Hydro Québec

Annual Report 1998

this is Hydro-Québec...

how may I help you?

who are we?

Hydro Québec

Hydro-Québec is a world leader in generating green energy, with over 31,400 MW of installed capacity in 1998. It also buys most of the generation from Churchill Falls power plant, in Labrador, which has a nominal capacity of 5,428 MW. Hydro-Québec ranks among North America's largest distributors of energy.

Hydro-Québec is a publicly owned company with a single shareholder, the Québec government. It offers multi-energy services to its customers, either directly or through its TransÉnergie division, its subsidiaries, or its strategic partners.

It serves 3.5 million residential, commercial, institutional and industrial customers in Québec. In addition, it supplies nine municipal systems, one regional cooperative and some 15 electric utilities in the Northeastern United States, Ontario and New Brunswick. Since obtaining a marketer's license from the Federal Energy Regulatory Commission, it also makes direct sales, at market prices, to American power wholesalers, including public utilities, municipalities, resellers, and large industrial consumers in the United States.

Its 1998 sales totaled 161.4 TWh, with Québec markets accounting for more than 88% (142.8 TWh), and sales outside Québec for nearly 11.5%.

Hydro Québec International

Hydro-Québec International develops international markets for Hydro-Québec and its subsidiaries in the energy industry and related sectors; exports the technological know-how and products of Hydro-Québec and its subsidiaries; invests in partnerships on the international energy market; and promotes and supports efforts to export the know-how of Québec companies in the energy industry.

Société d'énergie de la Baie James

The Société d'énergie de la Baie James chiefly provides world-class services in engineering and in carrying out construction projects in the energy industry, both locally and internationally.

CapiTech
A subsidiary of Hydro-Québec

In December 1998, Hydro-Québec CapiTech was given a new mission by its Board of Directors. It is now primarily a venture-capital company that invests in enterprises offering energy-related technologies and services.

Energy Marketing
A subsidiary of Hydro-Québec

H.Q. Energy Marketing conducts multi-energy transactions in Canada, including sales, puchases and exchanges at the Canada-U.S. border.

NOVERCO

Noverco, a holding company in which Hydro-Québec has a stake, controls a large number of companies involved primarily in the transmission and distribution of natural gas.

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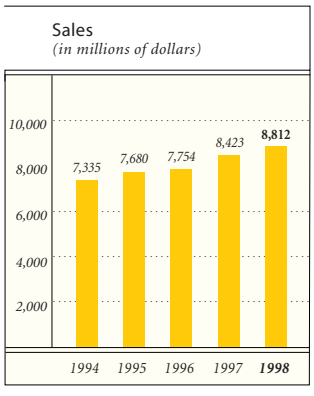
Units of Measure

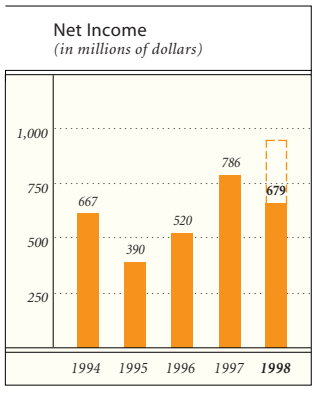
$M: millions of dollars
MW: megawatt (one million watts)
GW: gigawatt (one million kilowatts)
GWh: gigawatthour (one million kilowatthours)
TWh: terawatthour (one billion kilowatthours)

our performance

(in millions of dollars)	1998	1997	*Change (%)*
Operations			
Revenue	**$ 8,812**	$ 8,423	4.6
Expenditure	**4,968**	4,569	8.7
Financial expenses	**3,154**	3,062	3.0
Net income	**679**	786	-13.6
Balance Sheet			
Total assets	**57,295**	55,197	3.8
Long-term debt	**37,623**	37,131	1.3
Shareholder's equity	**13,288**	12,888	3.1
Financial Position			
Operating activities	**1,832**	2,372	-22.8
Investing activities	**(2,331)**	(2,133)	-9.3
Financing activities	**386**	(386)	200.0
Cash at end of year	**236**	349	-32.4

