Hydro Québec

L'herbier by Monique Mongeau

Hydro-Québec is proud to count *L'herbier* among the works in its art collection. A sincere tribute to nature, this series of works (six cherrywood panels measuring 38 cm by 56 cm, oil and wax) was made in 2002 by Montréal artist Monique Mongeau, who uses a highly contemporary visual language to explore philosophical and ecological concerns.

As a forward-looking company, Hydro-Québec incorporated the concept of sustainable development into its operations 15 years ago. We regard sustainable development as a long-term commitment that combines environmental protection, social equity and economic efficiency, in line with our vision and values.

Calypso bulbosa var americana (414)

Pterospera andromedea (421)

Elaeagnus commutata (417)

Pellaea atropurpurea (413)

Polystichum lonchitis (415)

Cypripedium reginae (419)

Message from the Chairman of the Board and the President and Chief Executive Officer

We are proud to present Hydro-Québec's *Sustainability Report 2003*. This year's triple-bottom-line report draws much of its inspiration from our desire to demonstrate, to our customers and to the people of Québec, our commitment to sustainable development.

For the third straight year, the information in the Report, the data collection process and the scope of the subjects covered follow the international guidelines of the Global Reporting Initiative. These standards are among the highest in the world and stem from an initiative supported by the United Nations Environment Program and numerous stakeholders.

The Report first covers the sustainable development principles espoused by the company, illustrated by two concrete cases: the Toulnustouc project, now being built, and the Saint-Maurice hydroelectric developments, which have been in operation for several decades. It then presents our achievements in the three spheres of sustainable development.

First, the environment must be treated as part of our collective heritage, a resource for which we have the responsibility of stewardship because it belongs to all. Readers will see this principle reflected in our Report. Second, our contribution to social development is presented in terms of the many means of communication set up to incorporate the concerns of customers, employees, investors and communities into the decisions made. Third, our involvement in Québec's economy is explained not only with the traditional economic indicators but also, in a new approach, on the basis of factors that enhance the company's overall value and the vitality of Québec society.

If Hydro-Québec's achievements benefit the environment, society and the economy, it is largely because of our employees, who deserve our thanks and congratulations. The results presented in the *Sustainability Report 2003* reflect their performance and their will to preserve the future by *Taking Action for Tomorrow*, every day.

We hope that this Report will be an inspiration for all our readers.

André Bourbeau
Chairman of the Board

André Caillé
President and Chief Executive Officer

Hydro-Québec operates eight generating stations on the Saint-Maurice River, working with local communities to stimulate recreation and tourism on the river.

Opposite: La Gabelle generating station.
Below: Mauricie international canoe race.

More than 250 partners in the Mauricie region

ENSURING THAT FUTURE GENERATIONS CAN MEET THEIR NEEDS

Corporate Profile

Hydro-Québec is one of the largest electricity companies and a major producer of green power in North America. About 97% of the power it generates is hydroelectric. Hydro-Québec generates, transmits and distributes almost all the electricity consumed in Québec, using facilities located throughout the province's 1,667,900 km^2. Its power system is one of the most extensive in North America, with 32,539 km of transmission lines and 106,568 km of distribution lines, 9% of which are underground. Its generating fleet has a total installed capacity of 33,616 MW and produces mainly hydroelectricity. The company's revenue for 2003 totaled $11.4 billion.

Hydro-Québec has separated its core operations into six autonomous divisions:

- Hydro-Québec Production
- Hydro-Québec TransÉnergie
- Hydro-Québec Distribution
- Hydro-Québec Équipement
- Hydro-Québec Technologie et développement industriel
- Hydro-Québec Pétrole et gaz

The divisions are supported by corporate activities, which comprise financial services, human resources and corporate affairs, including environment, and other activities that come under the Shared Services Centre, such as procurement and information technology.

Mission

Hydro-Québec's core mission is to supply Quebecers with electricity, under a social pact established in 1963. Its sole shareholder is the Québec government. The company is headquartered in Montréal.

Hydro-Québec at a Glance

Category	2001	2002	2003
Total installed capacity (MW)[a]	32,654	32,661	33,616
52 hydroelectric generating stations	30,386	30,392	31,347
1 nuclear generating station	675	675	675
28 thermal generating stations	1,591	1,592	1,592
1 wind farm	2	2	2
Total sales (TWh)	195	213	183
Sales outside Québec (TWh)	43	55	16
Revenue from sales in Québec ($M)	7,803	8,112	8,578
Revenue from sales outside Québec ($M)	3,120	3,507	1,382
Sales ($M)	12,563	13,001	11,425
Transmission system (km)	32,273	32,314	32,539
Distribution system (km)[b]	105,352	105,871	106,568
Customer accounts in Québec	3,557,291	3,596,542	3,644,463
Permanent workforce as at December 31	17,679	18,025	18,317
Temporary workforce (annual average)	3,545	3,632	3,596
Women in the workforce (%)	28.3	28.5	28.9

[a] Hydro-Québec also has access to most of the output from Churchill Falls generating station in Labrador, which has a rated capacity of 5,428 MW, and all the output from the Matane and Cap-Chat wind farms, consisting of 133 wind turbines with a total installed capacity of 100 MW.

[b] Including off-grid systems but excluding private systems, lines under construction and the 44-kV transmission system.

Embracing Sustainable Development

Hydro-Québec adhered to the concept of sustainable development in 1989, in response to the report of the World Commission on Environment and Development (Brundtland Commission, 1987). Our approach is based on the three pillars of the Johannesburg Declaration on Sustainable Development (2002): economic development, social development and environmental protection.

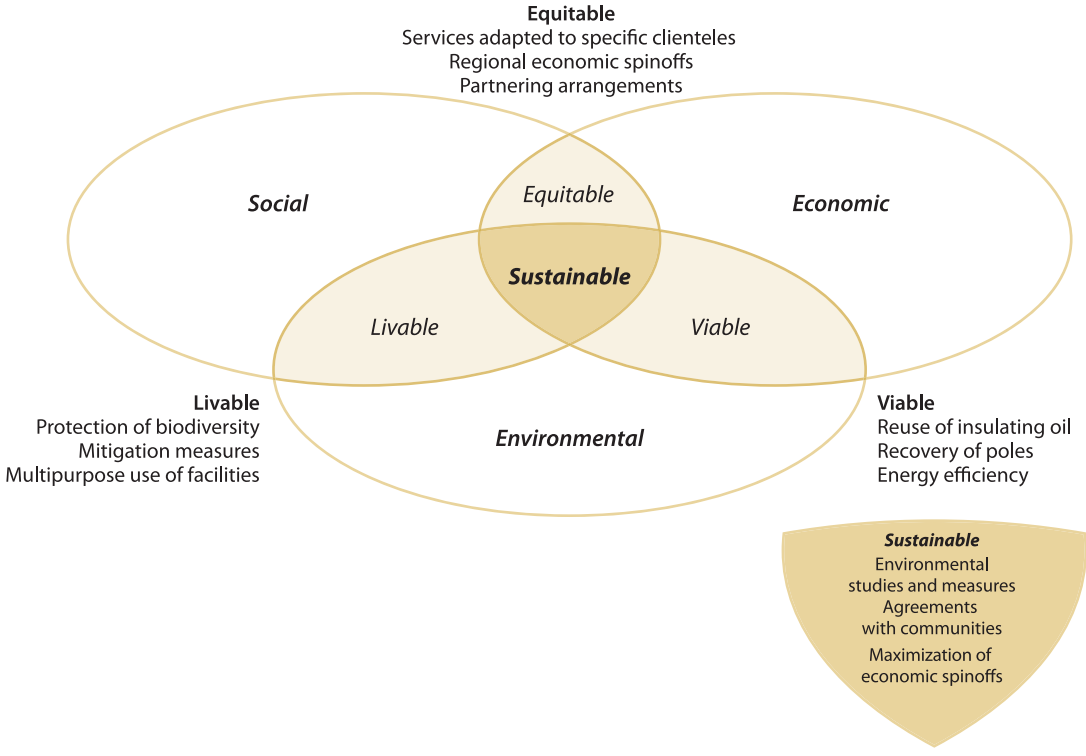
Our mission, our values and the principles in our policies and guidelines reflect our current approach to sustainable development. Our six fundamental values are customer satisfaction, a "business first" approach, respect for employees, quality improvement, respect for the environment in cooperation with local communities, and safeguarding the future.

Vision

Become a world leader in energy by developing our expertise for the benefit of customers, employees and our shareholder, and by working with partners in business ventures.

Opposite: A tributary of the future Eastmain 1 reservoir, which offers good potential for building fish spawning grounds.

Applying the Sustainable Development Concept



Managing Sustainable Development

Means and Resources

We use various means to manage sustainable development:

- The Board of Directors mandates the Environment and Corporate Social Responsibility Committee to advise it on sustainable development.
- More than 250 environmental specialists across Québec support the company's efforts.
- About 60 people handle ongoing relations with communities in all regions of Québec. A team of a dozen people also works with Aboriginal communities affected by the company's projects and operations.
- We have set up environmental management systems that include environmental objectives and ensure rigorous management.

Bicycle bridge over the Rivière du Poste in Sept-Îles. Hydro-Québec contributed to this feature through its Integrated Enhancement Program.

Corporate Ethics

Hydro-Québec has a code of ethics and rules of professional conduct for directors, executives and controllers, as well as a code of conduct for employees. Application of these codes is monitored by various control mechanisms. All new employees undertake in writing to respect the company's rules and values. Every year, ethics instruction is given to about 150 new managers who take a course on administration at Hydro-Québec. The Ethics and Corporate Governance Committee, made up of Board members, reviews the cases submitted to it. A report is made to the Board of Directors each year.

Hydro-Québec has created 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 company consequently adopted standards of conduct regarding the unbundling of its transmission, generation and wholesale merchant operations in 1997, and revised them in 2003. The *Code of Ethics on Conducting Calls for Tenders*, approved by the Régie de l'énergie (Energy Board) in 2001, governs the purchase of electricity to ensure equity in the tendering process for all electricity suppliers. Strict corporate governance rules based on the *Sarbanes-Oxley Act*, enacted in 2002 in the United States, have also been incorporated into management practices.

Access to Information

Hydro-Québec provides an array of information to the public through numerous publications as well as via its website and that of the Régie de l'énergie. It also handles many information requests made under the *Act respecting access to documents held by public bodies and the Protection of personal information*. It has adopted a personal information protection plan that is monitored by a committee set up for that purpose.

Opting for Sustainable Energy Choices

Hydro-Québec applies the principles of sustainable development during construction of its projects and operation of its facilities. Two concrete examples related to hydroelectricity are the Toulnustouc project and the development of the Saint-Maurice River.

Hydro-Québec received the Mérite AAPI 2003 award from the Association sur l'accès et la protection de l'information for its guide, *Access to Documents and the Protection of Personal Information: A Fair Balance*, distributed in 2002. The guide presents the broad outlines of the *Act respecting access to documents held by public bodies and the Protection of personal information* and provides practical advice on the most common situations. The guide has been distributed to all personnel and is given to new employees.

Toulnustouc Project

In 2001, Hydro-Québec began construction of a hydroelectric development on the Toulnustouc River, on the North Shore of the St. Lawrence, with commissioning scheduled for fall 2005.

