2009
	Canadian dollars	U.S. dollars	Other currencies	Weighted average	Weighted average
Maturity					
1 to 5 years	4.34	8.72	10.19	<b>6.21</b>	5.67
6 to 10 years	10.54	7.13	6.10	<b>10.02</b>	7.10
11 to 15 years	9.74	8.68	–	<b>9.17</b>	9.46
16 to 20 years	6.01	9.51	–	<b>9.41</b>	8.79
21 to 25 years	5.30	–	–	<b>5.30</b>	7.43
26 to 30 years	5.16	–	–	<b>5.16</b>	5.99
31 to 35 years	4.93	–	–	<b>4.93</b>	5.17
36 to 40 years	4.79	–	–	<b>4.79</b>	4.92
41 to 45 years	–	–	–	–	4.96
46 to 50 years	6.62	–	–	<b>6.62</b>	–
51 to 55 years	–	–	–	–	6.62
Weighted average	5.73	9.03	9.38	<b>6.37</b>	6.57

As at December 31, 2010, the floating-rate portion of long-term debt amounted to 10.6%, or 11.3% including perpetual debt (9.4%, or 10.1% including perpetual debt, as at December 31, 2009).

## Note 11 Long-Term Debt (continued)

### FAIR VALUE

The fair value of the long-term debt, including the current portion, totaled \$48,886 million as at December 31, 2010 (\$46,422 million as at December 31, 2009). Taking into account swaps related to long-term debt, it amounted to \$49,842 million (\$47,258 million as at December 31, 2009). Fair value is obtained by discounting future cash flows, based on forward interest rates derived from interest rates at the close of business on the balance sheet date for similar instruments traded on capital markets. Changes in fair value reflect sensitivity to capital market interest rates. However, Management's primary intention is to hold these debt securities until maturity.

### CREDIT FACILITY AND LINES OF CREDIT

Hydro-Québec has an undrawn credit facility of US\$2,000 million, composed of two tranches, one of US\$360 million and the other of US\$1,640 million, including a US\$750-million swing loan, which will expire in 2012 and 2013. Any debt securities will bear interest at a rate based on the London Interbank Offered Rate (LIBOR), except for the swing loan, which is at the U.S. base rate. Hydro-Québec also has access to undrawn lines of credit totaling \$362 million, which are renewed automatically in the absence of notice to the contrary and bear interest at the prime rate.

## Note 12 Asset Retirement Obligations

Liabilities arising from asset retirement obligations relate to the cost of dismantling Gentilly-2 nuclear generating station at the end of its useful life, the removal of spent nuclear fuel resulting from its operation, and the dismantling of thermal generating stations and certain fuel tanks and transmission substations.

Hydro-Québec has also identified asset retirement obligations relating to transmission activities for which no liability has been recognized since it expects to use these assets for an undetermined period. These relate to property, plant and equipment for which Hydro-Québec does not have sufficient information to accurately establish a schedule for the obligations. A liability resulting from these asset retirement obligations will be recognized in the period in which there is sufficient information to establish such a schedule.

The aggregate carrying amount of the asset retirement obligations is as follows:

				2010
	Dismantling of nuclear generating station <sup>a</sup>	Removal of spent nuclear fuel <sup>a</sup>	Dismantling of other assets	Total
Balance, beginning of year	185	170	112	<b>467</b>
Liabilities incurred	–	2	1	<b>3</b>
Accretion expense	12	16	5	<b>33</b>
Liabilities settled	–	(1)	(1)	<b>(2)</b>
Revision of estimated cash flows and expected timing of payments	–	–	3	<b>3</b>
Balance, end of year	197	187	120	<b>504</b>
				2009 (restated, Note 2)
	Dismantling of nuclear generating station <sup>a</sup>	Removal of spent nuclear fuel <sup>a</sup>	Dismantling of other assets	Total
Balance, beginning of year	129	155	109	393
Liabilities incurred	–	2	3	5
Accretion expense	9	14	5	28
Liabilities settled	–	(1)	(2)	(3)
Revision of estimated cash flows and expected timing of payments	47	–	(3)	44
Balance, end of year	185	170	112	467

a) The Québec government has provided an irrevocable financial guarantee of up to \$685 million to the Canadian Nuclear Safety Commission (CNSC) for the performance of Hydro-Québec's obligations with regard to the cost of dismantling Gentilly-2 nuclear generating station at the end of its useful life and the removal of spent nuclear fuel. This financial guarantee is required under the CNSC licence issued to Hydro-Québec to operate the generating station until June 30, 2011. In 2011, the CNSC will decide on the application submitted by Hydro-Québec to renew its operating licence until June 30, 2016.

The carrying amount of the asset retirement obligations is based on the following key assumptions:

	Dismantling of nuclear generating station	Removal of spent nuclear fuel	Dismantling of other assets
Estimated cash flows (in constant dollars) required to settle the obligations <sup>a</sup>			
As at December 31, 2010	932	667	170
As at December 31, 2009	914	651	162
Expected timing of payment of the cash flows required to settle the obligations			
As at December 31, 2010	Between 2040 and 2071	Between 2011 and 2159	Between 2011 and 2092
As at December 31, 2009	Between 2040 and 2071	Between 2010 and 2159	Between 2010 and 2092
Credit quality-adjusted, risk-free rate at which the estimated cash flows have been discounted (%)			
Initial recognition of obligations	6.4	6.4	Between 2.4 and 6.4
Subsequent recognition of obligations	Between 5.0 and 5.5	5.5	1.3 and 6.1

a) Inflation rates varying between 1.8% and 3.6% were used to determine the asset retirement obligations.

### HYDRO-QUÉBEC NUCLEAR FUEL WASTE MANAGEMENT TRUST FUND

On November 15, 2002, the *Nuclear Fuel Waste Act* came into force. Under this Act, Canadian nuclear energy corporations were required to set up a waste management organization whose role would be to propose a long-term approach for managing spent nuclear fuel to the Government of Canada. Each nuclear energy corporation was also required to set up a trust fund to finance the costs of long-term management of its nuclear fuel waste.

In November 2005, the Nuclear Waste Management Organization (NWMO) filed its report with the Government of Canada and recommended an approach which was adopted in June 2007.

In October 2007, the members of the NWMO ratified an agreement that sets forth a formula for financing the costs of long-term nuclear fuel waste management. This formula, approved by the Canadian Minister of Natural Resources in April 2009, is used to determine each member's share for the coming years, based on the number of spent nuclear fuel bundles produced at a given date. It also takes into account the date on which each member plans to start shipping spent nuclear fuel bundles to the future national repository site.

The amounts deposited in the trust funds can only be used to finance the application of the approach adopted by the Government of Canada. As at December 31, 2010, the investments held in the Hydro-Québec trust fund were composed of Hydro-Québec securities, the fair value of which totaled \$77 million (\$62 million as at December 31, 2009).

## Note 13 Other Long-Term Liabilities

	Notes	2010	2009 (restated, Note 2)
Accrued benefit liabilities	21	761	705
Accounts payable		96	91
Balance of purchase price (payable in 2011)	16	–	30
		<b>857</b>	826

## Note 14 Perpetual Debt

Perpetual notes in the amount of \$288 million (US\$289 million) as at December 31, 2010, and \$303 million (US\$289 million) as at December 31, 2009, bear interest at LIBOR plus 0.0625%, as determined semiannually. The notes are redeemable at Hydro-Québec's option. No portion was redeemed in 2010 and 2009. Various derivative instruments recorded at fair value are used to mitigate the currency risk associated with this debt.

As at December 31, 2010 and 2009, the rates applicable to the perpetual notes were 0.6% and 0.8%, respectively. The fair value of these notes was \$263 million as at December 31, 2010 (\$255 million as at December 31, 2009). Fair value is obtained by discounting future cash flows, based on forward interest rates derived from interest rates at the close of business on the balance sheet date for similar instruments traded on capital markets.

## Note 15 Financial Instruments

In the course of its operations, Hydro-Québec carries out transactions that expose it to certain financial risks, such as market, liquidity and credit risk. Exposure to such risks and the impact on operating results are significantly reduced through careful monitoring and implementation of strategies that include the use of derivative instruments.

### MARKET RISK

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate as a result of changes in market prices. Hydro-Québec is exposed to three main types of market risk: currency risk, interest rate risk and risk associated with energy and aluminum prices. Active integrated management of these three types of risk aims to limit their impact on operating results so that sensitivity to each risk, once mitigated, is at an acceptable level.

The following table shows the notional amounts of swaps used to manage risk associated with U.S.-dollar sales and long-term debt, expressed in Canadian dollars and other currencies:

Maturity					2010 <sup>a</sup>	2009 <sup>a</sup>
	1 to 5 years	6 to 10 years	11 to 15 years	16 to 20 years	Total	Total
<b>Swaps</b>						
Canadian dollars	252	(381)	(3,583)	(3,133)	<b>(6,845)</b>	(6,466)
U.S. dollars	260	322	3,100	2,620	<b>6,302</b>	5,845
Other currencies						
Yen	1,000	1,000	–	–	<b>2,000</b>	2,000
Euros	–	61	–	–	<b>61</b>	61
Pounds sterling	240	–	–	–	<b>240</b>	240

a) Figures in parentheses represent amounts to be paid.

The following table shows the fair value of swaps and forward contracts used to manage risk associated with U.S.-dollar sales and long-term debt, expressed in Canadian dollars:

	2010	2009
Instruments designated as cash flow hedges for U.S.-dollar sales <sup>a</sup>	<b>213</b>	441
Instruments designated as cash flow hedges for debt	<b>(1,928)</b>	(1,684)
Instruments designated as fair value hedges for debt	<b>(58)</b>	(129)
	<b>(1,773)</b>	(1,372)
Instruments not designated as hedges <sup>b</sup>	<b>1,234</b>	1,182
	<b>(539)</b>	(190)

a) A portion of the long-term debt, with a nominal value amount of US\$1,403 million as at December 31, 2010 and 2009, was also designated as a cash flow hedge for U.S.-dollar sales.

b) Transactions carried out as part of Hydro-Québec's risk management, including \$1,030 million in consideration of amounts received or disbursed with respect to credit risk mitigation agreements in 2010 (\$977 million in 2009).

### MANAGEMENT OF SHORT-TERM RISK

Currency risk – Hydro-Québec uses options and forward contracts to manage its foreign currency risk exposure over the short term. When designated as hedging items, these derivative instruments are recognized as cash flow hedges. The impact of currency risk hedging transactions on operating results is recognized in the line item corresponding to the hedged item, namely Revenue, Electricity and fuel purchases, or Financial expenses. The nominal amount of open positions as at December 31, 2010, was US\$212 million, with US\$78 million in sales contracts and US\$290 million in purchase contracts (US\$625 million, with US\$923 million in sales contracts and US\$298 million in purchase contracts as at December 31, 2009).

Interest rate risk – Hydro-Québec uses options, interest rate swaps and forward rate agreements to manage short-term interest rate risk. When designated as hedging items, these derivative instruments are recognized as cash flow hedges. The impact on operating results of transactions to hedge short-term interest rate risk is recognized in Financial expenses.

### MANAGEMENT OF LONG-TERM RISK

#### Management of risk associated with sales in U.S. dollars

Currency risk – Hydro-Québec uses currency swaps and a portion of its U.S. dollar-denominated debt to manage currency risk associated with probable U.S.-dollar sales, designating them as cash flow hedges. The impact of these hedging transactions on operating results is recognized in Revenue.

#### Management of risk associated with long-term debt

Currency risk and interest rate risk – Hydro-Québec uses currency swaps to manage the currency risk associated with long-term debt and forward contracts and interest-rate swaps to modify long-term exposure to interest rate risk. When designated as hedging items, these derivative instruments are recognized as cash flow hedges or fair value hedges, depending on the risk hedged. The impact on operating results of foreign currency hedging transactions and those associated with long-term debt interest rates is recognized in Financial expenses.

Price risk – Hydro-Québec uses mainly options, swaps and commodity futures to manage risks resulting from fluctuations in energy and aluminum prices. When designated as hedging items, these derivative instruments are recognized as cash flow hedges. The impact on the operating results of transactions to hedge the risk of variability in energy and aluminum prices is recognized in the line item corresponding to the hedged item, namely Revenue. In order to hedge exposure to the risk of variability in energy and aluminum prices, Hydro-Québec has traded derivative instruments for which open positions as at December 31, 2010, totaled 158,300 tonnes of aluminum (244,900 tonnes as at December 31, 2009), electricity swaps for which open positions as at December 31, 2010, were 7.5 TWh (10.3 TWh as at December 31, 2009) and natural gas futures for which open positions as at December 31, 2010, were 4.0 million MBtu (17.2 million MBtu as at December 31, 2009).



The following table presents the fair value of derivative instruments used to manage short-term financial risk, depending on whether or not they are designated as hedges:

	2010	2009
Instruments designated as cash flow hedges	(33)	43
Instruments not designated as hedges	(9)	18
	(42) <sup>a</sup>	61 <sup>a</sup>

a) Of which \$4 million (\$3 million in 2009) was equal to the aggregate financial instruments measured on the basis of quoted market prices (Level 1) and \$(46) million (\$58 million in 2009) to instruments measured using techniques based on observable market inputs (Level 2).

## EFFECT OF HEDGES

### *Effect of hedges on operating results*

#### *Effect of cash flow hedges*

As at December 31, 2010, the net loss arising from the ineffectiveness of cash flow hedges recognized in operations totaled \$25 million (\$12 million as at December 31, 2009).

As at December 31, 2010, Hydro-Québec estimated at \$261 million the net gains included in Accumulated other comprehensive income that would be reclassified to operations in the next 12 months (\$337 million as at December 31, 2009).

In 2010, Hydro-Québec did not reclassify any amount in Accumulated other comprehensive income to operations (\$6-million net gain reclassified in 2009) as a result of the discontinuance of cash flow hedges.

As at December 31, 2010, the maximum period during which Hydro-Québec hedged its exposure to the variability of cash flows related to anticipated transactions was 6 years (7 years as at December 31, 2009).

#### *Effect of fair value hedges*

As at December 31, 2010, the net loss arising from the ineffectiveness of fair value hedges recognized in operations was \$10 million (net gain of \$16 million as at December 31, 2009).

#### *Effect of revaluation of derivative instruments not designated as hedges*

As at December 31, 2010, the net gain recognized in operations as a result of the revaluation of the fair value of derivative instruments that had not been accounted for using hedge accounting totaled \$10 million (\$4 million as at December 31, 2009). These instruments are essentially related to risk management transactions.

### *Sensitivity analyses*

The risks associated with variability in foreign exchange rates, interest rates and energy and aluminum prices are the subject of integrated management aimed at limiting the impact of such risks on operating results. Most of the derivative instruments traded are designated as cash flow hedges or fair value hedges and therefore reduce the volatility of operating results, except for the ineffective portion of the hedges, which is insignificant. Derivative instruments which are not designated as hedges, but which nonetheless serve to hedge at-risk opposite positions, also reduce the volatility of operating results. The sensitivity of operating results is thus limited to net exposure to unhedged risks.