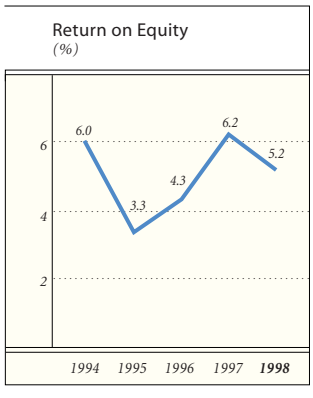
The nearly 5% increase in sales stems from new product development and higher sales of electricity. Growth in electricity sales outside Québec can be attributed to increased purchases from brokers on the open market for purposes of resale. Electricity sales topped $8 billion for the first time.

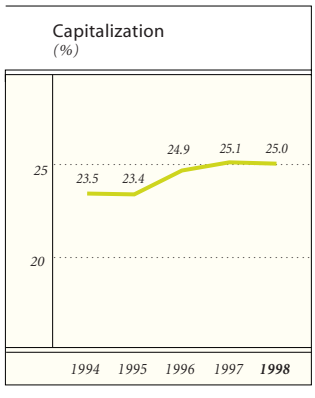




In 1998, two natural events had an impact of more than $300 million on net income: the ice storm and unseasonally mild temperatures. If these two factors are excluded, net income for the year would have been more than $950 million. Our performance nevertheless remains above average compared with the last five years.

Return on equity was pulled down by the decrease in net income. Our targeted return remains higher for the coming years.





With a capitalization rate that held steady at 25%, we were able to pay our shareholder a dividend of $279 million.

for today *and* tomorrow

L. Jacques Ménard
Chairman of the Board

André Caillé
President and Chief Executive Officer

The profits generated inside and outside Québec through the activities of Hydro-Québec and its partners contribute to economic growth, benefit society as a whole, and enhance the collective wealth that is Hydro-Québec.

Hydro-Québec ended fiscal 1998 with net income of $679 million, one of the most gratifying performances we have posted in the last five years. This positive result is partly attributable to growth in purchase and resale transactions, increased revenue from energy storage, and careful management of expenses.

When Nature Rebels

The particularly mild weather we enjoyed for most of the year brought down domestic and agricultural power consumption by 3 TWh compared with the averages recorded in the past half-century.

Because of low precipitation, Hydro-Québec turned to various means other than hydroelectric generation to supply power to its Québec customers: these included start-up of Tracy thermal generating station, reduction of sales on short-term markets outside Québec, and electricity purchases on external markets.

A third factor had an impact on 1998 results. That was last January's exceptionally severe ice storm, which caused substantial damage to part of Hydro-Québec's transmission and distribution systems. A number of cities and towns, among the most densely populated in Québec, were without electricity for as long as four weeks in some cases.

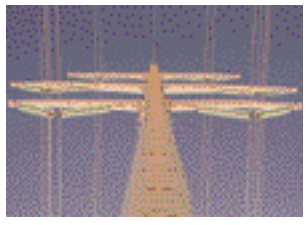
Thanks to the hard work and know-how of its employees and the cooperation of all its partners, Hydro-Québec was able to correct the situation with an efficiency that has been commended by numerous observers. According to a survey carried out by the polling firm Sondagem for the news media, 97% of Quebecers said they were satisfied with the way Hydro-Québec had handled the crisis.

Reinforcing the Power System: Investing in the Future

Given the scale of the damage, the Board of Directors charged a committee of 13 internationally respected experts with the task of analyzing the technical aspects related to the ice storm and giving its opinion on the remedial measures planned by Hydro-Québec. Stating that it was "impressed by the efficient organization set up in such a short time in response to such a serious event," the committee chaired by Roger Warren concluded in particular that the events of last January were not in any way connected to a weakness or lack of maintenance of the system; rather, they occurred because the facilities were stressed beyond their bearing capacity by the weight of the ice.