The Toulnustouc project at a glance

- **Total outlay of $1 billion**
- **Regional economic spinoffs estimated at $200 million for the North Shore region**
- **An annual average of 645 employees, 70% of them local**
- **A dam 77 m high**
- **A reservoir whose area will increase from 213 km^2 to 235 km^2**
- **A 9.8-km headrace tunnel and a spillway with a capacity of 2,400 m^3/s**
- **A 526-MW generating station that will produce an annual average of 2.6 TWh**
- **A 120-km road**

Environmental studies began in 1997. Local expectations and concerns have been included in the studies as a result of public consultations, information and discussion forums, and joint-action committees consisting of local representatives and Hydro-Québec personnel. These discussions led to three agreements with the Manicouagan regional county municipality, the Betsiamites Band Council and the Manicouagan snowmobilers' association. The agreements provide variously for payment of funds, hiring targets and contract awards for local businesses. A number of environmental measures are also specified, particularly for vacationers.

Hydro-Québec always has someone at construction sites to ensure compliance with environmental protection requirements, specifically with regard to construction operations (excavation in water, installation of culverts, blasting, etc.), disposal of waste and hazardous materials, vegetation clearing, wastewater sedimentation basins, operation of sandpits, wastewater treatment and drinking-water supply systems. These tasks are carried out by personnel who work under an ISO 14001–certified environmental management system.

The Toulnustouc development is one of the largest hydropower projects currently under way in Québec.

An environmental follow-up program was initiated during construction and will continue until 2020. It will determine whether the anticipated environmental impacts actually occurred and will assess the efficacy of the mitigation and compensation measures. The main factors studied are bank erosion, water quality, riparian vegetation, fish, mercury, land animals and birds, forestry operations, vacation sites, hunting and fishing, and access to and use of the land.

Teamwork and community involvement are indispensable for effective project management, and Toulnustouc is no exception. In this spirit, Hydro-Québec has created several committees:

- For workers: the Health and Safety Committee, Labor Relations Committee and Living Conditions Committee (lodging, food, recreation, etc.)
- With the local community: the Regional Economic Spinoffs Committee
- With the Betsiamites Montagnais community: the Committee to Implement the *Pesamit Agreement (1999)*

A complete status report on the project is available on Hydro-Québec's website, including information on construction contracts, which can facilitate job searches by local workers.

Saint-Maurice Development

The harnessing of the Saint-Maurice River contributed very early on to the growth of this region, which has an economy based mainly on logging and hydropower. As the river offers significant potential to generate low-cost electricity, hydroelectric development began there in about 1900 and continued for 50 years. Access to inexpensive power quickly attracted electricity-intensive industries such as pulp and paper, aluminum and chemicals.

The end of log driving in 1995, combined with major efforts by municipalities and large companies to clean up the water, has had a profound impact on the public's perception of the Saint-Maurice. Today the local community is rediscovering the river through the green spaces created on its banks and pleasure boating, which has grown immensely in popularity. Various public and private recreational and tourist events centred on the Saint-Maurice River and its history have also been created.

Two neighboring generating stations: Grand-Mère and Rocher-de-Grand-Mère (under construction).

Hydro-Québec operates eight hydroelectric facilities along the 532 km of the Saint-Maurice, taking into account the various uses of the water and riverbanks. The changing context has prompted the company to review how it works with local communities. In recent years, in addition to refurbishing four generating stations and building Rocher-de-Grand-Mère generating station, Hydro-Québec has carried out projects to make the river more accessible for canoeing, fishing and other water sports. It has invested in recreational and tourist projects near the La Tuque, Grand-Mère, Shawinigan and La Gabelle hydroelectric developments. It has taken part in the construction of infrastructure such as lookouts, a major theme park called Cité de l'énergie, boat ramps, a road link across the river on an existing dam, and bike paths. Hydro-Québec has also financed various studies of the river's recreational and navigation potential as well as its aquatic wildlife.

The company is actively involved in four regional development forums, including the commission set up to manage development of the Saint-Maurice River basin, as well as various recreational, tourist and environmental organizations. In addition, it sponsors tourist events such as the Mauricie international canoe race.

Hydro-Québec also helps remove debris and old logs—relics of the log-driving days—from the Saint-Maurice River by lowering the water level, an operation made possible by the dams.

To ensure daily management of the generating stations, Hydro-Québec works with 254 partners, including local municipalities. It has made commitments that include maintaining the water level required for recreation and navigation despite the significant operating constraints involved. Finally, 75% of the Hydro-Québec contracts carried out in the region were awarded to local companies. In 2003, purchases of goods and services in the Mauricie region totaled $101 million.

A total of 90,830 people visited the Cité de l'énergie theme park in Shawinigan in 2003.

Studies for the Eastmain 1-A and Rupert diversion project have yielded new information on biodiversity.

Opposite: Rupert River.
Below: Boreal chorus frog observed on the site.

The boreal chorus frog: first recorded sighting in Québec

TAKING CARE OF WHAT WE BORROW

Helping to Reduce Greenhouse Gases

Climate change is a global issue. Hydro-Québec is making substantial efforts in this area. In 1997, we supported ratification of the Kyoto Protocol, and we have since been actively involved in discussions and negotiations regarding implementation of the *Climate Change Plan for Canada* with the federal government, the Québec government and the Canadian Electricity Association. In February 2003, we submitted a brief to the Committee on Transportation and the Environment of Québec's National Assembly during public hearings on implementation of the Kyoto Protocol in Québec. Hydro-Québec favors the use of renewable energies in combination with the continued development of hydroelectric potential, and one of its objectives is to ensure that hydropower is recognized in the Kyoto Protocol mechanisms.

Priority on Renewable Energy

Hydro-Québec generates primarily hydroelectricity. It also purchases electricity from private producers that mainly use renewable energy sources.

As a result of the hydroelectric developments in Québec and Labrador, Hydro-Québec has to date exported more electricity than it has imported from its neighbors. Its main customers are in New York State and New England, as well as in Ontario and New Brunswick. This trend slowed in 2003, however, as demand rose in Québec while runoff was low. The situation required continuous operation of Tracy thermal generating station during the year and led to a decrease in renewables as a proportion of total energy generated and purchased.

Each electricity purchase by Hydro-Québec may give rise to atmospheric emissions, since neighboring utilities produce most of their electricity with thermal generating stations that use coal, oil or natural gas. Conversely, Hydro-Québec's exports help avoid greenhouse gas emissions. Thus, in 2003, with 4.0 TWh of net exports, the company avoided the emission of 2,816,413 tonnes of CO_2, 10,541 tonnes of SO_2 and 9,363 tonnes of NO_x.

Main atmospheric emissions

Carbon dioxide (CO_2) is found naturally in the environment and is often erroneously considered a pollutant. Human beings and animals exhale it with each breath and plants need it to grow. Carbon dioxide is, however, considered a greenhouse gas.

Atmospheric emissions that are harmful to the environment and health include nitrogen oxides (NO_x), sulphur dioxide (SO_2), volatile organic compounds (VOCs) and particulates. These emissions, which come mainly from thermal generating stations, are considered pollutants but not greenhouse gases.

Electricity Generated and Purchased (GWh)

	2001	2002	2003
Hydropower generated by Hydro-Québec	139,594	145,401	146,913
Wind power generated by Hydro-Québec		2.6	2.3
Hydropower purchased	33,655	36,356	31,995
Biomass and waste reclamation power purchased	1,011	1,376	1,477
Wind power purchased	158	169	168
Total – Renewables	174,419	183,304	180,556
Total electricity generated	144,679	150,135	152,375
Total electricity purchased	39,864	41,356	39,466
Total electricity generated and purchased	184,543	191,491	191,841
Renewables/total electricity generated and purchased (%)	95	96	94

Comparison of Hydro-Québec's Atmospheric Emissions with the Regional Average

In comparison with the regional average calculated for the electric utilities in the six New England states, New York State, Ontario and New Brunswick and according to 2002 data, each terawatthour generated and purchased by Hydro-Québec produces:

- **8,366 t of CO_2, or 48 times less than its neighbors**
- **42 t of SO_2, or 43 times less than its neighbors**
- **24 t of NO_x, or 28 times less than its neighbors**

Transportation Initiatives

The transportation sector accounts for about a quarter of Canada's greenhouse gas emissions and almost half of Québec's. It also contributes significantly to urban smog. Hydro-Québec is increasing its efforts to improve management of employees' business travel and to encourage them to think about how they use their personal vehicles. The company continued to make all personnel aware of business travel issues by various means, including presentations and distribution of stickers for vehicles.

Greenhouse gas research

In recent years, Hydro-Québec has studied the real contribution of reservoirs to global warming. It has conducted an extensive program of research and *in situ* measurements at a cost of $7 million, in partnership with prestigious universities and other hydropower producers around the world. The findings show that, after 10 years, emissions from reservoirs are roughly equal to those from surrounding lakes.

Urban transport and the electric vehicle

Hydro-Québec is working with a number of partners to develop an electric vehicle. It is also one of 12 partners in *Branché – Mobility Reinvented!*, a project spearheaded by Montréal's Agence métropolitaine de transport. This demonstration program promotes the widespread use of electric cars and bicycles.

Air transport

In 2003, Hydro-Québec began exclusively using new Dash 8 aircraft to transport employees to the Robert-Bourassa development in northern Québec. This move has cut fuel consumption for the Dash 8 Q300 by 43%, and for the Dash 8 Q400 by 12%, in relation to the older aircraft.

Protecting Resources

Sound Management of Water Resources

The *Québec Water Policy*, adopted in 2002, identifies 33 drainage basins, 16 of particular interest to Hydro-Québec. Like the Québec government, the company advocates joint management of water bodies. It is therefore involved in several government committees, including the liaison committee on the Water Policy, which discusses such matters as interbasin management, flood management and instream flows. In addition, together with the Canadian Electricity Association, it is negotiating with Fisheries and Oceans Canada to develop a compliance framework under the *Fisheries Act* and a joint research program.

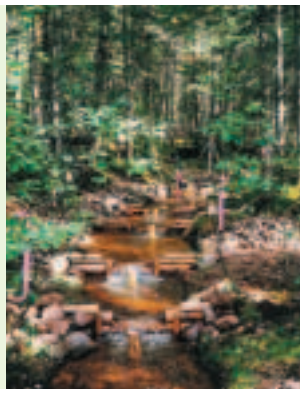
Regionally and locally, Hydro-Québec takes part in various committees and task forces related to water management, including the advisory committee on management of the Rouge River corridor. In the Mauricie region, an agreement was concluded on maintaining the water level in Cinconsine reservoir to enhance its use and protect aquatic wildlife. Ongoing communication with Hydro-Québec's partners also ensures an adequate water level and flow for recreational activities and water supply.

During the construction and rehabilitation of hydroelectric facilities, Hydro-Québec takes measures to prevent any net loss in the productive capacity of fish habitats, such as building spawning grounds and stocking water bodies with fish.

Hydro-Québec invests in research to protect aquatic environments. Here are two examples:

- **Characterization of salmon spawning grounds to determine the instream flow of the Betsiamites River**
- **Study of the impacts of a complete shutdown of Outardes-2 generating station on the spawning of rainbow smelt in the Rivière aux Outardes estuary**

Opposite: A spawning ground set up as part of the Sainte-Marguerite-3 project.



Studies of Mercury in Reservoirs

Although the creation of hydroelectric reservoirs does not add mercury to the environment, it results in the conversion and circulation of mercury already present in vegetation and flooded soils. For that reason, Hydro-Québec has carried out extensive research and a variety of measures for many years. In 2003, the main activities involved:

- monitoring of the mercury content of fish in Lac-Robertson reservoir
- a study of the river otter's use of reservoirs and modified-flow rivers in relation to fish mercury levels
- research on mitigation measures designed to reduce the mercury content of fish in new reservoirs
- development of reservoir-fish consumption guides for the public

Treatment of Soil and Environmental Incidents

To minimize problems associated with soil contamination, the company takes measures to determine the environmental history of its properties and assess their degree of contamination. It then carries out decontamination work as necessary. In 2003, some 18 sites were decontaminated (treatment or disposal of soil and decontamination of groundwater). The total cost of the work in progress or completed during the year is estimated at more than $5.1 million.