As at December 31, 2010, had the exchange rate (C\$/US\$) been 5% higher or lower, net income would have been \$7 million higher or lower, respectively (\$19 million as at December 31, 2009), while Other comprehensive income would have been \$71 million higher or lower, respectively (\$11 million lower or higher as at December 31, 2009). The analysis is based on financial assets and liabilities denominated in U.S. dollars, including cash of US\$53 million (US\$82 million as at December 31, 2009). It also takes into account the impact of hedged sales in U.S. dollars.

In 2010, had interest rates been 50 basis points higher or lower, net income would have been \$12 million lower or higher, respectively (\$11 million in 2009), while Other comprehensive income would have been \$233 million higher or \$179 million lower (\$72 million higher or \$77 million lower in 2009).

In 2010, had the price of aluminum been 5% higher or lower, net income would have been \$3 million higher or lower, respectively (\$1 million in 2009), taking into account the effect of hedged sales, and Other comprehensive income would have been \$26 million lower or higher, respectively (\$29 million in 2009).

## LIQUIDITY RISK

Liquidity risk is the risk that Hydro-Québec will have difficulty meeting commitments related to its financial liabilities.

Hydro-Québec's exposure is reduced by a large volume of cash from operations, a diversified portfolio of highly liquid or readily convertible instruments traded with high-quality counterparties, preauthorized sources of financing, the quality of Hydro-Québec's signature on financial markets, diversified sources of financing and its management of the proportions of floating-rate debt and debt repayable in foreign currency.

Moreover, as at December 31, 2010, \$36,932 million in long-term debt, perpetual debt and borrowings was guaranteed by the Québec government (\$36,518 million as at December 31, 2009).

## Note 15 Financial Instruments (continued)

Maturities of financial liabilities are presented in the following table. The amounts reported are contractual undiscounted cash flows, representing payments of principal and interest with respect to financial liabilities as at December 31, 2010.

Maturity	Borrowings <sup>a</sup>	Accounts payable and accrued liabilities	Dividend payable	Long-term debt	Derivative instruments <sup>b</sup>
2011	18	1,683	1,886	4,354	451
2012	–	42	–	3,396	149
2013	–	20	–	3,163 <sup>c</sup>	286
2014	–	13	–	4,206	124
2015	–	–	–	2,423	277
1 to 5 years	18	1,758	1,886	17,542	1,287
6 to 10 years	–	14	–	13,903	559
11 to 15 years	–	–	–	13,674	874
16 to 20 years	–	–	–	8,982 <sup>c</sup>	705
21 to 25 years	–	–	–	11,334	–
26 to 30 years	–	–	–	7,745	–
31 to 35 years	–	–	–	8,575	–
36 to 40 years	–	–	–	5,884	–
41 to 45 years	–	–	–	1,626	–
46 to 50 years	–	–	–	1,661	–
51 to 55 years	–	–	–	133	–
56 years and over	–	–	–	1,546	–
<b>Total</b>	<b>18</b>	<b>1,772</b>	<b>1,886</b>	<b>92,605</b>	<b>3,425</b>
Carrying amount	18 <sup>d</sup>	1,770 <sup>d,e</sup>	1,886 <sup>d</sup>	38,372 <sup>f</sup>	2,422

a) As at December 31, 2010, the weighted average interest rate on interest-bearing short-term borrowings was 0.75% (0.88% as at December 31, 2009).

b) Agreements entered into with certain counterparties to limit the market value of these financial instruments could result in cash receipts or payments at dates different from the initially scheduled maturity.

c) Certain debts carry sinking fund requirements.

d) Because of their short-term maturities, the carrying amount of these financial liabilities approximates their fair value.

e) Of this amount, \$1,683 million is recorded in Accounts payable and accrued liabilities and \$87 million in Other long-term liabilities.

f) Including the current portion.

Contractual maturities of perpetual debt, whose terms and conditions are described in Note 14, Perpetual Debt, result in biennial interest flows.

### CREDIT RISK

Credit risk is the risk that one party to a financial asset will fail to meet its obligations.

Hydro-Québec is exposed to credit risk related to cash and cash equivalents, short-term investments and derivative instruments traded with financial institutions. It is also exposed to credit risk related to accounts receivable and other receivables arising primarily from its day-to-day energy sales in and outside Québec. Credit risk is limited to the carrying amount presented under assets on the balance sheet, which approximates fair value.

#### Cash and cash equivalents, short-term investments and derivative instruments

In order to reduce its credit risk exposure, Hydro-Québec deals with Canadian and international issuers and financial institutions with high credit ratings. In addition, it applies policies to limit risk concentration as well as various monitoring programs and sets credit limits for each counterparty. Through prior agreements, it can also limit the market value of the main derivative instrument portfolios. Any variation in market value beyond the agreed-upon limit results in a cash receipt or payment. As at December 31, 2010, substantially all counterparties dealing with Hydro-Québec had a credit rating over A-, and none of them had defaulted on their obligations to Hydro-Québec.

#### Customers – Energy sales (classified in Accounts receivable and other receivables)

Exposure to credit risk from energy sales is limited due to Hydro-Québec's large and diverse customer base. Management believes that Hydro-Québec is not exposed to a significant credit risk, particularly because sales in Québec are billed at rates that allow for recovery of costs based on the terms and conditions set by the Régie. Moreover, Hydro-Québec

holds as collateral customer deposits totaling \$59 million (\$53 million as at December 31, 2009), of which \$15 million (\$12 million as at December 31, 2009) is recognized under Accounts payable and accrued liabilities, and \$44 million (\$41 million as at December 31, 2009) under Other long-term liabilities.

The value of accounts receivable, by age and net of the related allowance for doubtful accounts, is presented in the following table:

	2010	2009
<b>Accounts receivable</b>		
Under 30 days <sup>a</sup>	<b>1,362</b>	1,414
30 to 60 days	<b>47</b>	62
61 to 90 days	<b>25</b>	35
Over 90 days	<b>148</b>	190
	<b>1,582</b>	1,701
<b>Other receivables<sup>b</sup></b>	<b>231</b>	254
<b>Accounts receivable and other receivables<sup>c</sup></b>	<b>1,813</b>	1,955

a) Including unbilled electricity deliveries, which totaled \$1,092 million as at December 31, 2010 (\$1,071 million as at December 31, 2009).

b) Including a financial guarantee of \$16 million (\$31 million in 2009) covering certain financial instruments held at year end.

c) Including US\$107 million (US\$127 million in 2009) translated at the effective exchange rate at the balance sheet date.

The allowance for doubtful accounts was increased by \$29 million (\$48 million in 2009) to \$278 million as at December 31, 2010 (\$249 million as at December 31, 2009). The allowance is based on account age and customer standing.

## Note 16 Acquisition of an Interest

On December 9, 2009, Hydro-Québec acquired, through its subsidiary HQ Manicouagan inc., a 60% interest in Manicouagan Power Limited Partnership, which owns and operates a hydroelectric generating station on the Rivière Manicouagan, for a consideration of \$616 million, including cash, a balance of purchase price and acquisition fees. Hydro-Québec consequently acquired joint control over this limited partnership with Alcoa Ltd, which has a 40% interest, because under a contractual agreement, major operating, investment and financing decisions must be approved by all the directors. The transaction was accounted for using the purchase method.

The purchase price was broken down as follows:

Current assets	<b>9</b>
Property, plant and equipment	<b>373</b>
Water-power rights	<b>282</b>
	<b>664</b>
Current liabilities	<b>47</b>
Long-term liabilities	<b>1</b>
	<b>48</b>
Purchase price	<b>616</b>

The consideration was determined as follows:

Cash	<b>580</b>
Balance of purchase price (payable in 2011)	<b>30</b>
Acquisition fees	<b>3</b>
Other	<b>3</b>
	<b>616</b>

## Note 17 Interests in Joint Ventures

The proportionate share of the joint venture items included in the consolidated financial statements is presented in the following table. These joint ventures consist of the interests managed by Hydro-Québec Production and the Groupe – Technologie.

	2010	2009 <sup>a</sup>
<b>Operations</b>		
Revenue	<b>115</b>	64
Expenditure and financial expenses	<b>85</b>	61
Net income	<b>30</b>	3
<b>Balance Sheets</b>		
Current assets	<b>11</b>	16
Long-term assets	<b>665</b>	679
Current liabilities	<b>5</b>	48
Long-term liabilities	<b>21</b>	26
Net assets	<b>650</b>	621
<b>Cash Flows</b>		
Operating activities	<b>6</b>	3
Investing activities	<b>(4)</b>	–
Financing activities	<b>(4)</b>	(10)
Net change in cash and cash equivalents	<b>(2)</b>	(7)

a) Hydro-Québec's share in the balance sheet, operations and cash flows of Manicouagan Power Limited Partnership has been included in the consolidated financial statements since the acquisition date, December 9, 2009. Information concerning this acquisition is presented in Note 16, Acquisition of an Interest.

## Note 18 Equity

### SHARE CAPITAL

The authorized share capital consists of 50,000,000 shares with a par value of \$100 each, of which 43,741,090 shares were issued and paid up as at December 31, 2010 and 2009.

### RETAINED EARNINGS

Under the *Hydro-Québec Act*, the dividends to be paid by Hydro-Québec are declared once a year by the Québec government, which also determines the terms and conditions of payment. For a given financial year, the dividend cannot exceed the distributable surplus, equal to 75% of net income. This calculation is based on the consolidated financial statements.

### ACCUMULATED OTHER COMPREHENSIVE INCOME

#### CASH FLOW HEDGES

	2010	2009
Balance, beginning of year	709	1,243
Change for the year	(482)	(534)
Balance, end of year	227	709

However, in respect of a given financial year, no dividend may be declared in an amount that would have the effect of reducing the capitalization rate to less than 25% at the end of the year. The Québec government declares the dividend for a given year within 30 days after Hydro-Québec has sent it the financial data related to the distributable surplus. Upon expiry of the prescribed period, all or a portion of the distributable surplus that has not been subject to a dividend declaration may no longer be distributed to the shareholder as a dividend.

For 2010, the dividend is \$1,886 million (\$2,168 million for 2009).

## Note 19 Capital Management

Hydro-Québec manages its capital in such a way as to meet its shareholder's expectations, safeguard its funds at all times and sustain its growth. It fosters a management environment allowing it to enhance the long-term value of its assets and equity, ensure its financial sustainability, preserve its financing capability and safeguard its funds and securities.

In addition to equity, capital includes long-term debt, perpetual debt, short-term borrowings and derivative instruments.

Hydro-Québec uses its capitalization rate to monitor its capital structure. It aims to maintain capitalization at no less than 25%.

### CAPITALIZATION

	2010	2009
Equity	18,566	18,419
Long-term debt, including current portion	38,372	37,640
Perpetual debt	288	303
Short-term borrowings	18	29
Derivative instruments	581	129
Total	57,825	56,520
Capitalization rate (%) <sup>a</sup>	32.1	32.6

a) Equity divided by the sum of equity, long-term debt (including current portion), perpetual debt, short-term borrowings and derivative instrument liabilities, less derivative instrument assets.

In 2010, Hydro-Québec's capital management objectives were unchanged from 2009.

## Note 20 Supplementary Cash Flow Information

	2010	2009
<b>Change in non-cash working capital items</b>		
Accounts receivable and other receivables	124	(38)
Materials, fuel and supplies	15	(51)
Accounts payable and accrued liabilities	(6)	78
Accrued interest	(11)	(25)
	122	(36)
<b>Investing activities not affecting cash</b>		
Increase in property, plant and equipment	112	162
<b>Interest paid</b>	<b>2,149</b>	2,102

## Note 21 Employee Future Benefits

Hydro-Québec's pension plan (the "Pension Plan") is a funded plan that ensures pension benefits based on the number of years of service and an average of the best five years of earnings. These benefits are indexed annually based on a rate which is the greater of the inflation rate, up to a maximum of 2%, and the inflation rate less 3%.

Hydro-Québec also offers other post-retirement and post-employment benefits. Post-retirement benefits are provided by group life, medical and hospitalization insurance plans, which are contributory plans with contributions adjusted annually. Post-employment benefits are under non-contributory salary insurance plans, which pay short- and long-term

disability benefits. Most of these plans are not funded, with the exception of the long-term disability salary insurance plan, which is fully funded, and the supplementary group life insurance plan, which is partially funded.

Hydro-Québec's employee benefit plans are defined-benefit plans. The accrued benefit obligations of these plans, valued by independent actuaries, and their assets, at fair value, are valued as at December 31 of each year. The most recent actuarial valuation for funding of the Pension Plan was as at December 31, 2009, and the next valuation, to be dated December 31, 2010, is currently in progress.

The following table presents information concerning Hydro-Québec's employee future benefit plans:

	Pension Plan		Other plans	
	2010	2009	2010	2009
<b>Accrued benefit obligations</b>				
Balance, beginning of year	12,742	10,208	889	773
Current service cost	227	161	45	38
Employee contributions	120	118	–	–
Benefit payments and refunds	(602)	(551)	(55)	(54)
Interest on obligations	778	760	54	51
Actuarial losses	1,719	2,046	95	81
Balance, end of year	14,984	12,742	1,028	889
<b>Plan assets at fair value</b>				
Balance, beginning of year	12,390	10,475	65	60
Actual return on plan assets	1,708	1,713	2	2
Employee contributions	120	118	–	–
Current contributions by Hydro-Québec	296	295	13	14
Special contribution by Hydro-Québec	350	370	–	–
Benefit payments and refunds	(602)	(551)	(10)	(11)
Administrative expenses	(36)	(30)	–	–
Balance, end of year	14,226	12,390	70	65
<b>Deficit, end of year</b>	<b>(758)</b>	<b>(352)</b>	<b>(958)</b>	<b>(824)</b>
Unamortized past service costs	235	285	–	–
Unamortized net actuarial loss	3,341	2,412	157	65
Unamortized transitional (asset) obligation	(457)	(609)	40	54
<b>Accrued benefit assets (liabilities)</b>	<b>2,361</b>	1,736	<b>(761)</b>	(705)

## Note 21 Employee Future Benefits (continued)

In 2008, some amendments were made to the Pension Plan following agreements reached between Hydro-Québec and its unions. These amendments, which came into force on January 1, 2009, concern temporary and permanent provisions. The main temporary provisions concern retirement without pension reduction and the bridging benefit, whereas the main permanent provisions apply to the cost of optional pension forms and the broadening of the definition of the surviving

spouse upon a retiree's death. Amendments to the funding rules of the Pension Plan were also adopted under these agreements. As a result, in 2010, the employee and employer contribution rates were 6.5% and 7.8% (6.0% and 6.9% in 2009), respectively. These rates will be increased annually by 0.5% and 0.9% until they reach up to 7.5% and 10.5% of pensionable earnings.