Subsequently, the Québec government established a scientific and technical commission charged with analyzing the emergency plans and the measures taken throughout the incident, particularly by Hydro-Québec and the civil protection authorities. The commission is also responsible for studying the design and reliability criteria for Hydro-Québec's transmission and distribution systems, as well as suggesting ways to avoid such situations in the future. This commission, chaired by Roger Nicolet, is to table its report in April 1999.

Once service was restored, Hydro-Québec set about repairing its grids. In consideration of the urgency of the work to be done, in January Hydro-Québec received permission to go ahead with a series of improvements to reinforce its transmission system.



In December, Hydro-Québec was able to assure its Québec customers that its power lines had been reinforced and it was ready to face winter 1998-1999 with complete confidence.

The considerable efforts expended to ensure the reliability of our power systems attest to our commitment to maintaining a secure power supply and a high level of service for our customers at all times.

Holding Course

In spite of the events of January 1998, Hydro-Québec remains committed to the growth and profitability orientations laid out in its *Strategic Plan 1998-2002.*

For example, we have undertaken to apply stable, uniform rates throughout Québec and to keep them at their current level until 2002 for all customer categories. We plan to fulfill this promise mainly by managing our operating expenses very carefully and by developing the new markets that are accessible to us.

In an industry undergoing worldwide restructuring, we must act immediately to establish effective means of dealing with increasingly fierce competition. We are therefore working resolutely to develop our electrical generation and transmission capacity so that we can meet the growth in demand in Québec while taking advantage of the business opportunities offered by neighboring markets. We intend to derive additional revenues from developing multi-energy products and services.

The forecast growth in sales between now and 2002 is approximately 20 TWh: 14 TWh in Québec, resulting largely from the establishment and expansion of large industrial concerns, and 6 TWh outside Québec. To achieve this objective, we have built up a diversified portfolio of projects that can be carried out at a competitive cost, principally by completing the development of Québec's hydroelectric potential.

Within the parameters set with Newfoundland and Labrador Hydro, we are continuing discussions about harnessing the remaining hydropower potential of the Churchill River in Labrador. Developing this potential would involve an investment of some $10 billion over 10 years, and would create nearly 50,000 person-years of employment in Québec and Newfoundland during construction. It would add 3,200 MW of capacity to the two generating systems, enabling both utilities to serve their local markets better and take advantage of the business opportunities afforded by neighboring markets.

As clearly stated in our strategic plan, generation projects must meet three essential criteria.

- First, the projects must be favorably received by Aboriginal and local communities. To this end, we held discussions throughout the year with community representatives to reach partnership agreements that are mutually satisfactory.

- Second, the projects must also be acceptable from an environmental standpoint. Hydro-Québec has adopted an approach which goes beyond strict preservation of the local environment to foster the promotion and development of resources at its future installation sites.

- Third, all new projects must be shown to be profitable under market conditions.

Expanding Our Traditional Markets

In a rapidly changing environment that holds as many challenges as business opportunities, we plan to continue developing profitable activities in partnership with companies whose investment capacity or expertise complements our own.

We intend to expand our relations with partners on neighboring markets, particularly in Ontario and the Northeastern United States, where our low production costs and development of multi-energy projects give us a distinct competitive edge. Hydro-Québec now has official status as a power marketer, which opens up exciting prospects on the U.S. market.

Partnership, the Key to Lasting Growth

Hydro-Québec also made significant progress in consolidating its presence on international markets. Over the year, Hydro-Québec International (HQI) and its subsidiaries added many new projects to their books, as both investors and service providers.

In addition to laying the groundwork for a productive partnership with the Québec Federation of Labor (QFL) Solidarity Fund and with Gaz de France, HQI has developed a network of international partners in a score of countries. To allow for economic fluctuations, HQI subjected all its commitments to especially stringent risk-management criteria.