Hydro-Québec has mechanisms for responding effectively to spills of contaminants. In 2003, 436 spills occurred and were reported to the appropriate authorities. The company responded to or reported 70% of the spills within less than 12 hours. Insulating oil, which is used in some equipment such as transformers, accounted for 80% of the total volume spilled.

Effective Vegetation Control

To ensure the reliability of its system and the safety of its workers and the public, Hydro-Québec must control vegetation in transmission and distribution rights-of-way, in switchyards and on dikes and dams. The company applies integrated vegetation management, which is based on using the right method, in the right place, at the right time.

Pesticides are used only where absolutely necessary and if they present little risk to the environment. Hydro-Québec also strives to reduce pesticide use in lawn maintenance and landscaping. It works to find treatment methods that are more effective and cause less pollution.

Using a brush cutter to clear vegetation in a transmission line right-of-way.

2003 Statistics on Vegetation Control

- **77% of vegetation control in 17,099 hectares of transmission line rights-of-way used mechanical methods while only 23% used herbicides.**
- **53% of the work was carried out manually or mechanically on dikes and dams.**
- **21,955 km of overhead distribution lines underwent mechanical vegetation control: maintenance clearing, pruning and felling of trees that created hazards for the lines.**
- **86% of the 1,026 customers surveyed said they were satisfied with vegetation control on the distribution system.**

A Few Innovations

- **Development and testing of a combined technique using cutting and chemicals for maintenance in switchyards and transmission line rights-of-way, particularly in the Lower St. Lawrence and Gaspé regions.**
- **Use of a special technique to minimize clearing and cutting of tree roots likely to be affected by undergrounding of the distribution system in Trois-Rivières.**
- **Testing of a new bio-herbicide, *Touche Nature II*, made of extracts of beet juice, molasses and soy, to maintain lawns at administrative buildings.**
- **Testing in switchyards of the *Aquacide* process, which uses very hot water.**

Reduction at Source

In 2003, Hydro-Québec developed its Residual Materials Management Plan for 2003–2008. The plan covers some 237 facilities owned or leased by the company and affects more than 18,000 employees. Although more than 70% of the residual materials produced by the company are already salvaged from disposal, the plan should enable Hydro-Québec to improve that result and achieve the objectives in the Québec Residual Materials Management Policy. Communication with customers via the Internet is seeing sustained growth and has reduced the company's use of paper.

Recovery of Hot Water Tanks

HydroSolution, a Hydro-Québec subsidiary, introduced a program to recover metals from the old water heaters it replaces. Design requirements were developed for suppliers of water heaters to ensure that the appliances have superior durability.

Materials Recovered in 2003

- **35,982 residential customers had signed up for the online billing and payment program as at October 31, 2003, with the result that 640,000 bills a year do not have to be printed and mailed.**
- **620 tonnes of paper and paperboard were recovered in 2003, up from 589 tonnes in 2002.**
- **194.2 tonnes of power-line hardware were recovered, versus 99 tonnes in 2000.**
- **12,130 wood poles, or 98.4% of those removed from the system, were recovered.**
- **16,216 wood pallets were recovered.**
- **4,666,729 litres of insulating mineral oil were regenerated and reused in equipment or sold to suppliers, bringing the reuse rate to 95.3%.**
- **New oil purchases totaled 40,609 litres, down 66% from 119,310 litres in 2002.**
- **77% of residual hazardous materials were reclaimed, namely 9,020 of the 11,741 tonnes treated during the year.**

Investing in the Energy Efficiency of Hydro-Québec's Facilities

Hydro-Québec uses energy efficiency measures for facility operation as well as design and maintenance of its administrative buildings. The improved performance of its generating facilities yielded a cumulative productivity gain of 4.2 TWh from 1990 to 2003. In addition, we will soon replace the turbine runners at Robert-Bourassa generating station with more efficient, high-performance models. This project will increase generating capacity by almost 100 MW with the same amount of water and without changing the flow at the station.

In administrative buildings, energy performance has improved by 17.7% in relation to 1991. Still, energy consumption in 2003 was up 10% from the previous year, mainly because of the increase in hours worked and variable work schedules. Overall, the improved energy performance represented savings of $2.8 million in 2003, which includes only the buildings that were monitored.

The Shared Services Centre celebrates its ISO 14001 registration.

Practising Rigorous Environmental Management

Continued EMS Implementation

Implementation of environmental management systems (EMSs) at Hydro-Québec, which began in 1997, continued in 2003. At year-end, 81% of the targeted employees were covered by an ISO 14001–certified EMS, or three times as many as in 2000.

A great deal of effort was made to maintain and optimize the EMSs in place. The year's highlights include a single registration for the company's procurement and administrative services unit. This registration is the result of the merger and harmonization of the existing EMSs and the reorganization of activities in 2002. Moreover, implementation of an EMS began for the entire Hydro-Québec Distribution division, so as to obtain a single registration certificate in the near future.

Employee Awareness

Hydro-Québec takes many initiatives each year to make its employees more aware of the environment. In 2003, more than 1,000 people took part in various awareness activities. As well, the company marks Environment Month every year by organizing a range of in-house activities.

Preserving the Diversity of Species and Habitats

Hydro-Québec makes sustained efforts to preserve the biological diversity of the areas affected by its operations, notably by maintaining a high level of biological productivity and by protecting species.

In-Depth Knowledge of Resources and Ecosystems

The inventories conducted in the James Bay territory for the Eastmain-1-A project and the Rupert diversion have provided new knowledge of the biodiversity of the region. For example, they confirmed nesting of the marbled godwit in Québec and the most northerly nesting of the long-eared owl; the presence of the pigmy shrew and the southern bog lemming, two species likely to be designated threatened or vulnerable; and Québec's first recorded sighting of the boreal chorus frog.

In southern Québec, a study of biodiversity in power line rights-of-way was done in deciduous forests from 2001 to 2003. It showed the presence of 350 plant species, 81 bird species, 9 species of small mammals and 15 species of amphibians and reptiles.

A bald eagle nested and hatched two eaglets on a platform installed by Hydro-Québec downstream from Brisay generating station in 2003. The bald eagle has been designated a vulnerable species in Québec.

Fondation Hydro-Québec pour l'environnement – 2003 Contributions

- **Financial support totaling $1 million for 10 environmental projects**
- **Protection of flora and fauna: six threatened or vulnerable species and nine species likely to be so designated**
- **Contribution to the reintroduction of striped bass, a fish species that had disappeared from the St. Lawrence River in the 20th century**
- **Contribution to enlargement of the private network of protected areas with the acquisition and addition of about 1,330 hectares, including 1,190 hectares of wetlands**
- **Enhancement and restoration of the Blanche and Aux Pommes rivers in the Québec City region.**

Improving Quality of Life and Landscape

Undergrounding of Distribution Systems

In 2003, Hydro-Québec continued its program of undergrounding distribution lines. For part one of the program, designed to enhance new residential neighborhoods, it began analyzing its undergrounding practices to find ways of reducing customer costs. This factor currently limits the number of underground service loops. In 2003, 3,027 underground hookups were made, a number that fell short of the year's target of 3,600.

As for part two of the program, aimed at public thoroughfares, nine projects have been completed since 2001, including five in 2003: two in Québec City (boroughs of Sainte-Foy–Sillery and Laurentien), two in Longueuil (Borough of Boucherville) and one in Port-Cartier.

Twenty-two projects have been authorized under the government's undergrounding program for heritage, cultural and tourism sites, in which Hydro-Québec is the main partner. Five have been carried out since 2001, including three in 2003: Grand-Métis (Reford Gardens in Métis), Saint-Antoine-de-Tilly (De Tilly Street) and Tadoussac (Bord-de-l'Eau Street). The other projects will be completed by 2006.

Protection of Archaeological Heritage

Hydro-Québec continues to protect and enhance heritage sites. Archaeological digs in Trois-Rivières in the course of undergrounding the distribution grid made it possible to protect a rich archaeological heritage. Opposite: The remains of the outer wall of a house used by Governor Claude de Ramezay in Trois-Rivières, dating from the early 1700s, were discovered.

Integration into the Landscape

Every year, Hydro-Québec invests in landscape research. In 2003, for example, an environmental follow-up study, using a georeferenced video of the landscape and on-site interviews to measure drivers' perceptions, was done to assess the real impact of the 735-kV Des Cantons–Hertel line on the landscape and land use.

Hydro-Québec promotes access to its property for secondary uses, with due regard for safety as well as the operating requirements of its facilities. In partnership with the Corporation Récré-eau des Quinze and the Témiscamingue Development Corporation, it contributed to recreation and tourism development in the area between Rapides-des-Quinze and Première-Chute generating stations.

Hydro-Québec works to prevent usage conflicts between the operation of its facilities and the various uses of the land. It began consulting the James Bay Eeyou Corporation regarding snow removal and maintenance for James Bay roads, an initiative that takes into account the Crees' need to access their spring hunting grounds. It also carried out awareness activities on such matters as the safe use of rights-of-way by snowmobilers and the use of certain access roads such as the one leading to Chamouchouane substation. As well, it helped improve local quality of life by constructing sound barriers around its transformers at Jeanne-d'Arc substation in Montréal and at Montérégie substation in the municipality of Sainte-Cécile-de-Milton.

Working towards Environmental Acceptability

Studies to Minimize Impacts

Starting in the planning stage, Hydro-Québec performs an environmental assessment to determine the potential environmental impacts of its projects and other work. This approach identifies measures needed to mitigate expected impacts and to enhance spinoffs.

Twenty-one major generation and transmission projects underwent an environmental assessment in 2003, including the Chute-Allard and Rapides-des-Cœurs development projects, the Eastmain 1-A and Rupert diversion project, and the 315-kV Eastmain-1–Nemiscau line. The environmental assessments for two of these projects—the Péribonka development and the 120-kV Des Cèdres–Dorion line—were submitted to the government authorities in 2003.

As for distribution projects, 99% of the 13,048 projects approved underwent an internal environmental assessment in 2003, although there was no legal obligation to that effect. With this practice, Hydro-Québec aims to mitigate the negative impacts and improve the integration of its infrastructure and facilities.

Moving a beaver colony on the Eastmain-1 site in northern Québec.

Distribution Projects That Underwent an Internal Environmental Assessment (IEA)

	2001	2002	2003
Projects approved	14,700	13,323	13,048
Projects that underwent an IEA	14,112	13,190	12,917
Percentage	96	99	99

During the year, Hydro-Québec carried out an environmental assessment of the possible effects of the techniques used for offshore geophysical and seismic surveys in the Gulf of St. Lawrence. The study served to identify protected areas in the Gulf, such as parks and wetlands on Anticosti Island, and to develop appropriate environmental measures.

An information and consultation tour to visit stakeholders on the North Shore and in the Gaspé–Magdalen Islands region avoided potential conflicts between exploration operations and current land uses (hunting, fishing, snowmobiling, etc.).