### ADDITIONAL DISCLOSURES WITH RESPECT TO PLAN ASSETS

At year end, assets of the plans at fair value consisted of:

%	Pension Plan		Other plans	
	2010	2009	2010	2009
Bonds	50	54	93	100
Equities	40	33	–	–
Real estate investments	8	8	–	–
Other	2	5	7	–
	100	100	100	100

Assets of the plans include the following securities issued by Hydro-Québec and by the Québec government and some of its agencies:

	Pension Plan		Other plans	
	2010	2009	2010	2009
Bonds	1,828	1,820	65	64

### CASH PAYMENTS

Cash payments made by Hydro-Québec for employee benefit plans consist of the contributions paid to the funded plans and the benefits paid to employees and pensioners under unfunded plans. The cash payment details are as follows:

	2010	2009
Contributions by Hydro-Québec		
Pension Plan	646	665
Other funded plans	13	14
Benefit payments		
Unfunded plans	45	43
	704	722

In accordance with the actuarial valuation for funding purposes, Hydro-Québec made current contributions of \$296 million in 2010 (\$295 million in 2009), including additional contributions of \$156 million (\$186 million in 2009), to cover the current service cost, and a special contribution of \$350 million (\$370 million in 2009) to cover part of the unfunded actuarial liability. The special contributions made in 2010 and 2009 took

into account certain temporary relief measures introduced by *An Act to amend the Supplemental Pension Plans Act and other legislative provisions in order to reduce the effects of the financial crisis on plans covered by the Act*, assented to on January 15, 2009, and, in particular, the extension of the period to cover the unfunded actuarial liability.

## ELEMENTS OF ACCRUED BENEFIT COST RECOGNIZED FOR THE YEAR

	Pension Plan		Other plans	
	2010	2009	2010	2009
Current service cost <sup>a</sup>	227	161	45	38
Administrative expenses <sup>b</sup>	36	30	–	–
Interest on obligations	778	760	54	51
Actual return on plan assets	(1,708)	(1,713)	(2)	(2)
Actuarial losses	1,719	2,046	95	81
Cost before adjustments required to recognize the long-term nature of employee future benefits	1,052	1,284	192	168
Difference between actual and expected return on assets	790	926	–	–
Difference between actuarial losses on accrued benefit obligations and actuarial losses recognized	(1,719)	(2,046)	(92)	(82)
Amortization of past service cost	50	50	–	–
Amortization of transitional (asset) obligation	(152)	(152)	14	13
	(1,031)	(1,222)	(78)	(69)
<b>Cost recognized for the year</b>	<b>21</b>	<b>62</b>	<b>114</b>	<b>99</b>

a) For the long-term disability salary insurance plan, the current service cost corresponds to the cost of new disability cases for the year.

b) In 2010, administrative expenses billed by Hydro-Québec to the Pension Plan totaled \$12 million (\$13 million in 2009).

## SIGNIFICANT ACTUARIAL ASSUMPTIONS

The following actuarial assumptions, used to determine the accrued benefit obligations and cost of the plans, result from a weighted average:

%	Pension Plan		Other plans	
	2010	2009	2010	2009
<b>Accrued benefit obligations</b>				
Rate at end of year				
Discount rate	5.54	6.17	5.54	6.17
Salary escalation rate <sup>a</sup>	2.60	2.97	–	–
<b>Accrued benefit cost recognized</b>				
Rate at end of prior year				
Discount rate	6.17	7.49	6.17	7.49
Expected long-term rate of return on plan assets	6.75	6.25	3.90	3.72
Salary escalation rate <sup>a</sup>	2.97	2.86	–	–

a) This rate takes salary increases into account as well as promotion opportunities while in service.

As at December 31, 2010, health care costs were based on an annual growth rate of 5.50% for 2011. Subsequently, depending on the assumption used, the rate will ultimately decrease to 4.50% in 2030. A change of 1% in this annual growth rate would have had the following impact for 2010:

	1% increase	1% decrease
Impact on current service cost and interest cost on accrued benefit obligations for the year	5	(5)
Impact on accrued benefit obligations at end of year	61	(49)

## Note 22 Commitments and Contingencies

### ELECTRICITY PURCHASE TRANSACTIONS

On May 12, 1969, Hydro-Québec signed a contract with Churchill Falls (Labrador) Corporation Limited [CF(L)Co] whereby Hydro-Québec undertook to purchase substantially all the output from Churchill Falls generating station, which has a rated capacity of 5,428 MW. Expiring in 2016, this contract will be automatically renewed for a further 25 years under agreed-upon terms and conditions. On June 18, 1999, Hydro-Québec and CF(L)Co entered into a contract to guarantee the availability of 682 MW of additional power until 2041 for the November 1 to March 31 winter period.

As at December 31, 2010, Hydro-Québec was committed under 120 contracts to purchase electricity from other producers, for an installed capacity of about 5,674 MW. It expects to purchase approximately 17 TWh of energy annually over the terms of these contracts, which extend through 2045. The majority of the contracts include renewal clauses. Hydro-Québec has also undertaken to purchase power transmission rights.

Hydro-Québec expects to make the following minimum payments on all its electricity purchase contracts over the next five years:

2011	738
2012	1,058
2013	1,289
2014	1,467
2015	1,598

### GUARANTEES

In accordance with the terms and conditions of certain debt securities issued outside Canada, Hydro-Québec has undertaken to increase the amount of interest paid to non-residents in the event of changes to Canadian tax legislation governing the taxation of non-residents' income.

Hydro-Québec cannot estimate the maximum amount it might have to pay under such circumstances. Should an amount become payable, Hydro-Québec has the option of redeeming most of the securities in question. As at December 31, 2010, the amortized cost of these debts was \$4,223 million.

Under the contract signed on May 12, 1969, with CF(L)Co, Hydro-Québec could be required to provide additional funding if CF(L)Co were unable to pay its expenses and service its debt. The maximum amount that Hydro-Québec could be required to pay cannot be reasonably evaluated, however, since it is not stated in the contract and since the amount payable would depend on the outcome of future events whose nature and probability cannot be determined. To date, Hydro-Québec has not had to pay any amount under this contract.

As part of the implementation of the plan to capitalize on its interests abroad, which ended in 2008, Hydro-Québec provided guarantees to the purchasers of its interests with regard to contingent tax liabilities and certain other customary representations. These guarantees, for which no liability was recognized, will be in effect until the applicable limitation periods expire, namely until June 30, 2013.

### INVESTMENTS

Hydro-Québec expects to invest approximately \$4.2 billion in property, plant and equipment and intangible assets in 2011.

### LITIGATION

In the normal course of its development and operating activities, Hydro-Québec is sometimes party to claims and legal proceedings. Management is of the opinion that adequate provisions have been made for any disbursements that could result from these legal actions. Consequently, it does not foresee any adverse effect of such contingent liabilities on Hydro-Québec's consolidated operating results or financial position.

## Note 23 Segmented Information

Hydro-Québec carries on its activities in the four reportable business segments defined below. The non-reportable business segments and other activities are grouped together under Corporate and Other Activities for reporting purposes.

**Generation:** Hydro-Québec Production operates and develops Hydro-Québec's generating facilities. This division also sells electricity on external markets and engages in energy trading. Hydro-Québec Production provides Hydro-Québec Distribution with a base volume of up to 165 TWh of heritage pool electricity annually at an average price of 2.79¢/kWh. In excess of this volume, it can participate in Hydro-Québec Distribution's calls for tenders in a context of free market competition.

**Transmission:** Hydro-Québec TransÉnergie operates and develops Hydro-Québec's power transmission system. It markets system capacity and manages power flows throughout Québec.

**Distribution:** Hydro-Québec Distribution operates and develops Hydro-Québec's distribution system and is responsible for sales and services to Québec customers. It also promotes energy efficiency and ensures the security of the supply of electricity to the Québec market.

**Construction:** Hydro-Québec Équipement et services partagés and Société d'énergie de la Baie James (SEBJ) design, build and refurbish generating and transmission facilities. Hydro-Québec Équipement et services partagés is responsible for projects throughout Québec, except in the territory governed by the *James Bay and Northern Québec Agreement* (JBNQA). SEBJ builds generating facilities in the territory governed by the JBNQA (north of the 49th parallel) and may carry out projects outside Québec.

**Corporate and Other Activities:** The corporate units support the divisions in the achievement of their business objectives. They include the Groupe – Technologie, Groupe – Affaires corporatives et secrétariat général, Vice-présidence – Comptabilité et contrôle, Vice-présidence – Financement, trésorerie et caisse de retraite and Vice-présidence – Ressources humaines, as well as the Direction principale – Centre de services partagés, which reports to Hydro-Québec Équipement et services partagés. The Centre de services partagés brings together internal company-wide shared services, including goods and services procurement, real estate management, and material and transportation service management.

The amounts presented for each segment are based on the financial information used to prepare the consolidated financial statements. The accounting policies used to calculate these amounts are as described in Note 1, Significant Accounting Policies, and Note 3, Effect of Rate Regulation on the Consolidated Financial Statements.

Intersegment transactions related to electricity sales are recorded based on the supply and transmission rates provided for by the *Act respecting the Régie de l'énergie*. The Act sets a commodity rate for an annual base volume of up to 165 TWh of heritage pool electricity for the Québec market.

Other intersegment products and services are measured at full cost, which includes all costs directly associated with product or service delivery.

Most of Hydro-Québec's revenue is from Québec, and substantially all its property, plant and equipment, as well as its goodwill, are related to its Québec operations. In 2010, revenue from outside Québec amounted to \$1,643 million, with \$1,293 million coming from the United States (\$1,610 million and \$1,311 million, respectively, in 2009).



## OPERATIONS AND ASSETS BY SEGMENT

	2010						
	Generation	Transmission	Distribution	Construction	Corporate and Other Activities	Intersegment eliminations and adjustments	Total
Revenue							
External customers	1,692	66	10,531	–	33	16 <sup>a</sup>	<b>12,338</b>
Intersegment	4,843	3,051	72	2,607	1,342	(11,915)	–
Depreciation and amortization	725	948	859	3	82	(12)	<b>2,605</b>
Financial expenses	1,119	872	503	–	35	(3)	<b>2,526</b>
Net income (loss)	1,605	447	453	–	(2)	12	<b>2,515</b>
Total assets	30,609	18,072	12,746	449	4,306	(284)	<b>65,898</b>
Investing activities							
Increase in property, plant and equipment and intangible assets							
Affecting cash	1,900	1,248	728	7	121	–	<b>4,004</b>
Not affecting cash	89	17	6	–	–	–	<b>112</b>

2009  
(restated, Note 2)

	Generation	Transmission	Distribution	Construction	Corporate and Other Activities	Intersegment eliminations and adjustments	Total
Revenue							
External customers	1,588	61	10,648	–	25	11 <sup>a</sup>	12,333
Intersegment	4,819	2,868	69	2,645	1,281	(11,682)	–
Depreciation and amortization	667	778	868	3	68	(12)	2,372
Financial expenses	1,019	851	502	–	27	(1)	2,398
Net income	2,053	435	363	–	8	12	2,871
Total assets	29,249	17,677	12,383	423	5,571	(311)	64,992
Investing activities							
Increase in property, plant and equipment and intangible assets							
Affecting cash	2,033	1,196	709	1	111	–	4,050
Not affecting cash	139	23	–	–	–	–	162

a) Resales of excess supply by Hydro-Québec Distribution on outside markets are presented as offsets of electricity purchases rather than in Revenue.

## Note 24 Comparative Information

Some of the prior year's data have been reclassified to conform to the presentation adopted in the current year.

# FIVE-YEAR REVIEW

## CONSOLIDATED FINANCIAL INFORMATION

\$M	2010	2009	2008	2007	2006
<b>OPERATIONS</b>					
<b>Revenue</b>	<b>12,338</b>	12,333	12,716	12,326	11,162
<b>Expenditure</b>					
Operations	<b>2,581</b>	2,527	2,503	2,556	2,392
Electricity and fuel purchases	<b>1,390</b>	1,207	1,406	1,555	1,315
Depreciation and amortization	<b>2,605</b>	2,372	2,457	2,083	2,109
Taxes	<b>909</b>	928	1,093	820	534
Regulatory deferrals	<b>(188)</b>	30	(72)	29	(93)
	<b>7,297</b>	7,064	7,387	7,043	6,257
<b>Operating income</b>	<b>5,041</b>	5,269	5,329	5,283	4,905
Financial expenses	<b>2,526</b>	2,398	2,443	2,510	2,212
Income from continuing operations	<b>2,515</b>	2,871	2,886	2,773	2,693
Income from discontinued operations	–	–	129	25	944
<b>Restated net income*</b>	–	2,871	3,015	2,798	3,637
<b>Reported net income</b>	<b>2,515</b>	3,035	3,141	2,907	3,741
<b>DIVIDEND</b>					
	<b>1,886</b>	2,168	2,252	2,095	2,342
<b>BALANCE SHEET SUMMARY</b>					
Reported total assets	<b>65,898</b>	68,978	66,789	64,866	63,254
Restated total assets*	–	64,992	62,968	61,167	59,698
Long-term debt, including current portion and perpetual debt	<b>38,660</b>	37,943	36,415	34,534	34,427
Reported equity	<b>18,566</b>	22,395	22,062	20,892	18,840
Restated equity*	–	18,419	18,250	17,206	15,264
<b>INVESTMENTS FOR CONTINUING OPERATIONS AFFECTING CASH</b>					
Property, plant and equipment and intangible assets	<b>4,004</b>	4,050	3,717	3,418	3,352
Costs related to Energy Efficiency Plan	<b>216</b>	257	236	172	149
Total investments	<b>4,220</b>	4,307	3,953	3,590	3,501
<b>FINANCIAL RATIOS</b>					
Reported interest coverage <sup>a</sup>	<b>1.92</b>	2.17	2.12	2.13	2.06
Restated interest coverage <sup>a,*</sup>	–	2.11	2.07	2.09	2.01
Reported return on equity (%) <sup>b</sup>	<b>14.0</b>	14.3	15.4	15.0	20.6
Restated return on equity (%) <sup>b,*</sup>	–	16.5	18.1	17.8	24.8
Reported profit margin from continuing operations (%) <sup>c</sup>	<b>20.4</b>	24.6	23.7	23.4	25.1
Restated profit margin from continuing operations (%) <sup>c,*</sup>	–	23.3	22.7	22.5	24.1
Reported capitalization (%) <sup>d</sup>	<b>32.1</b>	37.0	37.7	37.5	36.1
Restated capitalization (%) <sup>d,*</sup>	–	32.6	33.4	33.1	31.4
Reported self-financing (%) <sup>e</sup>	<b>46.8</b>	41.2	45.7	63.1	69.8
Restated self-financing (%) <sup>e,*</sup>	–	41.3	45.7	63.7	69.8

\* The comparative data include adjustments relating to continuing operations that stem mainly from the change in the accounting policy regarding the depreciation method for property, plant and equipment. This change is described in Note 2 to the consolidated financial statements.

a) Sum of operating income and net investment income divided by gross interest expense.

b) Net income divided by average equity less average accumulated other comprehensive income.

c) Income from continuing operations divided by revenue.

d) Equity divided by the sum of equity, long-term debt (including current portion), perpetual debt, short-term borrowings and derivative instrument liabilities, less derivative instrument assets.

e) Cash flows from operating activities less dividend paid, divided by the sum of cash flows from investing activities [excluding net disposal (acquisition) of short-term investments] and repayment of long-term debt.