Hydro-Québec CapiTech is strengthening its financial position, after first redefining its orientations and rationalizing its portfolio of subsidiaries. Previously a holding company comprising several Hydro-Québec subsidiaries, HQ CapiTech has now become a value-added venture-capital company with a mission to exploit technological expertise and products developed by Hydro-Québec, or related to its activities in the energy industry.

Hydro-Québec's research institute, IREQ, has reassessed its priorities and will work in partnership with private companies or other organizations to carry out research and development projects, particularly in fields linked to Hydro-Québec's core activities.

Greeting the Year 2000 with Confidence

The major organizational and administrative changes accompanying Hydro-Québec's new business focus have now been completed. We are intent on the objective stated in our strategic plan, namely to stabilize our work force at 19,500 employees and ensure that it represents an optimum combination of the know-how acquired over the past decades and the various types of expertise that correspond to the new realities of our industry.

The cutting-edge technologies made available to employees include the first four modules of SAP R/3, a software program that will incorporate all data, systems and applications in use at Hydro-Québec and facilitate decision making and the adoption of new business practices.

In 1998, Hydro-Québec completed most of the preparations for Year 2000 readiness of its computer systems. In the coming year, we will conduct validation tests and make the necessary adjustments to ensure a smooth transition to the new millennium for Hydro-Québec's customers and employees.

The accelerated development of our business environment prompted us to establish a new department whose mandate is to carefully evaluate, in conjunction with all other corporate units, all forms of risk to which Hydro-Québec is exposed and, if need be, develop ways to mitigate their impact on the company and its customers.

1998: Mission Accomplished!

In view of the particularly demanding circumstances under which Hydro-Québec operated in 1998, we wish to pay special tribute to all those who enabled the company to fulfill its mission.

We first want to thank our customers and suppliers, as well as all the individuals, companies and other organizations whose tireless efforts enabled us to restore power to our customers as quickly as possible in the wake of the January ice storm.

We also wish to acknowledge the remarkable spirit of mutual aid that was demonstrated in the communities affected by the power outages. Together with the authorities and volunteer organizations, each municipality took the necessary steps to ensure that no one was left alone and that no one's life or health was at risk.

We would like to single out the invaluable contribution of our employees who, at the height of the storm, showed courage, competence, dedication and solidarity, demonstrating a sense of responsibility far beyond the call of duty. All year long, faced with the profound changes taking place within the organization, they gave concrete proof of their loyalty through their daily commitment.

We owe our gratitude to Guy Chevrette for his support and cooperation throughout his mandate as Minister of State for Natural Resources, and for his determination in helping us work toward our objectives.

We also wish to thank Georges Pelletier and Charles Sirois, who left the Board of Directors in 1998.

Finally, we acknowledge the outstanding role played by the Board of Directors. Their enlightened vision of Hydro-Québec's development, their unfailing sense of responsibility, and their judicious decisions enable us to provide our customers with the energy they need, today and tomorrow, at the best possible cost and under the best possible conditions.

L. Jacques Ménard
Chairman of the Board

André Caillé
President and Chief Executive Officer

the year's highlights

January

5 From January 5 to 9, Québec experiences the worst ice storm in its history. As a result of the damage caused to Hydro-Québec's transmission and distribution systems, nearly 1.4 million customers are without electricity.

15 HQI is awarded a US$180-million contract by the government of Peru to head a consortium in charge of building and operating an interconnection between Peru's northern and southern power grids.

23 Hydro-Québec charges a committee of experts, chaired by Roger Warren, with the task of advising the Board of Directors on 1) the suitability of the improvements and remedial measures planned to consolidate the transmission and distribution systems, 2) transmission system operating methods and strategies, and 3) management of the effort to restore service in an emergency situation.

27 The Québec government authorizes Hydro-Québec to begin construction of three new transmission lines to reinforce the systems supplying the Montérégie and Outaouais regions and downtown Montréal.