Environmental Follow-Up

To check whether anticipated impacts actually occur and mitigation measures are effective, Hydro-Québec performs environmental follow-up studies on its projects and facilities. Here are a few examples from 2003:

- *Montérégie substation*
  Monitoring of noise from circuit breakers, which provided measurements showing they are not a nuisance for area residents.
- *735-kV Saint-Césaire–Hertel line*
  Monitoring of electric and magnetic fields to measure ambient field levels before the Saint-Césaire–Hertel line was commissioned in December 2003.
- *Chambly dam and Beauharnois generating station*
  Monitoring of eel migration through the fish passes at Chambly dam and Beauharnois generating station. The monitoring is necessary to quantify and optimize the operation of the fish passes.
- *Partial diversion of the Portneuf and Sault aux Cochons rivers*
  Establishment of the baseline conditions of brook trout populations in six lakes in the drainage basins of the Portneuf and Sault aux Cochons rivers; and monitoring of the efficacy of the fish pass at the outlet of Portneuf Lake for upstream migration of brook trout; monitoring of bank erosion in the modified stretches of the Rivière aux Sables, the Lionnet River and Sault aux Cochons reservoir.

Montérégie substation, part of the Montérégie loop, was commissioned in 2003.

Developing Knowledge and Sharing Environmental Expertise

Employee Competencies

To ensure its employees have the necessary environmental competencies, Hydro-Québec developed and updated several courses on the management of residual hazardous materials, hydrocarbon spills, ecological maintenance of green spaces, and legal and regulatory requirements. A total of 9,463 people received training in various areas in 2003, compared with 4,419 in 2002. EMS implementation accounted for most of the training.

Also in 2003, two self-guided training modules using new information technology were developed, one on the environmental management system and the other on internal environmental assessments related to the distribution system.

Sharing Expertise Around the World

For more than 30 years, Hydro-Québec has been contributing significantly to the development of knowledge, research and support for the environmental industry, in Québec and elsewhere. Each year, its research, new methods and technologies are written up in many scientific journals as well as publications intended for a general readership. In 2003, more than 100 such documents were published.

Hydro-Québec works with international bodies and other companies to share its expertise and improve its knowledge. Examples include the strategic environmental assessment of power generation projects (Rwanda, Burundi and Western Tanzania), organization of the annual conference of the International Association for Impact Assessment in cooperation with the World Bank and the Moroccan government (Marrakech), and involvement in activities pertaining to the e7's sustainable energy development commitments (Bhutan, Galapagos Islands, Chile, Nicaragua, Niger, Benin and Burkina Faso).

For several years, Senghor University in Alexandria, Egypt, has invited Hydro-Québec to provide environmental training.

Together with local stakeholders, Hydro-Québec is working on the planned Manicouagan–Monts-Groulx (Uapishka) Biosphere Reserve.

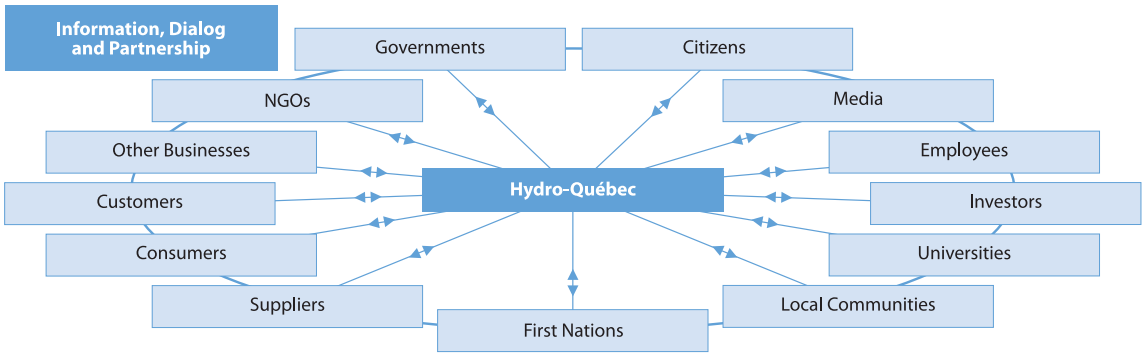
Opposite: Daniel-Johnson dam.
Below: The Groulx (or Uapishka) mountains.

The Manic-5 site: At the heart of a planned biosphere reserve

MAKING PROGRESS THROUGH COOPERATION

Maintaining Mutually Beneficial Relations

Hydro-Québec maintains relations with groups and individuals concerned with its operations.

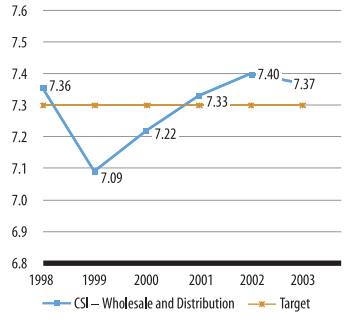


Adapting Business Practices to Meet Customer Needs

Listening to Customers

Customer satisfaction has been monitored since 1992. After decreasing in 1999, satisfaction improved until 2002, and remained stable at about 7.4 out of 10 in 2003, when it was affected by the application for a rate increase. A list of customer expectations drawn up this year in conjunction with focus groups representing the different customer categories showed that the priorities include safety of facilities, rates, reliability of service, accuracy in billing, quality of customer service, fair and equitable treatment, and respect and understanding. In terms of the environment, respect for residential customers' property during work and improved pruning methods are among the top expectations. Customer satisfaction in these areas was 7.6 out of 10 in 2003, up from 7.1 in 1999.

Customer Satisfaction Index



Tree pruning on the distribution system.

Privacy

In 2002, a business practice was adopted to protect customers' privacy and put into place new procedures for handling information requests from third parties. Personal and confidential information on Hydro-Québec customers is not disclosed to third parties without customer consent.

Economically Disadvantaged Customers

Ongoing relations with consumer groups have led to the development of services tailored to low-income customers and others with payment difficulties:

- In winter (December 1 to March 31), the company maintains service to residential customers who heat with electricity and reconnects those whose power was cut off for failure to pay.
- The company offers flexible payment terms and specific products that have helped settle almost 715,000 cases of overdue accounts totaling $691 million.
- The company has made special, very flexible payment arrangements with more than 15,000 low-income customers for amounts totaling about $14 million.
- Hydro-Québec has a special arrangement with Sun Youth for the non-interruption or quick restoration of power for humanitarian reasons.
- An awareness session on poverty and the prejudices it engenders was offered to all Collection employees in the winter of 2002–2003.
- Hydro-Québec has a *Before You Rent* info line, where customers can find out the electricity costs of an apartment before signing the lease.

Cultural Communities

In the Montréal area, where there is a substantial immigrant population, Hydro-Québec has introduced programs to meet the special needs of cultural communities. It also provides employees with training on cultural diversity. In partnership with organizations that provide orientation services to new arrivals, the company has developed better ways of communicating, particularly with unilingual customers who speak neither French nor English. For example, Hydro-Québec negotiates service agreements for newcomers in various languages through these organizations. It also supports the development of cultural communities by sponsoring social and cultural events, partnering with business associations and offering scholarships to students.

Payment Difficulties

Low-income households represent approximately 18% of Québec's population.

According to 2002 statistics, households with annual incomes under $20,000 spend 6.8% of their income on electricity (with heating), compared with an average of 2.4% for all households.

Many customers for whom collection procedures are undertaken spend from 10% to 15% of their income on current electricity consumption, in addition to having large past-due balances.

Scholarships for Young Members of Cultural Communities

Hydro-Québec awarded scholarships in conjunction with the following organizations:

- **Chinese Family Services of Greater Montreal**
- **Canadian-Italian Business and Professional Association**
- **Canadian-Lebanese Chamber of Commerce and Industry**
- **Association of Haitian Engineers and Montreal Black Business and Professional Association**
- **Greek Chamber of Commerce**

Energy Efficiency Target: 750 GWh in Savings by 2006

In November 2002, Hydro-Québec filed its 2003–2006 Energy Efficiency Plan (EEP) with the Régie de l'énergie (Energy Board). This plan targets energy savings of 750 GWh by 2006. In 2003, the Régie approved the entire EEP, which includes 16 programs intended for all customer categories. The programs for large-power customers were set in motion in fall 2003, while those for residential, commercial, institutional and small- and medium-power industrial customers were launched in early 2004.

The EEP calls for investments totaling $255 million over slightly more than three years, with $123 million coming from Hydro-Québec and $121 million from participating customers. More than $10 million is also expected from the company's main partners, the Agence d'efficacité énergétique and the federal Office of Energy Efficiency.

For the past 15 years, Hydro-Québec has supported its customers in developing and testing efficient electrical technologies, thereby generating savings of some 2.5 TWh. Here are some of the projects completed or started in 2003:

- A mechanical steam recompression unit was installed at an industrial customer's operation, resulting in an energy savings of about 10%.
- A new high-intensity infrared drying method was developed for use by large-power customers. Major energy savings, amounting to more than 20% over conventional electric or fossil-fuel-based drying methods, are expected.
- A thermal storage technology was developed for commercial and institutional use. This technology will ultimately have an impact on demand-side management and on customers' energy bills.
- Two computer tools for energy diagnoses were developed and deployed as *Energy Wise* solutions under the EEP, one for residential customers and the other for small service businesses.

ENERGY WISE

Hydro-Québec is using a new logo to demonstrate to all of its customers its commitment to energy efficiency. Manufacturers and retailers of energy saving products with whom the company has partnering arrangements are committed to using the logo. Businesses (professionals, builders and real estate developers) that promote one of the energy efficiency programs may also use the logo.

Requests, Complaints and Claims

Hydro-Québec is diligent in handling complaints and claims from its customers. In 2003, it received more than 12,200 complaints and claims, mainly from residential customers. Complaints generally concern collection, responsibility for bill payment, consumption and billing. Most claims deal with power fluctuations, outages, system maintenance and property damage.

Customers with complaints about rates or power supply conditions can appeal to the Régie de l'énergie. In 2003, 141 cases were brought before the Régie, which handed down 152 decisions on cases from 2003 and previous years. Most of the 1,164 environmental complaints and claims concerned property damage (51%) and pruning work (21%), especially on the distribution system.

Working with Communities

In all areas of Québec, the company maintains close relations with local communities, social and economic agencies and citizens' groups with a view to harmonious integration of its projects and activities.

Agreements and Partnerships

In 2003, Hydro-Québec entered into 35 agreements with communities, including partnering arrangements, agreements for the leasing or use of properties for community purposes and agreements under its Integrated Enhancement Program. Here are some examples of the subjects covered:

- Hydro-Québec participation in committees to maximize the economic spinoffs of its projects in Abitibi-Témiscamingue and Northern Québec
- A partnering arrangement with the Atelier la Flèche de Fer sheltered workshop for the sale of surplus computer equipment, enabling this non-profit organization to invest in job creation for persons with minor disabilities
- As part of the Eastmain-1 project, creation of a Regional Development Fund to be administered by the Municipality of Baie-James
- Creation of a bipartisan committee with the Haute-Côte-Nord regional county municipality to disseminate information on the environmental monitoring of facilities on the Sault aux Cochons and Portneuf rivers
- Research on the Trinity River salmon in conjunction with the Société de la faune et des parcs du Québec

Hydro-Québec Electronic Newsletter for Québec Municipalities

The company produces an electronic newsletter primarily for municipalities. Seven of Hydro-Québec's ten regional branches have adopted this method of communicating with municipal stakeholders.