Note: Throughout the Five-Year Review and the Consolidated Results by Quarter, certain comparative figures have been reclassified to reflect the presentation adopted in the current year.

## OPERATING STATISTICS

	2010	2009	2008	2007	2006
GWh					
<b>Electricity sales</b>					
In Québec, by category					
Residential and farm	59,534	62,484	60,747	60,046	56,722
Commercial and institutional	33,865	34,151	35,228	34,751	32,440
Industrial	68,439	63,310	69,144	73,005	73,297
Other	7,647	5,371	5,278	5,353	4,878
	<b>169,485</b>	165,316	170,397	173,155	167,337
Outside Québec					
Canada/U.S. (long-term)	2,677	2,604	2,516	2,384	2,384
Canada/U.S. (short-term)	20,593	20,753	18,783	17,240	12,074
	<b>23,270</b>	23,357	21,299	19,624	14,458
Total electricity sales	<b>192,755</b>	188,673	191,696	192,779	181,795
\$M					
<b>Revenue from electricity sales</b>					
In Québec, by category					
Residential and farm	4,302	4,500	4,300	4,144	3,775
Commercial and institutional	2,648	2,662	2,687	2,602	2,356
Industrial	3,185	3,092	3,174	3,336	3,022
Other	371	295	284	286	249
	<b>10,506</b>	10,549	10,445	10,368	9,402
Outside Québec					
Canada/U.S. (long-term)	247	256	220	225	198
Canada/U.S. (short-term)	1,266	1,250	1,699	1,392	951
	<b>1,513</b>	1,506	1,919	1,617	1,149
Total revenue from electricity sales	<b>12,019</b>	12,055	12,364	11,985	10,551
As at December 31					
<b>Number of customer accounts</b>					
In Québec, by category					
Residential and farm	3,698,169	3,649,470	3,603,330	3,554,443	3,501,709
Commercial and institutional	300,163	297,380	296,504	299,524	295,618
Industrial	9,589	9,829	10,111	11,565	12,032
Other	3,868	3,653	3,499	3,440	5,767
Total customer accounts	<b>4,011,789</b>	3,960,332	3,913,444	3,868,972	3,815,126
kWh/customer account					
<b>Average annual consumption</b>					
In Québec, by category					
Residential and farm	16,205	17,230	16,974	17,019	16,318
Commercial and institutional	113,347	115,009	118,209	116,782	112,010
Industrial	7,049,027	6,350,050	6,379,775	6,187,651	5,904,382
Other	2,033,506	1,501,957	1,521,257	1,162,811	855,039

## OPERATING STATISTICS (CONTINUED)

	2010	2009	2008	2007	2006
MW					
<b>Installed capacity<sup>a</sup></b>					
Hydroelectric	34,490	34,499	34,118	33,305	32,973
Nuclear	675	675	675	675	675
Thermal	1,506	1,637	1,637	1,672	1,672
Wind farm	–	2	2	2	2
Total installed capacity	36,671	36,813	36,432	35,654	35,322
GWh					
<b>Total energy requirements<sup>b</sup></b>	209,108	208,524	211,228	209,818	199,447
MW					
<b>Peak power demand in Québec<sup>c</sup></b>	37,717	34,659	37,230	35,352	36,251
km					
<b>Lines (overhead and underground)</b>					
Transmission	33,453	33,244	33,058	33,008	32,826
Distribution <sup>d</sup>	112,089	111,205	110,127	109,618	108,883
	145,542	144,449	143,185	142,626	141,709

a) In 2010, Hydro-Québec decommissioned a unit at Tracy generating station. In addition to the generating capacity of its own facilities, the company has access to almost all the output from Churchill Falls generating station (5,428 MW) under a contract with Churchill Falls (Labrador) Corporation Limited that will remain in effect until 2041. It also purchases all the output from nine privately owned wind farms with a total installed capacity of 659 MW. Moreover, 1,277 MW are available under agreements with other independent suppliers.

b) Total energy requirements consist of kilowatthours delivered within Québec and to neighboring systems.

c) Total power demand at the annual domestic peak for the winter beginning in December, including interruptible power. The peak for a given period is based on measurements at fixed intervals. The 2010–2011 winter peak was 37,717 MW and occurred on January 24, 2011, at 8:00 a.m., after the system load momentarily reached 38,286 MW at 7:38 a.m.

d) These figures include off-grid systems but exclude private systems, lines under construction and 44-kV lines (transmission).

## OTHER INFORMATION

	2010	2009	2008	2007	2006
%					
<b>Rate increases</b>					
Average increase from January 1 to December 31	0.6	1.6	2.7	2.8	4.3
<b>Number of employees<sup>a</sup></b>					
Permanent as at December 31	19,521	19,536	19,297	19,459	19,116
Temporary (year's average)	4,138	4,080	4,048	3,910	3,799
Women (%)	30.9	30.6	30.9	31.3	30.6

a) Excludes employees of subsidiaries and joint ventures.

# CONSOLIDATED RESULTS BY QUARTER

	2010				
	1st quarter (restated*)	2nd quarter (restated*)	3rd quarter (restated*)	4th quarter	12-month period
\$M				(unaudited)	(audited)
<b>Revenue</b>	3,821	2,691	2,701	3,125	<b>12,338</b>
<b>Expenditure</b>					
Operations	631	632	594	724	<b>2,581</b>
Electricity and fuel purchases	333	255	370	432	<b>1,390</b>
Depreciation and amortization	617	629	656	703	<b>2,605</b>
Taxes	272	216	201	220	<b>909</b>
Regulatory deferrals	(109)	(4)	(4)	(71)	<b>(188)</b>
	1,744	1,728	1,817	2,008	<b>7,297</b>
<b>Operating income</b>	2,077	963	884	1,117	<b>5,041</b>
Financial expenses	638	587	657	644	<b>2,526</b>
<b>Net income</b>	1,439	376	227	473	<b>2,515</b>

	2009 (restated*)				
	1st quarter	2nd quarter	3rd quarter	4th quarter	12-month period
\$M				(unaudited)	(audited)
<b>Revenue</b>	3,872	2,634	2,558	3,269	12,333
<b>Expenditure</b>					
Operations	615	651	569	692	2,527
Electricity and fuel purchases	419	258	233	297	1,207
Depreciation and amortization	621	576	588	587	2,372
Taxes	292	145	233	258	928
Regulatory deferrals	–	–	–	30	30
	1,947	1,630	1,623	1,864	7,064
<b>Operating income</b>	1,925	1,004	935	1,405	5,269
Financial expenses	551	624	634	589	2,398
<b>Net income</b>	1,374	380	301	816	2,871

\* Some data include adjustments mainly associated with the changes in accounting policies described in Note 2 to the consolidated financial statements.



# CORPORATE MANAGEMENT



**Thierry Vandal**  
President and Chief Executive Officer



**Marie-José Nadeau**  
Executive Vice President –  
Corporate Affairs and Secretary General



**Élie Saheb**  
Executive Vice President – Technology



**Jean-Hugues Lafleur**  
Vice President –  
Financing, Treasury and Pension Fund



**Lise Croteau**  
Vice President – Accounting and Control



**Michel Martinez**  
Vice President – Human Resources

# BOARD OF DIRECTORS

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## **Michael L. Turcotte**

Chairman of the Board, Hydro-Québec

*Appointment: November 17, 2005*

*Term: November 16, 2009<sup>a</sup>*

*Status: Independent director*

Michael L. Turcotte holds a Bachelor of Arts degree from the University of Montréal and a Master's degree from Laval University School of Business. He enjoyed a lengthy career with the Royal Bank of Canada where he held various senior positions. He was Chairman of the Board of Management of the Canada Customs and Revenue Agency from 1999 to 2004. Mr. Turcotte also sits on the boards of various not-for-profit organizations.

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## **Thierry Vandal**

President and Chief Executive Officer, Hydro-Québec

*Appointment: April 6, 2005*

*Term: October 3, 2012*

*Status: Non-independent director*

With a Bachelor of Engineering from the École Polytechnique de Montréal and an MBA from HEC Montréal, Thierry Vandal has worked in the energy sector for almost 30 years. In particular, he participated in the operations, marketing and strategic planning aspects of the petroleum, petrochemical and natural gas industries before joining Hydro-Québec in 1996. Mr. Vandal sits on the boards of The Conference Board of Canada, HEC Montréal and McGill University.

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## **Robert Sauvé**

Deputy Minister of Natural Resources and Wildlife,

Gouvernement du Québec

*Appointment: November 4, 2009*

*Term: November 4, 2013*

*Status: Non-independent director*

With a Bachelor's degree in Architecture from the Université de Montréal and a Master's degree in Urban and Regional Planning from Oxford Polytechnic in England, Robert Sauvé also studied planning and regional development at the doctoral level at the Université de Montréal. Mr. Sauvé joined the Québec public service in 1987 and held many executive positions in various departments. After serving as Associate Secretary General for Aboriginal Affairs and Deputy Minister of Regions, he became Associate Deputy Minister of Regional and Municipal Affairs before his appointment as Deputy Minister of Natural Resources and Wildlife in June 2009.

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## **Gaston Blackburn**

President, G. Blackburn Inc.

*Appointment: September 10, 2003*

*Term: February 11, 2012*

*Status: Independent director*

A merchant and businessman, Gaston Blackburn was elected MNA for Roberval in 1988. He was successively Parliamentary Secretary to the Premier, Minister for the Environment and Minister of Recreation, Fish and Game. A member of the Ordre des administrateurs agréés du Québec and with certification from the Collège des administrateurs de sociétés, he has served on the boards of companies in various sectors, including the food industry and natural resources. He currently sits on the board of the Institut des régions ressources.

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## **Anik Brochu**

Lawyer, Cain Lamarre Casgrain

Wells, LLP/Barristers & Solicitors

*Appointment: September 13, 2006*

*Term: September 13, 2010<sup>a</sup>*

*Status: Independent director*

A graduate of the University of Ottawa in Law and member of the Barreau du Québec, Anik Brochu was General Manager of the Chambre de commerce de Val-d'Or from 1997 to 2008 before she joined the law firm Cain Lamarre Casgrain Wells. She chairs the board of the Université du Québec en Abitibi-Témiscamingue and sits on the board of the Association de l'exploration minière du Québec. She is also a member of various committees involved in the field of socioeconomic development.

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## **Carl Cassista**

President, Axion Technologies Ltd.

*Appointment: September 26, 2007*

*Term: September 26, 2011*

*Status: Independent director*

A graduate of Université Laval and member of the Ordre des ingénieurs du Québec, Carl Cassista has worked in electrical engineering and in R&D, mainly for the Axion Technologies group. He joined that company in 1982 and has served there as President since 1994.

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## **Michelle Cormier**

Vice-President and Chief Financial Officer,  
TNG Corporation

*Appointment: November 4, 2009*

*Term: November 4, 2013*

*Status: Independent director*

With a Bachelor's degree in Administration from Bishop's University and a Graduate Diploma in Public Accountancy from McGill University, Michelle Cormier is a member of the Ordre des comptables agréés du Québec and the Institute of Corporate Directors. She held executive positions with Alcan Aluminium and Repap Enterprises before her appointment as Vice-President and Chief Financial Officer of TNG Corporation in 2001. Ms. Cormier is Chairman of the Board of Société immobilière du Québec and the Orchestre Métropolitain and sits on the boards of Pro-Fab and Calyx Transportation.



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**Bernard Gaudreault**

Corporate Director  
Appointment: December 5, 2001  
Term: September 26, 2010<sup>a</sup>  
Status: Independent director

With a diploma in commerce from the Noranda Business School, Bernard Gaudreault has more than 30 years' experience in corporate management in real estate and the food industry. He is Chairman of the Board of the municipal housing bureau in Rouyn-Noranda.

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**Suzanne Gouin**

President and Chief Executive Officer,  
TV5 Québec Canada  
Appointment: September 26, 2007  
Term: September 26, 2011  
Status: Independent director

Suzanne Gouin has a Bachelor's degree in Political Science from Concordia University, where she also took graduate courses in media studies. She completed an MBA at the University of Western Ontario and has certification from the Institute of Corporate Directors. She has held several management positions in media companies and joined TV5 Québec Canada in 2002 as President and Chief Executive Officer. Ms. Gouin sits on the boards of various not-for-profit organizations.

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**Louis Lagassé**

Chairman of the Board, Lagassé Group  
Appointment: September 10, 2003  
Term: February 11, 2012  
Status: Independent director

With a law degree from the Université de Montréal, an MBA from the University of Western Ontario and a PhD in Civil Law from Bishop's University, Louis Lagassé is a member of the Chambre des notaires du Québec. He also holds an honorary doctorate from the Université de Sherbrooke and is a member of the Order of Canada. Mr. Lagassé heads an industrial group that is active on the Canadian and European markets, and he serves on the boards of several telecommunications companies as well as various not-for-profit organizations.

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**Jacques Leblanc**

President, Gestion Jacques Leblanc inc.  
Appointment: April 7, 2004  
Term: September 26, 2010<sup>a</sup>  
Status: Independent director

A graduate of Université Laval in administration, Jacques Leblanc is a chartered accountant and a Fellow of the Ordre des comptables agréés du Québec. He also has certification from the Collège des administrateurs de sociétés. Mr. Leblanc was a partner in the firm Leblanc Bourque Arsenault for 25 years. Currently, he sits on the board of the Canada Employment Insurance Financing Board.

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**Michel Plessis-Bélair**

Vice-Chairman, Power Corporation of Canada  
Appointment: April 7, 2004  
Term: September 26, 2011  
Status: Independent director

Michel Plessis-Bélair holds a Bachelor of Arts from the Université de Montréal, a business and accounting degree from HEC Montréal and an MBA from Columbia University in New York. In 1986, he joined Power Corporation of Canada. From 1986 to 2008, he successively served as Senior Vice-President, Finance and Administration, as Executive Vice-President and Chief Financial Officer and as Vice-Chairman and Chief Financial Officer. Currently, he is Vice-Chairman and a director of Power Corporation and several of its subsidiaries. Mr. Plessis-Bélair also sits on the boards of various not-for-profit organizations.

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**Marie-France Poulin**

Executive Vice President, Camada Group Inc.  
Appointment: April 7, 2004  
Term: September 26, 2011  
Status: Independent director

Marie-France Poulin has a Bachelor of Business Administration with an option in Marketing from Université Laval, as well as certification from the Collège des administrateurs de sociétés. She has held several executive positions, including that of Vice President, Sales and Marketing, of MAAX. Ms. Poulin is a director of the Laurentian Bank and also sits on the boards of various not-for-profit organizations.

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**Marie-Anne Tawil**

President and Chief Executive Officer,  
Les Investissements Iron Hill Inc.  
Appointment: December 7, 2005  
Term: December 7, 2010<sup>a</sup>  
Status: Independent director

With a Licentiate in Civil Law and a Bachelor of Common Law from the University of Ottawa and an MBA from Concordia University, Marie-Anne Tawil has earned certification from the Institute of Corporate Directors and is a member of the Barreau du Québec. She has practised law with two major law firms in Montréal, was Legal Counsel and Secretary of Quebecor and has held management positions in various other companies. Ms. Tawil is Chairman of the SAAQ (Société d'assurance automobile du Québec).