27 Hydro-Québec gives its subsidiary HQ CapiTech a mission to invest as a partner in companies involved in energy technologies and related products and by-products.

February

10 Hydro-Québec signs a 22-year contract with Alcan to supply 350 MW of power, along with an energy purchase contract for up to 725 MW.

12 HQI concludes a financial partnership agreement with the QFL Solidarity Fund to invest $1.5 billion in international energy projects between 1998 and 2002.

March

3 The Québec government authorizes preliminary studies and draft designs for the construction of Tabaret and Toulnustouc generating stations and for the partial diversion of the Rivière Mégiscane.

9 The Québec and Newfoundland governments announce the start of formal negotiations between Newfoundland and Labrador Hydro and Hydro-Québec to conclude an agreement for completing the hydropower development of the Churchill River, in Labrador, and for related projects in Québec.

19 HQI inaugurates a 10.6-MW hydropower plant in Rio Lajas, Costa Rica, built in partnership with a Costa Rican firm.

April

1 The reservoir at Sainte-Marguerite-3 generating station is impounded.

May

1 Hydro-Québec is accredited by the Northeast Power Coordinating Council, whose standards for electricity service provision are among the most stringent in North America. This accreditation confirms the reliability and efficiency of Hydro-Québec's transmission system.

June

2 At a meeting of the E7, of which Hydro-Québec is a founding member, major electric utilities from eight industrialized countries establish international guidelines for sustainable development.
3 Hydro-Québec tables its proposal with the *Régie de l'énergie* (Energy Board) concerning the terms for establishing and applying electricity supply rates.
12 Hydro-Québec and Teqsim International conclude a $1.4-million agreement to supply a power-system simulator to the Instituto Costarricense de Electricidad, in Costa Rica.
13 H.Q. Energy Services (U.S.) joins the New England Power Pool.
25 The first in a series of horizontal-axis wind turbines to be connected directly to Hydro-Québec's distribution system, each with a capacity of 750 kW each, come on line in Saint-Ulric-de-Matane.

July

21 Hydro-Québec and Gaz de France, partners in MEG International, invest in the construction of the first two service stations in a planned natural-gas fueling network for converted buses in the Valley of Mexico.
24 TransÉnergie U.S. secures an initial contract for a feasibility study on the construction of a direct current underwater link between Connecticut and Long Island by the Long Island Power Authority.

August

18 Hydro-Québec awards four prizes recognizing effort and success in its program of awards for excellence for Aboriginal college students.
24 Hydro-Québec begins construction of the new Aqueduc-Atwater-Viger overhead transmission line, which will strengthen power supply to downtown Montréal.

September

8 HQI, in partnership with a Senegalese-Canadian consortium, is awarded a $24.2-million contract to carry out a turnkey project in Senegal involving the sale, transportation, installation, start-up and financing of a 37.4-MW thermal generating station.