Participation in Liaison Committees

In 1996 and 1999, Hydro-Québec set up standing liaison committees with the Union des producteurs agricoles (UPA), the Union des municipalités du Québec (UMQ), and the Fédération québécoise des municipalités (FQM). The results of the committees' activities in 2003 include the following:

- An agreement was reached for the implementation of the *Guide de gestion des projets de distribution souterraine*. In addition to Hydro-Québec, the UMQ and the FQM, Bell Canada, Groupe Vidéotron, Cogeco and Telus are participating in this initiative for better management of underground distribution projects.
- An HQ–UMQ–FQM cooperation agreement was ratified for the implementation of energy initiatives that have enabled municipalities to receive financial assistance under EEP programs since fall 2003. The agreement also calls for the establishment of an advisory committee on adapting energy programs for municipalities.
- A model agreement between Hydro-Québec and municipalities for the preventive maintenance of trees and shrubs was drafted. Two pilot projects are under way in the municipalities of La Malbaie and Verchères.
- A training program was established for regional land use planners on Hydro-Québec's participation in regional county municipality development plans, the company's operations and programs in different regions of Québec, and constraints relating to the operation of the power system. Training will begin in 2004.

Projects and Operations in Harmony with the Community

As in past years, Hydro-Québec worked with communities affected by new developments or facility rehabilitation projects. Various committees composed of Hydro-Québec and community representatives worked on environmental studies as well as implementing agreements, optimizing economic spinoffs and monitoring projects.

Strategic Plan for the Sustainable Development of the City of Montréal

Hydro-Québec is one of about 80 organizations that signed and endorsed the *Policy Statement by the Montréal Community on Sustainable Development*. This statement is the first step in the formulation of a strategic plan for sustainable development. The project is jointly coordinated by the City, the Conseil régional de l'environnement de Montréal and the Conseil régional de développement de l'Île de Montréal.

Community-Based Projects in Different Regions of Québec

Information and Discussion Forums

- **Mauricie: Chute-Allard and Rapides-des-Cœurs projects and draft design for the refurbishment of Gentilly-2 generating station**
- **Montréal: 120-kV Longue-Pointe–Notre-Dame underground line**
- **Northern Québec: Eastmain-1-A and Rupert diversion project**
- **Saguenay–Lac-Saint-Jean: Péribonka project**

Information and Consultation Meetings

- **Lower Saint Lawrence and Gaspé Peninsula–Magdalen Islands: Chandler line, project to refurbish the Île Verte underwater cable, and gas exploration projects**
- **North Shore: Romaine project (preliminary studies)**

Project Implementation Committees

- **Abitibi-Témiscamingue: Rapide-2, Rapide-7 and Rapides-des-Quinze refurbishment projects (economic spinoff and monitoring committees)**
- **North Shore: Sainte-Marguerite-3 and Toulnustouc projects, project for the partial diversion of the Sault aux Cochons and Portneuf rivers (committees and corporations to handle remedial works, salmon, environmental monitoring and economic spinoffs)**
- **Mauricie: Rocher-de-Grand-Mère, Chute-Allard and Rapides-des-Cœurs projects (committees on project implementation, regional spending, and ice-cover access monitoring)**
- **Northern Québec: Eastmain-1 projects (economic spinoff and monitoring committees)**
- **Saguenay–Lac-Saint-Jean: Péribonka project (joint economic spinoff committee)**

Through its Integrated Enhancement Program, Hydro-Québec contributes financially to initiatives that enhance the biophysical or social environment of municipalities affected by major power transmission projects. In 2003, Hydro-Québec allocated $4.6 million to this program, and funding provided under the program helped launch the following initiatives:

- A rest area and small falls were built in the Chéribourg sector of the municipality of Orford township as part of the 120-kV Sherbrooke–Magog line project.
- Recycling bins were purchased and distributed in Sainte-Brigide-d'Iberville as part of the 735-kV Des Cantons–Hertel line project.
- The Saules path in Beckett woods was landscaped as part of the 120-kV Sherbrooke–Saint-François line project.

Rapides-des-Quinze generating station is undergoing a major refurbishment, at a cost of $119 million.

Integrated Enhancement Program Initiatives and Funding

	Number	Hydro-Québec Funding ($M)	Counterpart Funding ($M)	Total Cost ($M)
Initiatives in 2003	18	4.5	88.0	4.6
Initiatives since 1985	895	85.6	132.5	218.1

Ongoing Relations with Communities

The company leads task forces and joint-action committees in all administrative regions of Québec, and participates in various community committees that deal with issues of local or regional interest. Some examples:

- **Abitibi-Témiscamingue: Hydro-Québec participated in the committee for the integrated management of the resources of the La Vérendrye wildlife reserve (forest, wildlife, recreational activities).**
- **Québec City: The company participated in the committee for the revitalization of the Parc de la Chute-Montmorency and in the Saint-Ferréol-les-Neiges development corporation (CODEF).**
- **Chaudière-Appalaches: Hydro-Québec played an active role on the regional cooperation and development board.**
- **North Shore: The company participated in the Manicouagan partnership committee comprising the regional county municipality, the local development board, the Chamber of Commerce and Hydro-Québec.**
- **The company took part in different Regional Administrative Conferences including those in the Eastern Townships, Montérégie, Abitibi-Témiscamingue, Northern Québec, Lanaudière and North Shore regions.**

Working with Investors and Managing Business Risk

To create a climate of trust and ongoing dialog with the major international financial markets, Hydro-Québec established an investor relations program in the late 1980s, one of the first of its kind in Canada.

The company organizes meetings with portfolio managers to discuss its financial results and any issues that may affect its development. It also maintains ongoing relations with U.S. and Canadian rating agencies. The Québec government and Hydro-Québec are rated each year on the quality of their credit. Investors who purchase the company's bonds want to be sure that the interest on their investments will be paid in a timely manner.

CODEF runs a nature and electricity interpretation centre on the site of the Sept-Chutes development. Opposite: Sept-Chutes dam.

Credit Ratings

	2002	2003
U.S. Agencies		
Moody's	A 1 Positive	A 1 Positive
Fitch Ratings	AA- Stable	AA- Stable
Standard & Poor's	A+ Stable	A+ Stable
Canadian Agency		
DBRS	A Stable	A Positive

In 1998, Hydro-Québec started to include integrated risk management as part of its business planning exercise. An analysis of risk and ways of managing it are submitted each year to the Board of Directors. The potential impact of the main risks affecting net income is also assessed. Among the risks that are continually monitored are runoff, temperature, forecast demand and financial risk.

Promoting the Development of Aboriginal Communities

The value of contracts awarded and purchases made from Aboriginal organizations, contractors and independent workers in 2003 totaled more than $185 million. Hydro-Québec also continued its efforts to encourage the participation of Aboriginal communities in its studies and projects.

- Toulnustouc project: 230 Innu from Betsiamites have worked on the project since 2001 (North Shore region).
- Eastmain-1 project: More than 300 Crees have worked on the site since the project began in 2002. Under the *Nadoshtin Agreement* (2002), a Cree advisor offers on-site support for the training and hiring of Crees, and contracts are awarded to Cree businesses (northern Québec region).
- Eastmain-1-A and Rupert diversion project: Through the work group set up under the *Boumhounan Agreement* (2002), Crees are helping to design and conduct the environmental and geotechnical studies and to analyze the results (northern Québec region).
- Project for the partial diversion of the Manouane River: Innu businesses and workers from Mashteuiatsh and Betsiamites are participating in the project (Saguenay–Lac-Saint-Jean region).
- Péribonka project: Hydro-Québec and the Innu community of Mashteuiatsh signed the *Manitukapatakan Agreement*, which facilitates the hiring of Aboriginal workers and the awarding of local contracts and provides for a development fund (Saguenay–Lac-Saint-Jean region).

Construction of the temporary diversion tunnel on the site of Eastmain-1.

Hydro-Québec offers awareness sessions to its employees so they will better understand the reality of Aboriginal nations. In 2003, more than 200 employees attended the sessions.

Hydro-Québec also works together with Aboriginal communities as part of its daily operations. For example, the *Agreement concerning employment for the Crees* calls for the hiring, by March 2017, of 150 Crees, who will hold permanent positions at James Bay. To achieve this, a dozen Cree students began training in Rouyn-Noranda with a view to obtaining a vocational diploma in automated systems electromechanics. In addition, following the *Agreement on the Decommissioning of Hydro-Québec/SEBJ "work sites" or installations no longer in service*, Hydro-Québec has continued the cleanup of exploration and work sites in the James Bay territory, in cooperation with the Crees.

Every year since 1996, Hydro-Québec has awarded scholarships to Aboriginal college and university students for outstanding scholastic achievement. This year, it helped six students from three Aboriginal nations. Two Huron-Wendat university students were offered 12-week internships in the field of human resources, and awards for excellence were given to four college students. The company also provided $122,000 in sponsorships to Aboriginal communities or events, such as the First Peoples' Festival in Montréal and the Mishtapew Awards of Excellence Gala in Québec City.

Supporting Humanitarian and Cultural Organizations

Hydro-Québec supports numerous causes through its donations and sponsorships. Donations are earmarked for humanitarian aid, education and health, while sponsorships support science and culture, social and economic programs, the environment and sustainable development, and amateur sport. New sponsorships include the Centre for Conservation of Boreal Biodiversity (Saguenay–Lac-Saint-Jean region) and the Musiqu'en Nous festival (Outaouais region).

Hydro-Québec ranks first in the province in terms of corporate donations to the Centraide/United Way campaign. In 2003, contributions from employees and the company totaled $5 million, 9% more than in 2002. Opposite: Father Emmett Johns, the founder of Le bon dieu dans la rue, an organization funded by Hydro-Québec.

Donations and Sponsorships ($M)

	2001	2002	2003
Donations	5.4	5.1	6.8
Sponsorships	7.4	9.0	11.7
Total	12.8	14.1	18.5

Hydro-Québec encourages its employees to do volunteer work through its employee social involvement program. Employees who volunteer with non-profit organizations can apply for a financial contribution of up to $1,000 for the organizations they support. In 2003, over 180 employees obtained contributions totaling nearly $167,000.

Ensuring Public Health and Safety

Commitment to Public Health

In cooperation with associations and government agencies concerned with public health, Hydro-Québec helps assess and prevent public health hazards that may be caused by its operations and facilities. Each year, it participates in the development of practices to better identify and manage potential hazards. It also sponsors a research chair for analyzing toxicological risks to human health at the Université de Montréal.

Promoting Public Safety

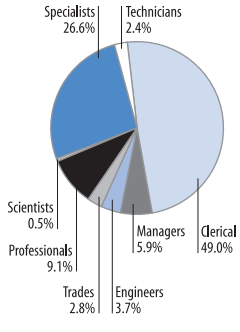
Hydro-Québec designs, manages and maintains its facilities with a view to eliminating risks of physical harm to its employees and the general public.

In 2003, five deaths in Québec were caused by electrocution; three involved Hydro-Québec facilities and two, low-voltage equipment belonging to customers. Some 25 other accidents occurred as well. Tree pruning operations and accidental vehicle contact with live conductors were the main causes.

To prevent accidents, Hydro-Québec continued its awareness program on the safe use of electricity. Initiatives in 2003 included the following:

- The company participated in a work committee with the province's Department of Public Security on the actions of Hydro-Québec teams during fires.
- Awareness programs on the safe use of electricity for elementary school students and preschoolers aged three to five were more widely disseminated.

Women in the Workforce – 2003



Overall, women in the workforce are concentrated mainly in the Clerical, Specialist and Professional job groups, while they are much less well represented among Scientists, Technicians, Trades, Managers and Engineers.

A land surveyor at work on the Toulnustouc jobsite.

- Hydro-Québec participated in events for the general public, including the Home Show in Montréal and Québec City.
- The company took part in a task force set up with Québec's occupational health and safety board (CSST) on arboriculture and delivery personnel.