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**Emmanuel Triassi**

President, Groupe T.E.Q. Inc.  
Appointment: September 26, 2007  
Term: September 26, 2011  
Status: Independent director

A member of the Ordre des ingénieurs du Québec, Emmanuel Triassi holds a Bachelor's degree from McGill University and a Master's degree in Building Engineering from Concordia University. He is the founding president of a general contracting company specializing in construction project management.

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**Gilles Vaillancourt<sup>b</sup>**

Mayor, Ville de Laval  
Appointment: September 26, 2007  
Term: September 26, 2011  
Status: Independent director

Following studies in science and business management, Gilles Vaillancourt launched his career in business. At the same time, he became involved in municipal affairs. He was elected Mayor of Laval in 1989 and serves in this capacity on the boards of various representational organizations at the local, regional, provincial and national levels. He also sits on the boards of various not-for-profit organizations.

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a) When their term expires, directors remain in office until replaced or reappointed.

b) Gilles Vaillancourt has temporarily withdrawn from the Board of Directors.

# ACTIVITY REPORT OF THE BOARD OF DIRECTORS AND BOARD COMMITTEES

► *Aerial views of Murailles workcamp near the Romaine-2 jobsite.*



## BOARD OF DIRECTORS

Hydro-Québec's Board of Directors is made up of 16 members, including the Chairman of the Board and the President and Chief Executive Officer. The directors' diverse professional backgrounds are a definite asset for the seven Board committees: Executive, Governance and Ethics, Audit, Human Resources, Environment and Public Affairs, Finance, and Pension Plan Financial Management. The Board is chaired by Michael Turcotte.

**Mandate:** The Board administers the company's business efficiently, in accordance with the *Hydro-Québec Act*, the *Companies Act* and the applicable regulations. Its principal functions include reviewing and approving the Strategic Plan and the annual Business Plan, setting the company's annual performance targets, reviewing financial results on a monthly basis, and performing the cyclical review of integrated enterprise risk management. The Board also approves the appointment of executives other than the President and Chief Executive Officer, i.e., those reporting to him, as well as the policies governing compensation and working conditions for Hydro-Québec's employees and executives. In addition, it approves the company's major capital projects in generation, transmission and distribution as well as matters submitted to the Régie de l'énergie.

**Activities:** *The Board met 12 times in 2010, while its committees held 34 meetings in all. It reviewed progress with regard to the Strategic Plan 2009–2013. It also approved the Energy Efficiency Plan's budget for 2011–2015, along with certain measures that will enable the company to meet its energy conservation objectives, particularly the CATVAR (voltage regulation and reactive power control) project, whose objective is to optimize management of distribution system voltage. Furthermore, it approved many capital projects in generation, transmission and distribution. The Board also examined and approved the expertise and experience profiles established for the selection of new directors, reviewed the mandates of its committees and assessed its own performance.*

*The Board's recurring deliberations dealt with the quarterly and annual objectives and financial results of the company and certain wholly owned subsidiaries, as well as with the financial management of the pension plan. It reviewed the progress of the company's capital projects and examined the risk management process and consolidated enterprise risk portfolio. It also approved the annual internal audit plan and the external auditors' plan and fees in connection with the audit of the financial statements of the company and of its pension plan.*

## EXECUTIVE (A)

**Mandate:** The Executive Committee is vested with all of the powers of the Board of Directors, except those powers that are expressly reserved for the Board by law and under the company's bylaws. It is chaired by Michael Turcotte.

**Activities:** *The Executive Committee held one meeting in 2010.*

## GOVERNANCE AND ETHICS (B)

**Mandate:** The role of the Governance and Ethics Committee is to develop the rules of governance and codes of ethics applicable to directors, senior executives appointed by the company and employees of Hydro-Québec and its wholly owned subsidiaries; the expertise and experience profiles used in appointing Board members; the criteria for assessing the performance of directors and the Board's functioning; the induction and training program for directors; and the measures for evaluating the company's efficiency and performance. This committee also makes recommendations to the Board regarding the company's policies and Strategic Plan and the composition and mandate of the Board committees. The Governance and Ethics Committee is chaired by Michael Turcotte.



DIRECTOR ATTENDANCE AT MEETINGS OF THE BOARD OF DIRECTORS AND BOARD COMMITTEES IN 2010

	Notes	Number of meetings	Board <sup>1</sup>	A <sup>1,2</sup>	B	C	D	E <sup>1</sup>	F	G <sup>1</sup>
<b>Directors</b>			<b>12</b>	<b>1</b>	<b>6</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>4</b>
<b>Michael L. Turcotte</b> ABCDEFG			12	1	6	5	5	7	5	3
<b>Thierry Vandal</b> A EFG	3		12	1	5	5	5	5	5	3
<b>Robert Sauvé</b>			11							
<b>Gaston Blackburn</b> E			10					7		
<b>Anik Brochu</b> E	4		2							
<b>Carl Cassista</b> D			11				6			
<b>Michelle Cormier</b>			12							
<b>Bernard Gaudreault</b> C			11			5				
<b>Suzanne Gouin</b> DE			10					6		
<b>Louis Lagassé</b> AFG			8	1					4	3
<b>Jacques Leblanc</b> BC	5, 6		12	1	6	5		1		2
<b>Michel Plessis-Bélair</b> ABFG			6		3				4	3
<b>Marie-France Poulin</b> ABD	5		10	1	6		6			
<b>Marie-Anne Tawil</b> BC			12		6	5				
<b>Emmanuel Triassi</b> CF			12			5			5	
<b>Gilles Vaillancourt</b> D G			9							2
<b>Board Committees</b> A Executive B Governance and Ethics C Audit D Human Resources E Environment and Public Affairs F Finance G Pension Plan Financial Management			<p>1) Including two conference calls of the Board of Directors, one conference call of the Executive Committee, one of the Environment and Public Affairs Committee and one of the Pension Plan Financial Management Committee.</p> <p>2) The Executive Committee meets when necessary.</p> <p>3) Thierry Vandal attends meetings of the Governance and Ethics, Audit and Human Resources committees as a guest.</p> <p>4) Anik Brochu was unable to attend several meetings for personal reasons.</p> <p>5) Marie-France Poulin and Jacques Leblanc took part in the Executive Committee meeting as substitute members.</p> <p>6) Jacques Leblanc participated as a substitute member in the meeting of the Environment and Public Affairs Committee held on December 9, 2010, and in the meetings of the Pension Plan Financial Management Committee held on May 14 and December 9, 2010.</p>							

**Activities:** In 2010, the Governance and Ethics Committee met six times. While carefully ensuring application of the governance measures in the Hydro-Québec Act, the Governance and Ethics Committee assessed the performance of the Board of Directors and reviewed the mandates of the Board committees and the expertise and experience profiles of the Board members. The committee also made recommendations regarding the appointment of senior executives of Hydro-Québec's wholly owned subsidiaries, as well as Board members and external auditors of the company's first-tier wholly owned subsidiaries. In addition, it examined annual reviews of several company policies.

**Summary of the assessment of Board performance:** In accordance with the Hydro-Québec Act, in 2010 the Governance and Ethics Committee assessed the performance of the Board of Directors. The directors completed a questionnaire based on the assessment criteria approved by the Board, to which the results were submitted.

#### AUDIT (C)

**Mandate:** The Audit Committee's role is to make recommendations to the Board of Directors on the approval of the financial statements of Hydro-Québec and of its pension plan. It ensures that the financial statements accurately reflect the financial positions and changes therein, and that internal controls are adequate and effective. It is also responsible for reviewing the relevance of its mandate on an annual basis, issuing an opinion prior to the Board's approval of the annual internal audit plan, supervising internal audit activities, ensuring that the company has a plan to optimize the use of its resources and monitoring this plan. The Audit Committee also makes recommendations to the Board on the external auditors' fees and meets periodically with the external auditors. In addition, it examines the integrated enterprise risk management process. It can also act as the audit committee of any of the company's wholly owned subsidiaries. The Audit Committee is composed solely of independent directors who have the necessary expertise for the performance of its mandate. It is chaired by Jacques Leblanc.

**Activities:** In 2010, the Audit Committee held five meetings. As part of its recurring deliberations, the committee verified the independence of the external auditors. It also examined internal and external audit results and internal audit reports on control and optimization of the company's operations and resources as well as management of the related risks. It examined the quarterly and annual financial statements of Hydro-Québec and its pension plan and the annual financial statements of Société d'énergie de la Baie James. The committee also monitored progress in Hydro-Québec's migration to the International Financial Reporting Standards. Moreover, it examined the company's 2011 internal audit plan and recommended its approval by the Board. The plan addresses the effectiveness and efficiency of the company's operations and incorporates monitoring of performance indicators for that purpose. It also covers the reliability, integrity and availability of financial and operational information, as well as the protection of corporate assets and compliance of the company's activities with the laws and regulations in effect.

#### HUMAN RESOURCES (D)

**Mandate:** The Human Resources Committee is responsible for establishing human resources policies as well as standards and rate scales applicable to the compensation of senior executives and employees of the company and its wholly owned subsidiaries. It is also responsible for developing the expertise and experience profile to be used in selecting the President and Chief Executive Officer and for proposing a candidate for that position to the Board of Directors, which will then make a recommendation to the Québec government. In addition, it develops and suggests criteria for assessing the performance of the President and Chief Executive Officer and makes recommendations to the Board regarding his compensation. It also participates in selecting the senior executives of the company and its subsidiaries and in developing a succession plan. The committee is chaired by Marie-France Poulin.

**Activities:** In 2010, the Human Resources Committee held six meetings, including a joint meeting with the Finance Committee to examine Hydro-Québec's Business Plan, objectives and corporate risk management. It evaluated whether or not the company had met its annual performance objectives and examined the overall compensation of its employees, executives and President and Chief Executive Officer and of the employees and senior executives of its wholly owned subsidiaries. In addition, it closely monitored the succession plan for Senior Management. It also studied the Report of Activities of the Corporate Ombudsman 2009 and examined the annual report on the corporate policy *Our Human Resources*.

## ENVIRONMENT AND PUBLIC AFFAIRS (E)

**Mandate:** The role of the Environment and Public Affairs Committee is to provide opinions and make recommendations to the Board of Directors on environmental management and compliance; integration of sustainable development principles; environmental incident reports and related claims, opinions, investigations and legal proceedings; public health and safety; community relations; the company's social responsibility and its contribution to the community; and its public image. The committee is chaired by Gaston Blackburn.

**Activities:** *The Environment and Public Affairs Committee met seven times in 2010. It studied the summary of environmental management assessments prepared by the President and Chief Executive Officer as well as the semi-annual reports on environmental compliance and legislation. Moreover, the Committee recommended that the Board approve the granting of donations and sponsorships according to the criteria and rules in effect. As well, it examined the 2009 results with respect to the company's communication and public relations activities, financing of university research chairs and the Fonds Hydro-Québec pour la Francophonie. The committee also examined the Sustainability Report 2009, the Annual Report 2009 of the Fondation Hydro-Québec pour l'environnement and the 2009 regional profile of Hydro-Québec's activities. In addition, the committee reviewed the annual activity reports of the liaison committees established by the company with groups representing Québec agricultural producers and municipalities.*

## FINANCE (F)

**Mandate:** The role of the Finance Committee is to advise the Board on Hydro-Québec's directions, policies, strategies and overall objectives related to financing, borrowing, insurance, banking and risk management, on major investment projects outside Québec and on important matters related to technology marketing. In addition, every year, it examines the company's consolidated portfolio of internal and external risks. The committee is chaired by Michel Plessis-Bélair.

**Activities:** *In 2010, the committee held five meetings, including a joint meeting with the Human Resources Committee for the purpose of analyzing the company's Business Plan, objectives and corporate risk management. It also examined various annual programs (borrowing, guarantee, financial risk management, swap and sinking fund) before recommending their approval by the Board. The committee reviewed financial tracking reports on capital projects worth more than \$50 million and the annual report on application of the corporate policy Our Assets. Moreover, it recommended that the Board approve the signature of a payment bond related to the transmission service agreement with Northern Pass Transmission LLC.*

## PENSION PLAN FINANCIAL MANAGEMENT (G)

**Mandate:** The role of the Pension Plan Financial Management Committee is to advise the Board on the directions, policies, strategies and overall objectives established by Hydro-Québec for its pension plan: the Pension Plan Funding Policy, the Pension Fund Investment Management Policy, actuarial valuations of the plan, choice of the benchmark portfolio, the plan's financial position and plan expenses. It also expresses its opinion on any other aspect of pension fund management. The committee is chaired by Louis Lagassé.

**Activities:** *In 2010, the Pension Plan Financial Management Committee met four times. It recommended that the Board approve amendments to the Pension Fund Investment Management Policy, the annual actuarial valuation for purposes of pension plan funding and solvency, the annual pension fund management and pension plan administration budgets, and the reappointment of the actuary for the next annual valuation. The Committee reviewed the long-term asset mix and the pension plan management structure. It also evaluated the performance of the pension plan portfolio and specialized portfolio managers. Lastly, it closely monitored changes in the Pension Plan's financial position.*

# CORPORATE GOVERNANCE

► Sylvie Ouellet and Maxime Lanctôt, directors in Hydro-Québec Production's *Vice-présidence – Marchés de gros*, in front of a painting by Sylvain Bouthillette titled *Santo Subito*. © Sylvain Bouthillette



Hydro-Québec's Board of Directors complies with the requirements of the *Hydro-Québec Act* with regard to governance. It also follows the guidelines of the Canadian Securities Administrators applicable to state-owned enterprises, even though it is not legally bound to do so because Hydro-Québec is not publicly traded.

## INDEPENDENCE

A total of 14 of the 16 directors of Hydro-Québec, including the Chairman of the Board, are independent directors, i.e., they have no direct or indirect relationships or interests, for example of a financial, commercial, professional or philanthropic nature, which are likely to interfere with the quality of their decisions as regards the interests of the company. The two Board members who are not independent are Thierry Vandal, the company's President and Chief Executive Officer, and Robert Sauvé, Deputy Minister of Natural Resources and Wildlife.

The Québec government appoints the members of the Board based on the expertise and experience profiles established by the company. Directors are appointed for a term of up to four years and the Chairman for a term of up to five years; they may be reappointed twice, successively or not.

## RULES OF ETHICS

The Board is responsible for compliance with the rules set out in the *Code of Ethics and Rules of Professional Conduct for Directors, Executives and Controllers of Hydro-Québec*, which are based on the *Regulation respecting the ethics and professional conduct of public office holders*.