October

8 The Atomic Energy Control Board renews the operating license for Gentilly-2 generating station for another two years.

November

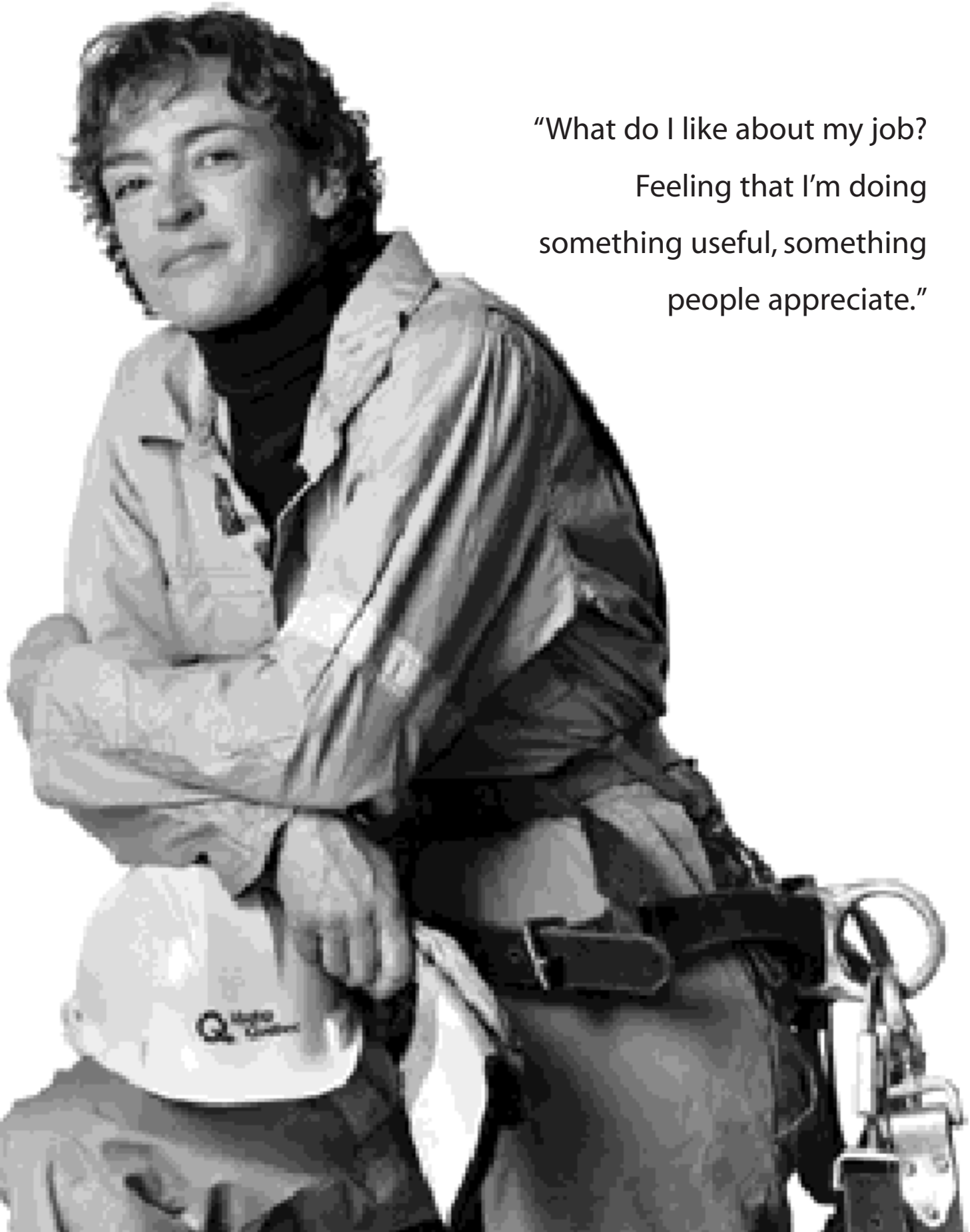
19 HQI joins with the QFL Solidarity Fund and the American firm Coastal Power to acquire Fortuna, the largest hydroelectric generating station in Panama with an installed capacity of 300 MW.

December

11 Hydro-Québec announces the commissioning of the 315-kV Aqueduc-Atwater line, which will improve the security of power supply to downtown Montréal. In addition, the new 315-kV Duvernay-Anjou line will bolster supply to downtown and east-end Montréal in emergency situations.

18 HQI reaches an agreement with Australia's NorthPower for co-ownership of a direct current interconnection which will link two existing grids in the states of Queensland and New South Wales. TransÉnergie will supply technical expertise for the system's construction and operation.

I'm working for you



"What do I like about my job? Feeling that I'm doing something useful, something people appreciate."

home comfort

Keeping the social pact it made with Quebecers in 1962, Hydro-Québec reiterates its commitment to maintaining low, stable, uniform rates for all customer categories, while constantly improving service quality.