A series of meetings was held with representatives of municipalities and regional county municipalities located near Hydro-Québec facilities to inform them about emergency plans as provided for in the *Dam Safety Act*.

Ensuring a Stimulating and Respectful Work Environment

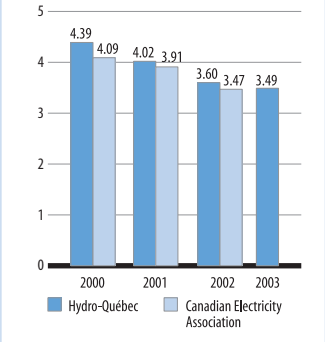
Employee Health and Safety

Hydro-Québec develops and implements approaches and measures relating to health and safety issues, such as the prevention of work-related accidents and mental health problems. The frequency of accidents involving lost time or medical assistance is compared each year with the average for the Canadian electrical industry. Since 2000, accidents have been on the decline at Hydro-Québec. The results are indicative of excellent performance, which has improved steadily over the past three years.

Workforce as at December 31, 2003

Permanent employees	18,317
Temporary employees (annual average)	3,596
Average age	45.3 years
Women in the worforce	28.9%

Frequency[1] – All Accidents Combined



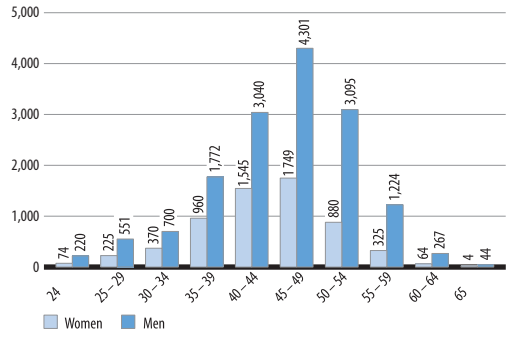
1. *(Lost Time + Medical Assistance) x 200,000 / Hours Worked*

Training the next generation: one of the major challenges to be met.

Jobs Groups – Unionized Employees

- Specialists
- Engineers and scientists
- Trades
- Technicians and dispatchers
- Clerical

Employee Age Pyramid



Hydro-Québec is not immune to contemporary workplace trends or to the increase in mental health problems. The year's efforts focused on understanding the factors that promote or hinder job attendance, improving management information, conducting pilot projects to improve attendance, and instituting winning practices and a multifaceted employee assistance program.

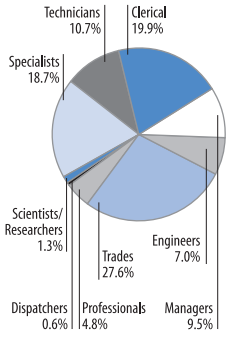
Pay Equity

To comply with the *Pay Equity Act*, eight of the ten pay equity programs set up in 2002 were completed in 2003. Five of these programs did not have any predominantly female job categories and did not require wage adjustments. Two others, concerning employees governed by the *Répertoire des conditions de travail de chantiers* (standard jobsite working conditions) and non-unionized workers, required salary adjustments. These adjustments represent respectively 1.78% and 0.72% of the total payroll for these groups. No discrimination was found in the last program to be completed, for engineers. The programs affecting clerical workers and unionized specialists are now being assessed.

Employment Equity

In accordance with the *Act respecting equal access to employment in public bodies*, Hydro-Québec analyzed its workforce based on a survey of all employees, conducted in 2002. Of its 21,000 employees, almost 15,000 took part in the survey. The employee analysis report was submitted to the Québec commission responsible for administering the Act. The commission is expected to announce its recommendations in fall 2004.

Breakdown of Permanent Employees by Job Group in 2003



Concrete workers building Toulnustouc generating station.

Results of the Employee Survey on Equal Access to Employment (15,000 respondents)

Employee Category	Number
First Nations	126
Visible minorities	327
Ethnic minorities	203
Women	6,196
Persons with disabilities	419

Working with Responsible Suppliers

Hydro-Québec insists that its suppliers of goods and services meet environmental and social requirements equivalent to those that it sets for itself. Special environmental clauses are therefore inserted in suppliers' contractual documents according to the specific nature and terms of each contract.

Hydro-Québec makes its suppliers aware of environmental requirements and the importance of complying with them. For example, key environmental requirements are explained to contractors at pre-startup briefings, and there are periodic inspections over the course of a project to ensure compliance with these requirements.

Collaborating with the Scientific and Educational Community

The company contributes in various ways to training and education in Québec. Among other things, it supports 15 active research chairs in Québec universities with funding of almost $1.4 million per year. It also contributed to a new Hydro-Québec institute for environment, development and society at Université Laval. Between 2003 and 2014, the company will donate a total of $12 million so that scholarships for excellence can be awarded, as well.

Recognition of Employee Efforts to Improve the Environment

A new award called *Mérite environnemental* recognizes employees' environmental achievements, both within Hydro-Québec and outside the company, in the following categories: from ideas to action, environmental projects and contribution to the community.

The company received 111 nominations. Fifteen employees were recognized for their outstanding work, and three were crowned grand prize winners.

Financial Contributions to University Chairs 2001–2003 ($'000)

University Chair	2001	2002	2003
Université Laval	195	195	195
Université du Québec and constituents	385	420	420
Université de Montréal and affiliated institutions	875	1,075	725
Université de Sherbrooke	72	92	50
Total	1,527	1,782	1,390

Hydro-Québec has offered paid internships to university students for a number of years. In 2003, 220 students, including 37 in environmental fields, were able to gain job experience by working alongside company employees.

Cooperating with Non-Government Organizations

In the course of its operations and projects, or as part of its efforts to support cultural, community, social and economic organizations, Hydro-Québec collaborates with many non-government organizations (NGOs), including the following:

- Corporate training and recovery centres to help young dropouts, including the Louis-Joseph-Papineau centre for the recovery of ring binders, in the Montréal region, and the Victoriaville centre for recycling power-line hardware, in the central Québec region.
- Club Défi in Rouyn-Noranda, an organization dedicated to consolidating and developing new businesses and creating jobs in the Abitibi-Témiscamingue region.
- Fondation Marie-Victorin, a Montréal-based organization that promotes the scientific and environmental education of young people to help them take their place in the future.
- Épopée de la Manic, a North Shore theatre company that put on a play on the building of the Manic-Outardes complex, a venture supporting Québec artists and culture.
- Opération Enfant Soleil (Mauricie region), which responds to the needs of humanitarian aid organizations.

The Louis-Joseph-Papineau Centre booth at a symposium held for Hydro-Québec environment specialists.

Partnering with Other Businesses

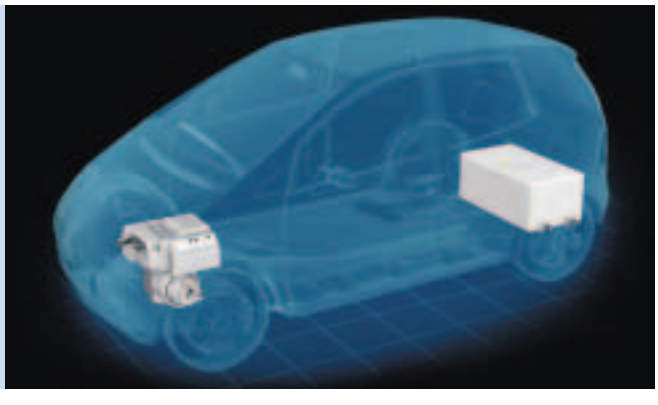
In spring 2003, Hydro-Québec and the French consortium Société de Véhicules Électriques announced that they would be working together on the development of an electric vehicle that uses Hydro-Québec technologies. The vehicle, slated for commercial delivery in 2006, will be equipped with a lithium-metal-polymer (LMP) battery produced by AVESTOR, a Hydro-Québec indirect joint venture, and a high-performance propulsion system or motor generator developed by TM4, a Hydro-Québec subsidiary.

To optimize energy use, Hydro-Québec carries out many projects at its energy technology laboratory in partnership with other companies. The ÉlectroBois program, for example, involves cooperation between Hydro-Québec and Forintek Canada Corp., Canada's national wood products research institute. Since 2001, this project, which pools the expertise of different research centres, has sought to transfer efficient electric technologies to the lumber industry to improve wood drying, among other things. The goal is to achieve better wood quality, increase productivity and make optimal use of energy.

Interacting with the Media

In 2003, in Montréal alone, an average of 1,000 inquiries were handled each month by the company's media relations officers. And that's not counting the requests processed in the other regions of Québec. How is the power system affected by a solar storm, the switch to Daylight Saving Time or the weather? How much does the company contribute to Québec's finances, to regional development and to the advancement of science? What is the current status of a project, a call for tenders or a regulatory issue? These are just some of the questions that Hydro-Québec strives to respond to with pertinent information. In emergencies, a 24-hour information service is available to the media in each region of Québec.

The electric vehicle will be equipped with the LMP battery and the TM4 motor generator, two products developed at Hydro-Québec.



The company estimates that every million dollars invested in projects creates 8.9 jobs.

Opposite: Toulnustouc jobsite.
Below: Miners building the intake.

Approximately 4,400 jobs created in 2003 in connection with a variety of projects

SHARING THE VALUE WE CREATE

Creating Value for Québec Society

Financial Results

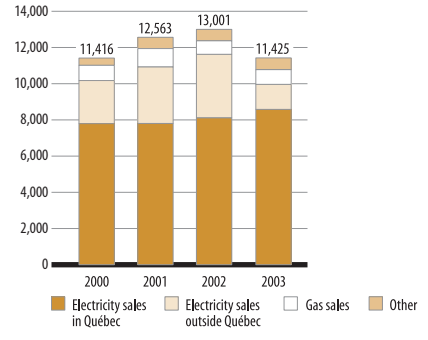
With assets of $57.7 billion, Hydro-Québec is the biggest company in the Canadian energy industry. It is therefore important to maintain its growth and improve its financial performance so that it can continue to create wealth for Quebecers. In 2003, the company posted sales of $11.4 billion and net income of $1.9 billion, $405 million more than in 2002. Its return on revenue rose 5.2% to reach 16.9% in 2003. Hydro-Québec's investments in 2003, which amounted to $3.2 billion, were among the highest in the past 10 years.

Overall, the company's financial ratios also improved. Return on equity reached 13.2%, compared with 11.0% in 2002, while interest coverage went from 1.56 to 1.66. Since the capitalization rate remains above the 25% threshold, Hydro-Québec will pay its shareholder, the Québec government, dividends of $965 million, versus $763 million in 2002. This seventh consecutive payout, the largest in its history, will bring the cumulative amount paid to its shareholder since 1998 to $3.9 billion.

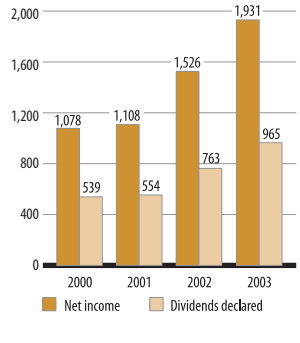
Growth in Demand

The year 2003 was marked by strong demand growth in Québec, totaling approximately 8.5 TWh, which generated additional revenues of $466 million compared with 2002. To respond to this rise in demand, the company reduced its net sales of electricity on external markets, with sales outside Québec decreasing by 38.4 TWh or $2.1 billion. Total sales amounted to $11.4 billion, or 183.4 TWh, down $1.6 billion, or 30 TWh, from 2002.