## COMPENSATION AND OTHER BENEFITS PAID TO DIRECTORS

Compensation for all independent directors, except the Chairman, is set out in Order-in-Council No. 610-2006. Compensation consists of a basic annual retainer of \$17,064, plus a meeting fee of \$800 for each Board or committee meeting. A yearly supplement of \$5,333 is paid to the chairs of Board committees. Pursuant to Order-in-Council No. 1099-2005, the

Chairman of the Board receives annual compensation of \$125,000. Board members are also entitled to reimbursement of travel expenses incurred in the performance of their duties.

## DIRECTORS' COMPENSATION AND BENEFITS IN 2010

	Base compensation <sup>a,b</sup>	Meeting fees <sup>b</sup>	Benefits <sup>c</sup>
<b>Michael L. Turcotte<sup>d</sup></b>	\$125,000	–	\$54
<b>Thierry Vandal<sup>e</sup></b>	–	–	–
<b>Robert Sauvé<sup>e</sup></b>	–	–	–
<b>Gaston Blackburn</b>	\$12,714	\$12,382	\$3,850
<b>Anik Brochu</b>	\$17,040	\$796	\$61
<b>Carl Cassista</b>	\$17,040	\$13,186	\$4,826
<b>Michelle Cormier</b>	\$17,040	\$8,788	\$61
<b>Bernard Gaudreault</b>	\$17,040	\$11,984	\$3,850
<b>Suzanne Gouin</b>	\$17,040	\$14,778	\$61
<b>Louis Lagassé</b>	\$22,366	\$11,192	\$3,850
<b>Jacques Leblanc</b>	\$22,366	\$19,576	\$3,850
<b>Michel Plessis-Bélaïr</b>	\$22,366	\$11,974	\$61
<b>Marie-France Poulin</b>	\$22,366	\$17,178	\$61
<b>Marie-Anne Tawil</b>	\$17,040	\$17,176	\$4,826
<b>Emmanuel Triassi</b>	\$17,040	\$16,776	\$3,850
<b>Gilles Vaillancourt</b>	\$16,056	\$7,984	\$3,610

a) Pursuant to Orders-in-Council Nos. 1099-2005 and 610-2006.

b) Includes indexing applied on April 1, 2010.

c) Insurance premiums paid by Hydro-Québec.

d) Michael Turcotte also receives a car allowance of \$15,797.

e) Thierry Vandal, President and Chief Executive Officer, and Robert Sauvé, Deputy Minister of Natural Resources and Wildlife, may not receive compensation as members of Hydro-Québec's Board of Directors.

## DIRECTOR INDUCTION AND TRAINING PROGRAM

When Board members are first appointed, they receive training on their roles and responsibilities as well as the nature and business context of Hydro-Québec's principal activities. Board members are informed about the company's legal and regulatory context, with particular emphasis on the governance of a government-owned utility. In addition, Board committee members receive documents regarding the mandate of their committee and the matters it handles. The director induction



▲ CREDIT: DANIEL ROUSSEL

◀ The Hydro-Québec Collection contains more than a thousand works of art and acquires new ones every year. Left, *Les feuilles mortes* by Roberto Pellegrinuzzi, a photographic emulsion on Japan paper. © Roberto Pellegrinuzzi

▼ At head office, walls are graced by three silver prints by Gabor Szilasi, winner of the 2009 Prix Paul-Émile-Borduas and a Governor General's Award in Visual and Media Arts in 2010. Their titles are *46, rue Saint-Adolphe, Baie-Saint-Paul*; *Magasin général, Saint-Joseph-de-la-Rive*; and *Goélette, Saint-Joseph-de-la-Rive*. © Hydro-Québec. Seated is Michel Martinez, Vice President – Human Resources, accompanied by his assistant, Monique St-Jean.



and training program also includes presentations on major issues and projects, as well as tours of the company's facilities. In 2010, some Board members visited the energy trading floor. As well, to complement their knowledge, some directors took advantage of training programs offered by educational institutions.

#### DEINTEGRATION

In 1997, Hydro-Québec implemented an organizational structure that allows some units to work independently from each other while remaining part of the same company. This is the principle of deintegration, or unbundling.

The operations of these units are subject to set rules of conduct and ethics. The Distributor's electricity procurement process is governed by the *Code of Ethics on Conducting Calls for Tenders*, which was approved by the Board of Directors and the Régie de l'énergie. The code ensures that the tendering process is conducted fairly for all electricity suppliers. The Régie follows up annually on its application. Moreover, the Régie de l'énergie approved the *Code de conduite du Distributeur* (Distributor Code of Conduct) in March 2006. This code applies to transactions between the Distributor and the Generator for procurement not subject to the tendering process. It also governs dealings between the Distributor and its affiliates, with the aim of preventing affiliates' business operations from being financed, in whole or in part, by electricity service customers. The Distributor provides details on the application of the code in its annual report to the Régie. The code is available for consultation, in French only, on the company's Web site.

Hydro-Québec TransÉnergie is subject to the *Transmission Provider Code of Conduct* approved by the Régie in 2004. This code governs relations between the Transmission Provider and Hydro-Québec affiliates, and its purpose is to prevent any form of preferential treatment or cross-subsidization. The information that must be made public pursuant to the *Transmission Provider Code of Conduct* is published on-line at OATI webOASIS™<sup>SM</sup> (Open Access Same-Time Information System) hosted

by Open Access Technology International ([www.oatioasis.com/hqt/](http://www.oatioasis.com/hqt/)). The Transmission Provider reports on the application of the *Transmission Provider Code of Conduct* in its annual report to the Régie.

The *Reliability Coordinator Code of Conduct* was approved by the Régie de l'énergie in December 2007 after Hydro-Québec TransÉnergie's Direction – Contrôle des mouvements d'énergie—the unit responsible for system control—was designated as Reliability Coordinator for Québec. The Direction later became the Direction – Contrôle et exploitation du réseau. The purpose of this code, which came into effect in January 2008, is to ensure that the reliability of the transmission system remains a top priority and to prevent any form of preferential treatment in favor of other branches of the Transmission Provider, its affiliates or other system users.

#### INTERNAL CONTROL SYSTEM

The company's Management maintains an internal control system that meets the demanding requirements of the internationally recognized framework developed by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission. This includes communicating Hydro-Québec's code of ethics and code of conduct to employees, primarily to ensure the proper management of resources and the orderly conduct of business. The objective of this system is to provide reasonable assurance that financial information is relevant and reliable and that Hydro-Québec's assets are appropriately recorded and safeguarded. The system includes an enterprise risk management process. The internal audit helps to determine whether the internal control system is sufficient and effective and to assess the company's policies and procedures. It includes a performance audit to ensure the efficiency, effectiveness and cost-effectiveness of operations. The internal auditor and the external auditors have full and unrestricted access to the Audit Committee, with or without Management present.

## MONITORING OF EXTERNAL AUDITORS' INDEPENDENCE

Hydro-Québec has introduced various mechanisms to enable the Audit Committee to ensure that external auditors remain independent:

- A process whereby any assignment to be given to external auditors is analyzed first to prevent any interference with their independence; among other things, certain services may not be provided by the external auditors
- Rules requiring prior approval of all requisitions for service sent to the external auditors
- Reports to the Audit Committee on the fees billed by the external auditors

## EXTERNAL AUDITORS' FEES

KPMG LLP, Ernst & Young LLP and the Auditor General of Québec are Hydro-Québec's external auditors for 2010. Professional fees billed by KPMG LLP and Ernst & Young LLP in 2010 for services other than auditing and certification amounted to 2.5% of the total \$6.5 million in fees billed.

## ACCESS TO DOCUMENTS AND PROTECTION OF PERSONAL INFORMATION

Hydro-Québec carefully protects the personal information of its customers, suppliers and employees and respects the public's right of access to information. It takes all the necessary measures to comply with the *Act respecting Access to documents held by public bodies and the Protection of personal information*, or the "Access Act."

To facilitate access to information, Hydro-Québec publishes many documents on its Web site at [www.hydroquebec.com/profile/](http://www.hydroquebec.com/profile/) in accordance with the *Regulation respecting the distribution of information and the protection of personal information*. It also provides explanations regarding access to documents and the protection of personal information, including an explanation of the procedure for requesting access to a document.

Hydro-Québec makes documents of public interest available on its Web site. These documents include a senior management organization chart, a list of the company's directors, the names and contact information of persons in charge of access to documents and the protection of personal information, the inventory of personal information, the register of personal information released, a description of services and programs offered to customers and Hydro-Québec's document classification plan. Other information includes the *Hydro-Québec Act*, the company's regulations, codes and policies, and a list of donations and sponsorships that have been awarded.

Furthermore, pursuant to the *Action Plan for People with Disabilities 2010*, Hydro-Québec has committed itself to taking all reasonable measures to ensure that people with disabilities can exercise their right to obtain complete, high-quality information.

In 2010, Hydro-Québec received 387 requests for access to information under the Access Act. Most applicants were looking for documents such as studies, reports and contracts, or wanted to know what personal information the company held about them. All the requests were

processed within the prescribed time limit; 155 were granted in full, 177 were granted in part and 55 were denied. Request denials were due mainly to security issues, to opposition by a third party to the disclosure of information belonging to it, or to the commercial nature of the documents requested. Only 21 files were the subject of requests for review by the Commission d'accès à l'information du Québec.

## ETHICS

Hydro-Québec attaches great importance to ethics in all aspects of its activities. The concept of ethics has been included in official company guidelines since 1988, with the aim of setting high standards of judgment and behavior in professional activities.

As a government-owned utility, Hydro-Québec must demonstrate exemplary probity, and it can do so only with the consistent support of its employees. Loyalty, integrity, respect, discretion and fairness are fundamental values reflecting Hydro-Québec's social commitment to its customers and the community. Ethical standards and rules resulting from these values are set out in the *Code of Ethics and Rules of Professional Conduct for Directors, Executives and Controllers of Hydro-Québec* (see page 112) and in the *Code of Conduct* for employees. This document, which is available at [www.hydroquebec.com/profile/](http://www.hydroquebec.com/profile/), has a twofold purpose: facilitate an understanding of the ethical principles set out in the policy Our Management and approved by the Board of Directors, and help all employees perform their duties in keeping with Hydro-Québec's values.

Hydro-Québec managers at all reporting levels play a key role in applying the company's ethical principles. They see to it that the *Code of Conduct* is applied and observed, thereby upholding the company's values. The Executive Vice President – Corporate Affairs and Secretary General, who is responsible for interpreting the *Code of Conduct*, may issue opinions on ethical questions with a view to preventing or rectifying a situation.

## LANGUAGE GUIDELINES

In 2010, Hydro-Québec continued its efforts to maintain the quality of the French used in the company's internal and external communications. Various proficiency courses (grammar, business correspondence and specialized writing) were offered to employees, and five terminology bulletins were published on the intranet. Promotional, and awareness activities were organized to highlight Francofête, a celebration of French language and culture. A vocabulary related to the assistance program for energy efficiency projects was published. As well, the list of official place names was updated and published on the intranet and on Hydro-Québec's Web site.



## SUSTAINABLE DEVELOPMENT

The Sustainability Report discusses the company's main sustainable development initiatives, the progress made in this area and the company's sustainable energy choices. The report is based on the Global Reporting

Initiative Guidelines. It is published at [www.hydroquebec.com/sustainable-development](http://www.hydroquebec.com/sustainable-development), where additional information is provided on the company's performance with regard to sustainable development.

## COMPENSATION AND OTHER BENEFITS PAID TO THE COMPANY'S FIVE MOST HIGHLY COMPENSATED OFFICERS IN 2010

	Base compensation	Variable compensation <sup>a</sup>	Perquisites used <sup>b</sup>	Automobile		Life insurance and health insurance premiums paid by Hydro-Québec
				Description of benefit	Cost-in-use	
<b>Thierry Vandal</b> President and Chief Executive Officer, Hydro-Québec	\$423,113	\$84,623	\$2,986	Executive vehicle	\$2,580	\$7,175
<b>André Boulanger</b> President, Hydro-Québec Distribution	\$370,975	\$74,195	\$4,641	Car allowance or vehicle, plus parking	\$16,999	\$7,741
<b>Richard Cacchione</b> President, Hydro-Québec Production	\$368,880	\$73,776	\$5,000		\$13,195	\$7,605
<b>Réal Laporte</b> President, Hydro-Québec Équipement et services partagés President and Chief Executive Officer, Société d'énergie de la Baie James <sup>c</sup>	\$356,890	\$71,378	\$5,000		\$13,813	\$7,054
<b>Isabelle Courville</b> President, Hydro-Québec TransÉnergie	\$356,593	\$71,319	\$5,000		\$16,999	\$3,540
<b>Pension Plan and Supplementary Benefits Program</b>						
<b>Basic Hydro-Québec Pension Plan (HQPP)</b>						
<ul style="list-style-type: none"> <li>- Usual contribution under the plan</li> <li>- Pension calculated on the basis of average salary for the best five years</li> <li>- Credit of 2.25% per contribution year</li> <li>- Recognition of 66.67% of the maximum bonus as pensionable earnings for purposes of the HQPP</li> </ul>						
<b>Supplementary Benefits Program</b>						
<ul style="list-style-type: none"> <li>- Contribution assumed by Hydro-Québec</li> <li>- Additional benefits to offset the tax limits under the HQPP (lifting of ceiling on the permitted maximum amount)</li> <li>- Payment of benefits according to the same terms as those applicable under the HQPP</li> </ul>						
<i>Other provisions applicable to the President and Chief Executive Officer of Hydro-Québec</i>						
<ul style="list-style-type: none"> <li>- Pension calculated on the basis of average salary for the best three years (less pension payable under the HQPP)</li> <li>- Credit of 3.5% per contribution year (less pension credit under the HQPP)</li> <li>- Recognition of two years for each year of participation</li> <li>- Recognition of 100% of the maximum bonus as pensionable earnings (less portion of bonus recognized under the HQPP)</li> <li>- Pension limited to 70% of the average of base salary and variable compensation for the best three years</li> </ul>						

a) In accordance with the provisions of the *Act to implement certain provisions of the Budget Speech of 30 March 2010, reduce the debt and return to a balanced budget in 2013–2014* (Bill 100).

b) Health assessment, financial and succession planning, sports clubs and professional dues.

c) Réal Laporte does not receive any separate compensation as President and Chief Executive Officer, Société d'énergie de la Baie James.

## COMPENSATION AND OTHER BENEFITS PAID TO THE ONLY TWO OFFICERS COMPENSATED BY ONE OF THE COMPANY'S WHOLLY OWNED SUBSIDIARIES IN 2010

	Base compensation	Variable compensation <sup>a</sup>	Perquisites used <sup>b</sup>	Employee benefits
<b>Yves Girouard<sup>c</sup></b>	\$15,944	\$2,287	\$2,000	Hydro-Québec Pension Plan and group insurance plans
<b>Michel A. Tremblay<sup>c</sup></b>	\$71,313	\$9,946	\$2,000	

a) In accordance with the provisions of the *Act to implement certain provisions of the Budget Speech of 30 March 2010, reduce the debt and return to a balanced budget in 2013–2014* (Bill 100).

b) Financial and succession planning and sports clubs.

c) Yves Girouard served as General Manager, Cedars Rapids Transmission Company, Limited from January 1 to February 21, 2010, and Michel A. Tremblay from May 17 to December 31, 2010.