Service on Call

To improve access to services, Hydro-Québec undertook a project to set up a call centre. The centre will actually have five locations, networked to form a single entity, and will operate under the name of HydroDirect, the new banner that now designates the utility's customer services. The first call centre site was opened in Saint-Hyacinthe on September 10, 1998. The others (in Montréal, Québec City, Saint-Antoine, and Hull) will gradually start up operations between now and summer 2000.

A payment collection centre, also with five physical locations, will be gradually set up during 1999 and 2000 to improve collection of amounts owed the company while ensuring fair treatment of customers. Sites are planned at Trois-Rivières, Thetford Mines, Valleyfield, Joliette, and Montréal.

Both centres will field customer calls and forward them to the employee most qualified to respond to the customer's needs. While fostering harmonization of the company's business practices and reducing customer service costs, the centres will also contribute to maintaining jobs in all regions of Québec and facilitate employee development with a view to continuous improvement of service.

Technology to Benefit the Customer

Already in the forefront of information technology use, Hydro-Québec pursued its efforts to develop new applications to enhance the efficiency of its facilities.

For example, the company worked on the development of smart meters that will gradually replace existing units. These remote-programmable devices will allow Hydro-Québec to check the accuracy of its metering equipment at all times. Smart meters will also offer our business customers an expanded range of services and help them manage their electricity bills with greater flexibility.

In the realm of home automation, the utility conducted a pilot project last winter in more than 400 households in the Saguenay region, designed to evaluate the customer benefits of well-planned automation of home heating systems.

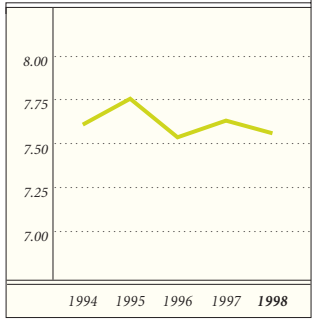
Optimizing Energy Consumption

Hydro-Québec continued to promote the benefits of responsible energy management to its Québec customers by keeping them informed in a variety of ways. The newsletter *HydroContact*, with a circulation of 3,480,000, gives suggestions for energy conservation.

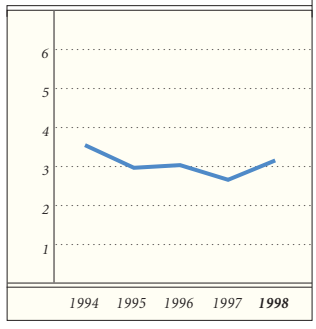
Hydro-Québec also renewed its efforts to make contractors aware of the many advantages of the *Nouveau confort* program, which helps increase the energy performance of new homes and yields savings of up to 50% on residential heating costs.

The utility continued its promotion of Iso-Therm 3000 electronic thermostats, which offer energy savings along with enhanced comfort by keeping room temperatures more constant.

Residential Customer Satisfaction Index



Average Hours of Service Interruption per Customer
*(Distribution and Transmission)**



**Major events such as the January ice storm are not included, as these events are considered exceptional and non-recurring.*