Sales ($M)



Net Income and Dividends Declared ($M)



Electricity Rates

On January 1, 2004, electricity rates rose by 3%. This increase followed a five-year rate freeze, from May 2, 1998, to December 31, 2003, which represented savings of 13.1% versus inflation. The rate hike will help the company maintain and develop its distribution facilities and meet demand growth and customer expectations. Even after the increase, Quebecers' electricity bills remain among the lowest in North America. According to data gathered in May 2003, only residential customers in Manitoba can boast slightly lower rates than those in Québec.

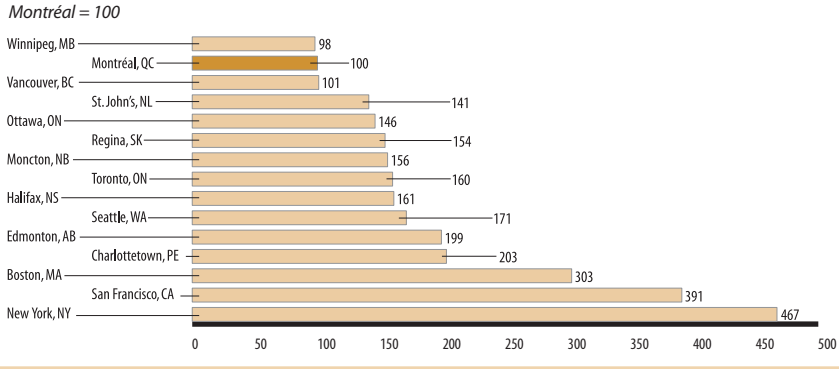
Power Project Spinoffs

Over the past few years, Hydro-Québec has started up many projects representing billions of dollars in capital spending. The company estimates that every million dollars invested creates 8.9 jobs. The table below shows the main projects now under way, the total outlay, and the spinoffs in terms of jobs in 2003.

Economic Spinoffs of Major Construction and Refurbishment Projects

Project (under way in 2003)	Administrative Region	Jobs (average number in 2003)	Total Cost for the Project Duration
Rapides-des-Quinze generating station (refurbishment)	Abitibi-Témiscamingue	85	$119 million
315-kV Toulnustouc–Micoua line (construction)	North Shore	58	$37 million
Outardes-3 generating station (refurbishment)	North Shore	85	$185 million
Sainte-Marguerite-3 project (construction)	North Shore	84	$2.5 billion
Toulnustouc project (construction)	North Shore	869	$1 billion
Rocher-de-Grand-Mère generating station (construction)	Mauricie	430	$500 million
Beauharnois generating station (refurbishment)	Montérégie	259	$1.6 billion
Montérégie loop (substation and lines) (construction)	Montérégie	1,250	$255 million
Eastmain-1 project (construction)	Northern Québec	1,000	$2.1 billion
Mercier generating station (construction)	Outaouais	22	$95 million
Manouane River diversion (construction)	Saguenay–Lac-Saint-Jean	168	$74 million
Pont-Arnaud and Chute-Garneau dams (refurbishment)	Saguenay–Lac-Saint-Jean	20	$75 million
Total		4,330	$8.6 billion

Comparative Index of Electricity Prices at May 1, 2003 – Residential Customers *



** Monthly bill (before taxes) for a consumption of 1,000 kWh.*

Proposed Suroît Gas-Fired Thermal Generating Station

In 2001, Hydro-Québec filed for approval to build an approximately 800-MW combined-cycle gas-fired thermal generating station next to the Beauharnois Canal southwest of Montréal. In January 2003, the Bureau d'audiences publiques sur l'environnement (environmental hearings board) concluded in its report that the Suroît project would:

- **contribute positively to energy development in North America**
- **boost the economy of the Beauharnois region**
- **have a limited impact on the environment, the quality of life and the safety of residents in the surrounding area**
- **substantially increase greenhouse gas emissions in Québec**

The report also emphasizes that efforts to reduce greenhouse gases should be coordinated across North America.

Hydro-Québec recognizes that the Suroît plant's greenhouse gas emissions would represent less than 3% of total emissions in Québec. In fall 2003, the company therefore proposed an improved version of the project with lower annual atmospheric emissions which was publicly announced in January 2004. This project uses the latest combined-cycle gas-turbine technology, with an efficiency of over 60%. Today, thermal generation based on natural gas is the preferred option for many power producers in northeastern North America.

A number of social and environmental groups have voiced their opposition to the project. In this context, the Régie de l'énergie received a special mandate from the Québec government to issue an opinion on the Suroît project's contribution to providing Quebecers with a secure supply of electricity. Its opinion will be handed down and made public in June 2004.

Maintaining a Solid Reputation

Promotion of Activities

The company participates in numerous industry and scientific forums in order to promote hydroelectricity, among other aims. Its noteworthy initiatives in 2003 included:

- Hydro-Québec gave presentations and signed a white paper on the role of hydroelectricity in sustainable development at the First International Summit on Sustainable Use of Water for Energy as part of the third World Water Forum.

Wind Power

In the Gaspé Peninsula–Magdalen Islands region, where wind power has become a prime niche, Hydro-Québec is committed to purchasing 1,000 MW of wind power beginning in 2004. It is estimated that every 100 MW of wind power can create up to 500 direct and indirect jobs. Opposite: The Saint-Ulric-de-Matane wind farm.

- The company helped draft guidelines for sustainable hydroelectric development for the International Hydropower Association.
- The company participated in the Hydropower Good Practices five-year research program carried out as part of the International Energy Agency's hydroelectricity protocol.
- Hydro-Québec helped organize the 21st Congress of the International Commission on Large Dams, held in Montréal, and presented a number of papers.

Public Satisfaction and Hydro-Québec's Reputation

Since 1988, Hydro-Québec has regularly measured overall public satisfaction with its projects and operations. In 2003, public satisfaction remained relatively stable at 94%. Moreover, despite a decline of 0.3 in the fourth quarter, from 7.8 to 7.5, due in large part to the application for a rate increase, Hydro-Québec managed to maintain an average public image rating of 7.7 out of 10 for the year.

In 2003, 87% of the population continued to agree with the company's growth and profitability goals, and 90% of Quebecers had great confidence in the reliability of the power system. A number of highly publicized events contributed to this result, including the fifth anniversary of the 1998 ice storm and the blackout that struck northeastern North America on August 14, 2003, which demonstrated the Hydro-Québec system's robustness and reliability.

Hydro-Québec's Public Image

Motivating Employees

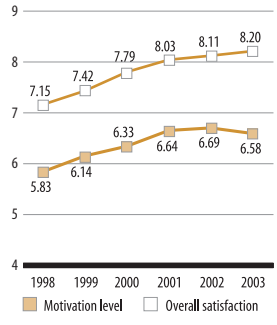
Employee Satisfaction

Since 1995, the Company has measured employee satisfaction and motivation. Overall employee satisfaction has improved since 1998, reaching 8.2 out of 10 in 2003.

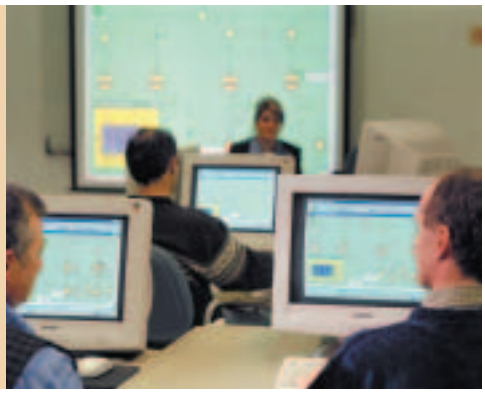
Ongoing Training and Competency Development

Each year, more than 75% of the company's employees participate in at least one training activity. In 2003, some 16,000 employees did so. Hydro-Québec invested $30.3 million during the year to support employee participation in various types of training. Employee development helps to ensure quality of customer service, develop competencies needed for the introduction of new technologies and maintain expertise. Managers undergo training as well with a view to developing a results-oriented management style that focuses on understanding the business context as well as employee motivation and empowerment.

Employee Motivation and Satisfaction



Employees in training.



Succession Management

Like most North American companies, Hydro-Québec will have to cope with the retirement of many employees in the medium and long term. In fact, between 2004 and 2008, almost 17% of its employees could leave their jobs. A possible loss of expertise, renewal of the management team and recruitment difficulties are among the challenges facing the company. To meet these challenges, a number of initiatives have been put into place:

- an analysis of regional characteristics, including employment conditions in northern Québec
- continuation of the advance-staffing program
- development and testing of various knowledge transfer strategies
- renewal of self-guided and Web-based training modules
- development of management succession action plans

Supporting Regional Economic Vitality

Hydro-Québec contributes to the development of Québec's regions by creating direct and indirect jobs for its operations, purchasing goods and services, paying taxes, and maintaining a workforce throughout the province.

In 2003, 92.7% ($2.1 billion) of the company's purchases of goods and services were from Québec-based businesses. These purchases helped support approximately 15,200 direct jobs, up 24% over 2002. Hydro-Québec's contribution to the Québec government included dividends of $965 million and taxes totaling $563 million. The company also paid almost $33 million in municipal and school taxes.

A Major Presence Throughout Québec

Hydro-Québec's workforce throughout the province has a major impact on the economy and contributes to regional economic growth. As at December 31, 2003, the company had approximately 21,000 employees, more than 11,500 of whom work outside Montréal and Québec City. Opposite: The Magdalen Islands.

Hydro-Québec contributes to community and regional economic growth through direct involvement in local committees and organizations. For example, it cooperates with representatives of Québec's Department of Economic and Social Development, Emploi Québec and Investissement Québec to monitor company retention and to share information for this purpose.

In 2003, Hydro-Québec welcomed more than 206,000 visitors to 19 of its facilities and sites in 11 administrative regions, thereby contributing to regional recreation and tourism. The visiting public can learn about electricity, the benefits of hydropower, environmental concerns, and the company's services and programs. Hydro-Québec also supports organizations that coordinate guided tours of its properties, such as the Cité de l'énergie in the Mauricie region and the Sept-Chutes recreation and tourism complex in the Québec City region. The Mauricie, Québec City and North Shore regions receive the most visitors.

Visits to Facilities – Key Facts

- **This year saw a significant 68% increase in the number of students who toured the company's facilities.**
- **A new brochure on electricity and hydropower entitled *Electricity: From the Power Station to the Home* was published to provide visitors with information.**
- **Work began on the Georges-Dor* reception centre for summer visitors to Manic-2 generating station. The centre will include an exhibit on Hydro-Québec and the environment.**

* *Québec singer/songwriter Georges Dor, who died just recently, described life at Manicouagan in song and gave Quebecers a sense of pride in their hydropower expertise.*

A school visit to Robert-Bourassa generating station.

Supporting Technology Development in Québec Business

Hydro-Québec supports the expansion and improvement of its industrial customers' operations in order to help Québec businesses become more competitive. To promote technology development in business, it engages in a broad range of activities, including conducting exploratory research, developing innovative products and processes, and offering advice in its areas of expertise (building energetics, electrotechnologies and processes, energy system integration, power quality and electromagnetic compatibility). Noteworthy achievements include:

- recovery of gas from landfill sites and agricultural residues for distributed generation
- destruction of organic sludge through an advanced electric oxidation process
- conditioning of mine products by electromagnetic induction
- development of thermal storage batteries for demand-side management in the commercial sector

Technology Development Projects

Since 1997, the company has been associated with 86 technology development projects. These projects represent industrial investments of $5.3 billion, additional electricity sales estimated at 475 MW, and the creation or retention of almost 40,000 direct and indirect jobs.