# CODE OF ETHICS AND RULES OF PROFESSIONAL CONDUCT

## FOR DIRECTORS, EXECUTIVES AND CONTROLLERS OF HYDRO-QUÉBEC

### Part I – Interpretation and application

1. In this Code, unless the context indicates otherwise:
  - a) **“director”** means, with respect to the Company, a member of the Board of Directors of the Company, whether or not working full-time within the Company;
  - b) **“Committee”** or “Ethics and Corporate Governance Committee” means the Ethics and Corporate Governance Committee established by resolution of the Board of October 17, 1997 (HA-173/97), a copy of which is attached in Schedule D. A copy of the Committee’s mandate as amended by resolution of the Board of June 13, 2008 (HA-104/2008) is attached in Schedule D;
  - c) **“spouse”** includes marriage partners and persons living as if married for more than one year;
  - d) **“Board”** means the Board of Directors of the Company;
  - e) **“contract”** includes a proposed contract;
  - f) **“control”** means the direct or indirect ownership of securities, including shares, conferring more than 50% of voting rights or economic interest without this right depending on the occurrence of a particular event or allowing the election of the majority of directors;
  - g) **“controller”** means the controller of the Company and the controllers of divisions or groups or units reporting to the President and Chief Executive Officer of the Company;
  - h) **“executive”** with respect to the Company means any contractual manager whose employment conditions are subject to the approval of the Board;
  - i) **“enterprise”** means any form that can be taken by the organization for the production of goods or services or any other business of a commercial, industrial or financial nature or any group seeking to promote certain values, interests or opinions or to exercise an influence on public officials; however, this does not include the Company or a non-profit association or group that has no financial link with the Company or is not incompatible with the objects of the Company;
  - j) **“affiliated enterprise”** means a legal person or company in which the Company owns, directly or indirectly, securities, including shares, conferring more than 10% of voting rights or economic interest;
  - k) **“immediate family”** means spouse and dependent children;
  - l) **“subsidiary”** means a legal person or company controlled directly or indirectly by the Company;
  - m) **“Regulation”** means the *Regulation respecting the ethics and professional conduct of public office holders* [Order-in-Council 824-98 of June 17, 1998 (1998) 130 G.O. II., 3474, pursuant to sections 3.01 and 3.02 of the *Act respecting the Ministère du Conseil exécutif*, R.S.Q., c. M-30], as amended from time to time;
  - n) **“Company”** means Hydro-Québec.
2. In this Code, the prohibition to perform an act also applies to any attempt to perform it and any participation in it or incitement to perform it.
- 2.1 This Code applies to the directors, the President and Chief Executive Officer, other executives of the Company and its controllers.  
The directors and the President and Chief Executive Officer are also subject to the Regulation.

### Part II – Ethical principles and general rules of professional conduct

3. The director, executive or controller is appointed to contribute to the achievement of the Company’s mission in the best interest of Québec. Accordingly, he is expected to use his knowledge, abilities and experience in a way that will promote the effective, fair and efficient accomplishment of the objectives assigned to the Company by law and the good administration of the property it owns as mandatary of the State.  
His contribution shall be made with respect for the law and with honesty, loyalty, prudence, diligence, efficiency, application and fairness.
- 3.1 The director, executive or controller respects the following principles in the performance of his duties:
  - the values underlying the activities of the Company as a government-owned business company, which include customer satisfaction, a “business first” approach, respect for employees, quality improvement, respect for the environment, partnership with local communities and safeguarding the future; and
  - the principles set out in the basic policies of the Company, expressing commitments and conveying a business culture with regard to customers, human resources, acquisition of assets and services, business partners, finance, assets, the environment, social role, management, security and financial disclosure.
- 3.2 The director, executive or controller is required, in the performance of his duties, to respect the ethical principles and rules of professional conduct provided by law, the Regulation as applicable, and those defined in this Code. In case of discrepancy, the more stringent rules and principles apply.  
When in doubt, act according to the spirit of these principles and rules.  
A director, executive or controller who, at the request of the Company, serves as director or member of an undertaking or a company, is held to the same standards.
4. The director, executive or controller shall not merge the assets of the Company with his own; he may not use the assets of the Company or information he obtains as a result of his duties for his own profit or the profit of others. These obligations continue even after the director, executive or controller has ceased to hold his position.
5. The director, executive or controller shall seek, in the performance of his duties, only the interest of the Company to the exclusion of his own interest or that of others.
- 5.1 The director, executive or controller is bound to discretion in regard to anything that comes to his knowledge in or during the performance of his duties and is at all times bound to maintain the confidentiality of such information.
- 5.2 In the performance of his duties, the director, executive or controller shall make decisions without regard for any partisan political considerations.  
The Chairman of the Board, the director working full-time within the Company, the executive and the controller shall demonstrate reserve in the public expression of their political opinions.

6. The director, executive or controller may not directly or indirectly grant, solicit or accept a favor or an undue advantage for himself or for a third party.

In particular, he may not accept or solicit an advantage from a person or undertaking doing business with the Company or a subsidiary or acting in the name of or on behalf of such a person or undertaking if this advantage is intended or likely to influence him in the performance of his duties or generate expectations of this nature.

- 6.1 The director, executive or controller shall, in making decisions, avoid allowing himself to be influenced by offers of employment.

- 6.2 The director, executive or controller may not accept any gift or hospitality except what is customary and modest in value.

Any other gift or hospitality shall be returned to the giver.

7. The director may not make a commitment to a third party or grant them any guarantee relative to a vote he may be asked to make or any decision whatsoever that the Board may be asked to make.

- 7.1 The director, executive or controller may not, in the performance of his duties, deal with a person who has ceased to be a director, executive or controller of the Company for less than one year if this person is acting on behalf of a third party with respect to a proceeding, negotiation or other transaction to which the Company is a party and about which he has information not available to the public.

- 7.2 After ceasing his duties, no director, executive or controller may disclose confidential information he has obtained or give anyone advice based on information not available to the public concerning the Company or any other undertaking or company with which he had direct and substantial dealings during the year preceding the date on which he ceased his duties.

In the year following that date, he may not act on behalf or on account of another party with respect to a procedure, negotiation or other transaction to which the Company is a party and about which he has information not available to the public.

8. The director, executive or controller shall collaborate with the Chairman of the Board or the Ethics and Corporate Governance Committee on an issue of ethics or professional conduct when asked to do so.

- 8.1 The director, executive or controller who intends to be a candidate for elective office shall inform the Chairman of the Board of this intention.

The Chairman of the Board or President and Chief Executive Officer with the same intention shall inform the Secretary General of the Conseil exécutif.

### **Part III – Duties and obligations of directors, executives and controllers with respect to conflicts of interest**

#### **Prevention of conflicts of interest**

9. The director, executive or controller shall avoid placing himself in a situation in which his personal interest is in conflict with the duties of his position or in which reasonable doubt is cast on his ability to perform these duties with undivided loyalty.

In the event that this Code does not include provisions for a certain situation, the director, executive or controller must determine whether his conduct is in accordance with how the Company could reasonably expect a director, executive or controller to conduct himself in such circumstances. He must also determine whether a reasonably well-informed person would conclude that the situation might influence his decisions and impair his objectivity and impartiality in the performance of his duties for the Company.

10. A director who is employed full-time within the Company or one of its subsidiaries shall also avoid performing duties or being bound by commitments that prevent him from devoting the time and attention that the normal exercise of his duties requires.

As for other directors, they shall be sure to devote the time and attention reasonably required in the circumstances for the execution of their duties.

- 10.1 No director holding a full-time office with the Company, under pain of forfeiture of office, may have any direct or indirect interest in an undertaking, company or association that puts his personal interest in conflict with that of the Company.

However, such forfeiture is not incurred if that interest devolves to him by succession or gift, provided that he renounces or disposes of it with all possible dispatch. Meanwhile, sections 12, 13, 15 and 18 apply to this director.

Every other director who has an interest in an undertaking shall, on pain of forfeiture of his office, comply with the provisions of sections 12, 13, 15 and 18.

11. A director, executive or controller of the Company who serves as director, executive or controller of an affiliated enterprise shall be specifically authorized by the Board to:

- hold shares, rights or any other security issued by such enterprise and conferring voting rights or economic interest in it or the right to subscribe or buy such shares, rights or securities;
- benefit from any profit-sharing program, unless this director, executive or controller works full-time for the enterprise and the profit-sharing program is closely linked with the individual performance of the director, executive or controller within the affiliated enterprise;
- benefit from a pension plan granted by the affiliated enterprise if he does not hold a full-time position within the enterprise; or
- benefit from any advantage granted in advance in the case of a change of control of the affiliated enterprise.

12. A director, executive or controller who:

- is party to a contract with the Company or a subsidiary; or
- has a direct or indirect interest in an enterprise that is a party to a contract with the Company or a subsidiary or is a director, executive, controller or employee of this enterprise, except, in the latter case, if it is an enterprise that belongs to the same group as the Company;

shall disclose the nature and extent of his interest in writing to the Chairman of the Board.

The same applies to a director who has a direct or indirect interest in any issue being considered by the Board of Directors.

The director shall at all times abstain from conveying any information of any kind to any employee, controller, executive or director of the Company with respect to this contract or interest.

The director shall abstain from deliberating or voting on any question linked to this interest and avoid trying to influence the related decision. The director shall also withdraw from the meeting for the duration of deliberations and voting on this question. These restrictions do not apply when the decision concerns an enterprise belonging to the same group as the Company.

- 12.1 A director who is a member of the Audit Committee of the Board of Directors may not have an interest in the Company or a subsidiary. In particular, he may not accept from the Company or a subsidiary fees with respect to consulting, consulting services or any other similar service.

13. The disclosure required by section 12 occurs, in the case of a director, during the first meeting:

- in the course of which the contract or question concerned is under study;
- following the time at which the director who had had no interest in the contract or question concerned acquires such interest;
- following the time at which the director acquires an interest in the already concluded contract; or
- following the time at which any person with an interest in a contract or a question under study becomes a director.

14. An executive or controller who is not a director shall make the disclosure required in section 12 immediately after:

- a) having learned that the contract or question concerned was or will be studied at a meeting;
- b) having acquired the interest, if it is acquired after the contract was concluded or the decision made; or
- c) having become an executive or controller, if he becomes one after acquiring the interest.

The executive or controller may not try to influence the directors' decision in any way.

15. The director, executive or controller shall make the disclosure required in section 12 as soon as he has knowledge of a contract contemplated by this section which, as part of the normal business of the Company, does not require the approval of the directors.

16. Sections 12 to 15 apply also when the interest concerned is held by a member of the immediate family of the director, executive or controller.

17. The director, executive or controller shall notify the Chairman of the Board in writing of the rights he may invoke against the Company, by indicating their nature and their value, as soon as these rights come into existence or when he acquires knowledge of them.

18. The director, executive or controller shall submit to the Chairman of the Board, within 60 days of being appointed and on January 31 of each year in which he remains in office, an attestation in the form provided in Schedule B and containing the following information:

- a) the name of any enterprise (including its area of activity and place of operations), in which he owns directly or indirectly securities or assets, including common shares, when the holding of securities is greater than 5% of the total issued capital and shares outstanding, specifying the nature and proportion of securities owned and value of assets;
- b) the name of any enterprise for which he performs functions or in which he has an interest in the form of a debt, right, priority, mortgage or significant commercial or financial benefit; and
- c) any other fact, situation or event of which he has knowledge and that could put him in a conflict of interest situation or be perceived as such.

A director, executive or controller to whom the provisions of paragraphs a) to c) do not apply shall fill out an attestation to that effect and present it to the Chairman of the Board.

The director, executive or controller shall also produce such an attestation within 60 days of the occurrence of a significant change in its content.

The attestations presented pursuant to this section are treated as confidential.

19. The Chairman of the Board submits the attestations received pursuant to sections 12 to 18 to the Secretary of the Company, who keeps them at the disposal of the members of the Board and the Ethics and Corporate Governance Committee.

Moreover, the Secretary of the Company notifies the Chairman of the Board and the Ethics and Corporate Governance Committee of any failure to satisfy the obligations provided for in sections 12 to 18 as soon as the Secretary becomes aware of them.

## Waivers

20. This Code does not apply:

- a) to owning securities representing 5% or less of the total issued capital and shares outstanding;
- b) to owning an interest by way of a mutual fund in whose management the director, executive or controller plays no role directly or indirectly;
- c) to owning interests through a blind trust whose beneficiary cannot know its makeup;
- d) to owning a minimum number of shares required to be eligible as director of a corporation;
- e) to an interest which, by its nature and extent, is common to the public at large or a particular sector in which the director, executive or controller operates;
- f) to a directors' liability insurance agreement; or
- g) to the owning of shares issued or guaranteed by the Company, a government or municipality under the same conditions for everyone.

## Attestation

20.1 Within sixty days of the adoption of this Code by the Board, each director, executive or controller shall submit to the Chairman of the Board and the Secretary of the Company the attestation appearing in Schedule C.

Each new director, executive or controller shall do the same within sixty days of his appointment to this position.

## Part IV – Remuneration

20.2 The director, executive or controller, for the exercise of his duties, is entitled solely to the remuneration related to those duties. Such remuneration may not include, even partially, monetary advantages such as those established, in particular, by a profit-sharing plan based on the variation in the value of shares or on a stake in the capital stock of the Company.

20.3 A director, executive or controller dismissed for just and sufficient cause may not receive a severance allowance or payment.

20.4 A director, executive or controller who quits his duties, who has received or is receiving a severance allowance or payment and who holds an office, employment or any other remunerated position in the public sector during the period corresponding to that allowance or payment shall refund the part of the allowance or payment covering the period for which he receives a salary or shall cease to receive it during that period.

However, if the salary he receives is lower than that he received previously, he shall be required to refund the allowance or payment only up to the amount of his new salary, or he may continue to receive the part of the allowance or payment that exceeds his new salary.

20.5 Anyone who has received or is receiving a severance allowance or payment from the public sector and receives a salary as director, executive or controller during the period corresponding to that allowance or payment shall refund the part of the allowance or payment covering the period for which he receives a salary or shall cease to receive it during that period.

However, if the salary he receives as director, executive or controller is lower than that he was receiving previously, he shall be required to refund the allowance or payment only up to the amount of his new salary, or he may continue to receive the part of the allowance or payment that exceeds his new salary.

20.6 A President and Chief Executive Officer who has ceased to perform his duties, who has received so-called assisted departure measures and who, within two years after his departure, accepts an office, employment or any other remunerated position in the public sector shall refund the sum corresponding to the value of the measures received by him, up to the amount of the remuneration received, by the fact of his return to the public sector, during that two-year period.

20.7 Part-time teaching by a director, executive or controller is not covered by sections 20.4 to 20.6.

20.8 For the application of sections 20.4 to 20.6, "public sector" means the bodies, institutions and companies referred to in the Regulation in Schedule A.

The period covered by the severance allowance or payment referred to in sections 20.4 and 20.5 shall correspond to the period that would have been covered by the same amount if the person had received it as salary in his prior office, employment or position.

## Part V – Application of the Code

### Competent authorities

20.9 The Associate Secretary General for Senior Positions of the Ministère du Conseil exécutif is the competent authority for the application of this Code with respect to the Chairman of the Board and the other directors of the Company appointed by the Government.

The Chairman of the Board is the competent authority with respect to all directors of wholly owned subsidiaries, executives or controllers of the Company.

The Chairman of the Board shall ensure observance of the ethical principles and rules of professional conduct by the directors, executives and controllers of the Company.

21. The Ethics and Corporate Governance Committee has as its mission to advise the competent authority with respect to ethics and professional conduct.

The Committee also performs the duties invested in it by the resolution appearing in Schedule D and performs any other duties related to ethics entrusted to it by the Board.

In the performance of its duties, the Ethics and Corporate Governance Committee may become acquainted with the attestations contemplated by section 19.

22. When a director, executive or controller is accused of a violation of ethics or the rules of professional conduct, the Committee is responsible for collecting all relevant information. It makes a report of its findings to the competent authority and recommends appropriate measures, if any.

The competent authority notifies the director, executive or controller of the alleged violations and the possible penalties. It informs him that he has seven days in which to respond and if he requests, to be heard on this matter.

23. The Committee may render advisory opinions to directors, executives or controllers on the provisions of this Code and their application to specific cases, even hypothetical ones. It is not required to limit its views to the terms contained in the request.

23.1 In order to allow an appropriate decision to be made in the case of an urgent situation requiring fast response or in an alleged case of serious misconduct, the competent authority may temporarily relieve of his duties, with remuneration, the director, executive or controller who is accused of violations of ethics or the rules of professional conduct.

24. The Secretary of the Company keeps records in which are stored the statements, disclosures and attestations that must be submitted to it under this Code, the reports and advisory opinions of the Committee and the decisions of the competent authority with respect to ethics and professional conduct.

The Secretary shall also take the necessary steps to ensure the confidentiality of the information provided by the directors, executives and controllers pursuant to this Code.

25. The Committee may consult and receive opinions from outside counsel or experts on any issue it considers appropriate.

26. A director, executive or controller does not violate the provisions of this Code if he has obtained in advance a favorable decision from the Committee on the following conditions:

- a) the decision was obtained before the facts on which it was based became a reality;
- b) the decision was submitted to the Board;
- c) all of the relevant facts were fully disclosed to the Committee exactly and completely; and
- d) the director, executive or controller has complied with all the requirements of the decision.

27. The Committee and the competent authority preserve the anonymity of complainants, applicants and informers unless there is a clear intention to do otherwise. They may not be forced to reveal information likely to disclose their identity except if the law or a court so requires.

### Penalties

28. Upon concluding that a provision of the law, the Regulation or this Code has been violated, the competent authority may impose either of the following penalties:

- a) for an executive or a controller, the appropriate penalty, which can extend as far as termination of employment; and
- b) for a director, reprimand, suspension without remuneration for a maximum of three months, or removal from the Board.

However, when the competent authority is the Associate Secretary General contemplated by section 20.9, the penalty is imposed by the Secretary General of the Conseil exécutif. If the penalty proposed consists of the removal of a public office holder appointed or designated by the Government, it can only be imposed by the latter; in this case, the Secretary General of the Conseil exécutif may immediately suspend the public office holder without remuneration for a period not exceeding 30 days.

Any penalty imposed on a director and the decision to temporarily relieve him of his duties must be in writing and give the reasons therefor.

29. In the case of a violation of section 10, the competent authority records in writing the forfeiture of office of the violator.

30. The director, executive or controller shall render an account and restore to the Company any profits earned or benefits received as a result of or on the occasion of a violation of the provisions of this Code.

31. A director's vote shall not be a casting vote if it is made in violation of the provisions of this Code or associated with such a violation, or if the director fails to produce the attestation contemplated by section 18.

# GENERATING, TRANSMISSION AND DISTRIBUTION FACILITIES

AS AT DECEMBER 31, 2010

## Generation Installed capacity in MW

### Hydroelectric generating stations

**34,490 MW**

The installed capacity of a hydroelectric generating station is equivalent to that of its generating units operating in winter conditions (water temperature 5°C).

Robert-Bourassa	5,616	Bersimis-2	869	Paugan	206
La Grande-4	2,779	Outardes-4	785	Rapide-Blanc	204
La Grande-3	2,417	Carillon	753	Shawinigan-2	200
La Grande-2-A	2,106	Toulnoustouc	526	Shawinigan-3	194
Beauharnois	1,911	Outardes-2	523	Manic-1	184
Manic-5	1,596	Eastmain-1	507	Rapides-des-Îles	176
La Grande-1	1,436	Brisay	469	Chelsea	152
René-Lévesque (Manic-3)	1,244	Péribonka	405	La Gabelle	131
Bersimis-1	1,178	Laforge-2	319	Première-Chute	131
Jean-Lesage (Manic-2)	1,145	Trenche	302	Rapides-Farmer	104
Manic-5-PA	1,064	La Tuque	294	Les Cèdres	103
Outardes-3	1,026	Beaumont	270	Rapides-des-Quinze	103
Sainte-Marguerite-3	884	McCormick	235	Other (20 generating stations rated less than 100 MW)	835
Laforge-1	878	Rocher-de-Grand-Mère	230		

### Nuclear

**675 MW**

Gentilly-2	675
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### Thermal

**1,506 MW**

Tracy (steam)	495
Bécancour, La Citière and Cadillac (gas turbine)	881
Other (24 diesel plants)	130

### Hydroelectric generating stations planned or under construction

**2,468 MW**

Eastmain-1-A and Sarcelle	918
Romaine (4 generating stations)	1,550

### Installed capacity of Hydro-Québec's generating fleet

**36,671 MW**

Hydroelectric (60) <sup>a</sup>	<b>34,490</b>
Nuclear (1) <sup>b</sup>	<b>675</b>
Thermal (28) <sup>c</sup>	<b>1,506</b>

### Other sources of supply

**7,364 MW**

Churchill Falls generating station [Churchill Falls (Labrador) Corporation Limited] <sup>a</sup>	<b>5,428</b>
Nine privately owned wind farms <sup>b</sup>	<b>659</b>
Agreements with other independent power producers <sup>c</sup>	<b>1,277</b>

a) 59 operated by Hydro-Québec Production and 1 by Hydro-Québec Distribution

b) Operated by Hydro-Québec Production

c) 4 operated by Hydro-Québec Production and 24 by Hydro-Québec Distribution

a) Hydro-Québec has access to almost all the output until 2041.

b) Hydro-Québec purchases all the output.

c) Hydro-Québec has access to the output of these suppliers.

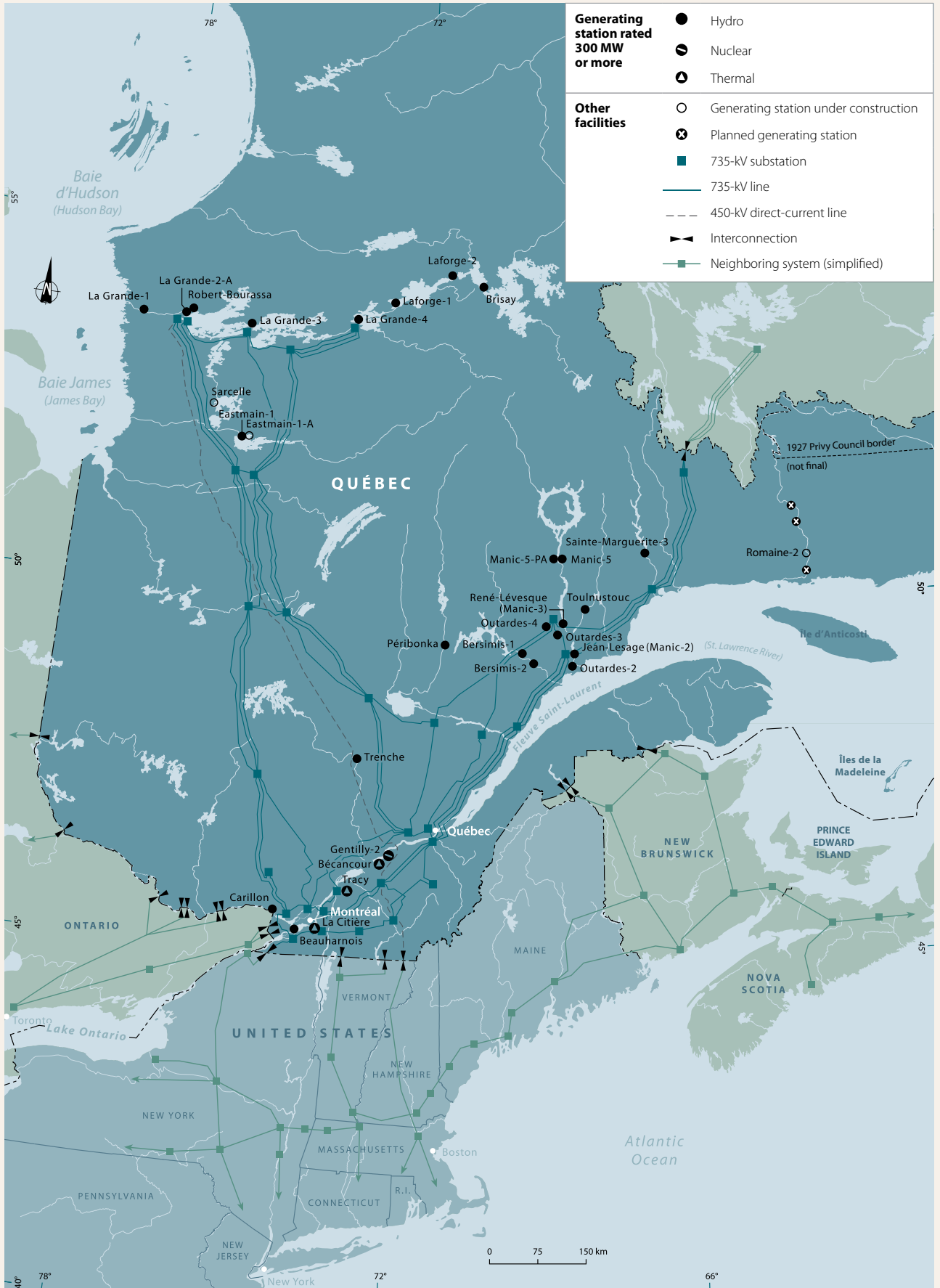
## Transmission

Voltage	Lines (km)	Substations (number)
765 and 735 kV	11,422	38
450 kV DC	1,218	2
315 kV	5,254	64
230 kV	3,120	52
161 kV	2,026	41
120 kV	6,757	216
69 kV or less	3,656	101
<b>Total</b>	<b>33,453</b>	<b>514</b>

## Distribution

Voltage	Lines (km)
34 kV	716
25 kV	105,927
12 kV	5,107
4 kV or less	339
<b>Total</b>	<b>112,089</b>

# MAJOR FACILITIES



# OTHER INFORMATION

## TO CONTACT US

### HYDRO-QUÉBEC

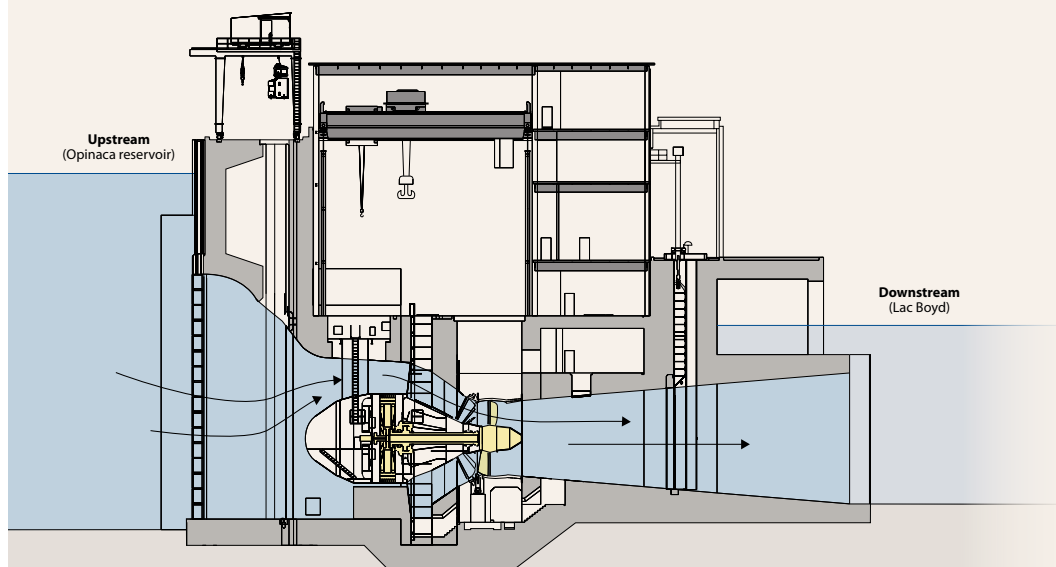
75, boulevard René-Lévesque Ouest  
20<sup>e</sup> étage  
Montréal (Québec) H2Z 1A4  
CANADA  
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### INVESTOR RELATIONS

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## UNITS OF MEASURE

<b>¢/kWh</b>	cents (\$0.01) per kilowatthour
<b>\$M</b>	millions of dollars
<b>\$B</b>	billions of dollars
<b>V</b>	volt (a unit for measuring voltage)
<b>kV</b>	kilovolt (one thousand volts)
<b>W</b>	watt (a unit for measuring power)
<b>kW</b>	kilowatt (one thousand watts)
<b>MW</b>	megawatt (one million watts)
<b>GW</b>	gigawatt (one million kilowatts)
<b>Wh</b>	watthour (a unit for measuring electric energy)
<b>kWh</b>	kilowatthour (one thousand watthours)
<b>MWh</b>	megawatthour (one million watthours)
<b>GWh</b>	gigawatthour (one million kilowatthours)
<b>TWh</b>	terawatthour (one billion kilowatthours)
<b>km</b>	kilometre
<b>MBtu</b>	million Btu (British thermal units)
<b>t</b>	tonne (metric ton)
<b>t CO<sub>2</sub> eq.</b>	tonnes of CO <sub>2</sub> equivalent



### Cross-section of Sarcelle powerhouse

*Sarcelle powerhouse will be equipped with bulb-type units. Such generating units have a turbine with a horizontal axis driving a generator in a watertight enclosure shaped like a bulb. Unlike other types of turbine-generators, the entire unit is submerged in the current that drives the turbine. Suited to configurations with a low head, large drawdown and high flow, bulb-type units achieve greater efficiency since there is no need for a scroll case and the water continues to flow horizontally.*



Hydro-Québec wishes to thank all the employees and suppliers whose photos appear in this Annual Report.

The following publications may be obtained from our Web site [www.hydroquebec.com](http://www.hydroquebec.com) or by calling 1 800 ENERGIE (363-7443):  
*Annual Report 2010* (this document)  
*Financial Profile 2010–2011*



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