Promoting Innovation

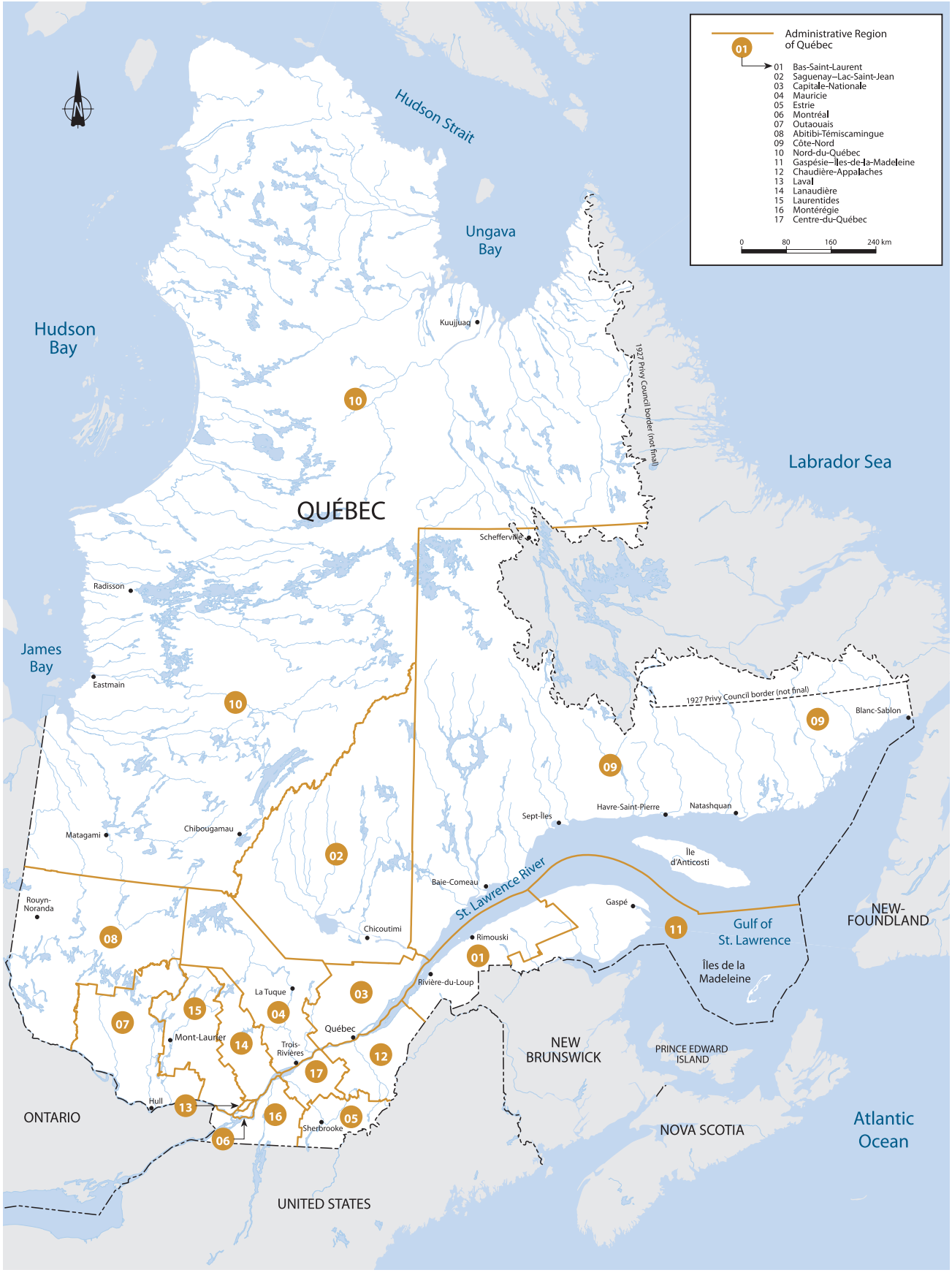
Hydro-Québec is committed to being a true business partner to its industrial, commercial and institutional customers in Québec and around the world. With this in mind, it maintains an ongoing presence in outlying regions and forges solid ties with its customers and partners.

Québec has an open economy, and the company's industrial customers export much of what they produce. To support these customers, Hydro-Québec, in cooperation with the Network of Export Commissioners, the Quebec Manufacturers & Exporters Association, the Department of Economic and Regional Development, and other economic stakeholders, sponsored networking events to get Québec companies and foreign businesses acquainted with each other. It also worked to bring project proponents closer together by helping to organize events such as "Stimulating Economic Development Through the Advancement of Knowledge-Based Economies," the 2003 Industrial Forum of the Americas, and the 2004 International Economic Development Council Annual Conference.

Noteworthy Activities Providing Business Support

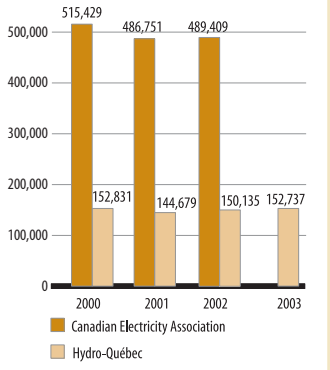
- **FuturAllia 2003: This international forum, which fosters strategic alliances, brought together 1,129 participants, representing 808 businesses from 26 countries, in Québec City.**
- **Forum-Export 2003: Manufacturers and exporters from Québec, Ontario and New Brunswick, as well as professional associations and export assistance agencies, had an opportunity to network at this forum.**
- **Four regional workshops were held, in Sherbrooke, Québec City, Gatineau and Montréal, to help businesses export their products and services.**

Administrative Regions of Québec

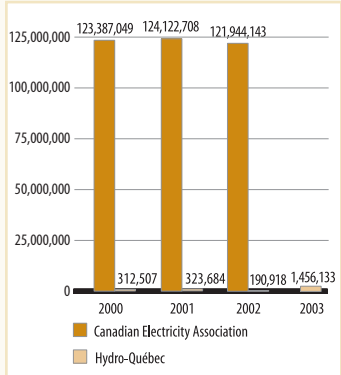


Other Indicators

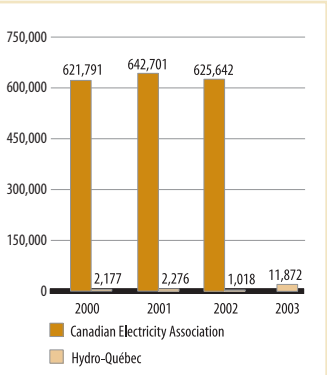
Net Electricity Generation (GWh)



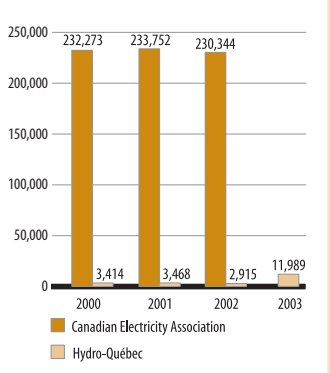
CO_2 Emissions (tonnes)*



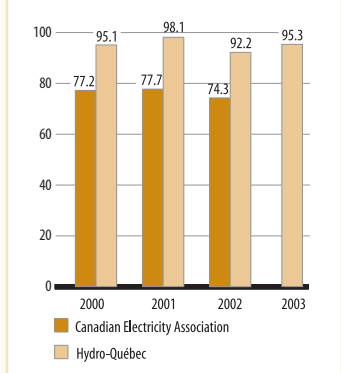
SO_2 Emissions (tonnes)*



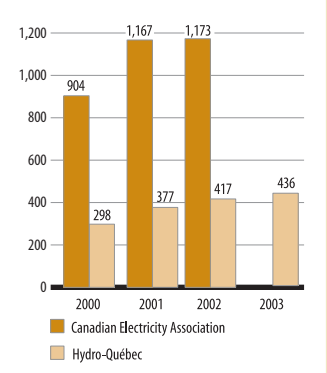
NO_X Emissions (tonnes)*



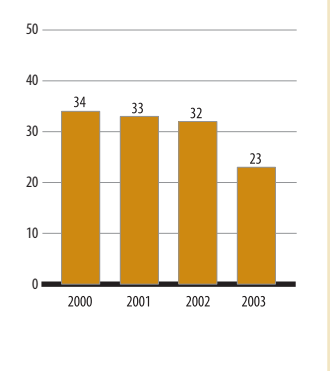
Rate of Reuse of Insulating Mineral Oil (%)



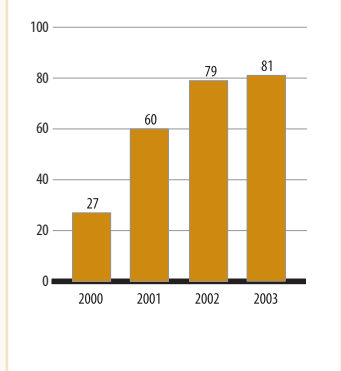
Accidental Spills (number)



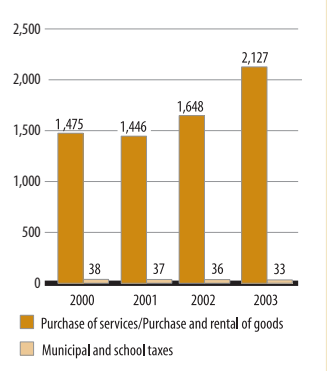
Area Treated with Pesticides over Total Area Treated in Transmission Line Rights-of-Way (%)



Targeted Employees Whose Activities Are Covered by an ISO 14001–Certified EMS (%)



Contribution to Regional Economies ($M)



** Increase in 2003 due to increased use of Tracy thermal generating station.*

Sustainability Reporting

Hydro-Québec reports to its directors and the public on its sustainability performance. Each year since 1995, it has produced a report on its environmental performance. In 2002, it published its first triple-bottom-line report, the *Sustainability Report*, including an appendix on regional contributions and a series of 34 fact sheets, all accessible on the Internet. This is the third consecutive year that the report is based on international standards dictated by the Global Reporting Initiative.

Letter of Attestation

QMI has been commissioned by Hydro-Québec to undertake an independent verification of the validity of environmental information within its 2003 Sustainability Report, excluding social, economic and financial data. The report, as well as the results of the company's environmental performance, remains under the responsibility of Hydro-Québec. The verification process included assessing the data collection methods and the data provided by Hydro-Quebec, interviewing management personnel and employees, and visiting selected units for further assessment and validation of data. QMI used a risk- based verification sampling plan defined in QMI's External Verification of Environmental Reports protocol.

As a result of the methodology used and the evidence made available, it is QMI's opinion that the collected and consolidated data of the 2003 Sustainability Report does not include any material errors. QMI also observed that the 2003 Report demonstrates an improvement, through the use of examples to support the data, compared to the 2002 Report. However, the information and data were, in many instances, limited to the units and divisions with a registered environmental management system, as described on page 17 of the Report.

Wendy Tilford
QMI President

Sustainability Report 2002

Stratos, a sustainable development consulting firm, ranked the S*ustainability Report 2002* third out of 35 similar reports issued by Canadian companies and first among the reports by public utilities.

Hydro-Québec's ***Sustainability Report 2003*** focuses mainly on its Québec operations. The company's website provides further information about sustainable development and includes a table of compliance with Global Reporting Initiative indicators.

www.hydroquebec.com/sustainable-development

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Units of measure

$M: millions of dollars

kV : kilovolt

kW : kilowatt

kWh : kilowatthour

MW : megawatt (one million watts)

MWh: megawatthour (one million watthours)

GW : gigawatt (one million kilowatts)

GWh: gigawatthour (one million kilowatthours)

TWh: terawatthour (one billion kilowatthours)

Hydro Québec

2004G027A