a new regulatory framework

Reorganization of Operating and Distribution Centres

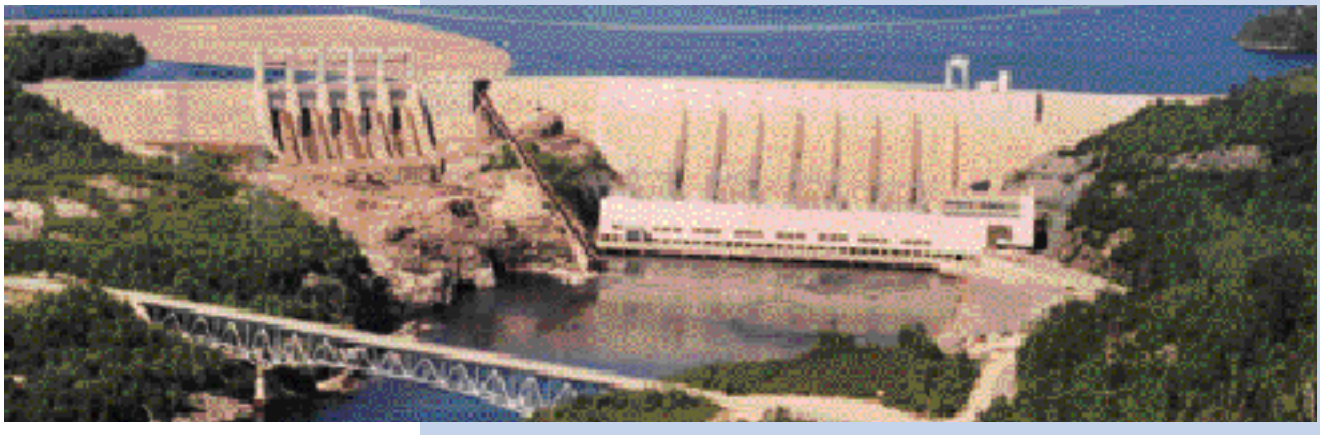
The reorganization of the Operating and Distribution Centres (ODCs) was completed in 1998. The number of ODCs was reduced to five, compared with eight in 1997, resulting in annual savings of $3.5 million. Management team efforts and consideration for union concerns made it possible to attenuate the impact on employees and keep long-distance travel to a minimum. In addition, early retirement packages were offered to facilitate the adjustment.

During the year, two major submissions were tabled with the *Régie de l'énergie* with a view to obtaining the opinion of the Québec government. The first concerns electricity rates, the second the development of wind energy in Québec.

In accordance with Section 167, paragraph 1, of the *Act respecting the Régie de l'énergie*, Hydro-Québec presented a proposal in February 1998 on ways to establish and apply its electricity supply rates. This proposal, arising out of the orientations of the Québec Energy Policy, was stated in Hydro-Québec's strategic plan, which was approved by the Québec government. It aims to regulate electricity generation on the basis of price and establish the initial price for Hydro-Québec's acquisition of supply.

After holding public hearings, the *Régie* recommended that the government reject Hydro-Québec's proposal and, instead, maintain cost-based regulation of generation. On receiving this opinion, the Minister of Natural Resources announced that he would analyze the impacts of the recommendation before making a ruling.

With respect to the place of wind energy in Québec's energy portfolio, the *Régie* recommended that the government set an annual quota of 50 MW of installed capacity, to be integrated into Hydro-Québec's resource plan. The development of wind energy will be the subject of a nine-year program (three phases of three years each), beginning in 2002. The *Régie* also recommended that the cost of this energy should not exceed 5.8 cents per kilowatthour and that the government should cover the difference between this cost and the benchmark cost of hydropower generation.



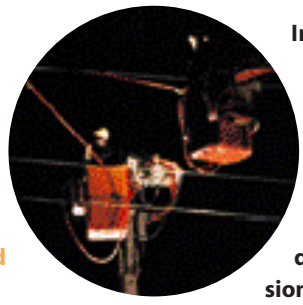
January 1998

From January 5 to 9, 1998, southwestern Québec was struck by an ice storm of exceptional intensity, scale and duration. According to Environment Canada, up to 100 mm of freezing rain fell on southern Québec during those few days. The weight of the ice, coupled with strong winds, damaged some 600 km of transmission lines and 3,300 km of distribution lines. Nearly 1.4 million customers were without electricity for periods ranging from a few days to about four weeks.

the worst storm

Due to the gravity of the situation, Hydro-Québec put a record number of employees from all across Québec on alert the day after the storm hit. The company also mobilized power suppliers and electrical contractors, and requested assistance from electric utilities in the other Canadian provinces and the United States, the civil protection authorities, the Canadian Armed Forces and the police departments of a number of municipalties. At the peak of the outage, nearly 10,000 people were at work in the field.

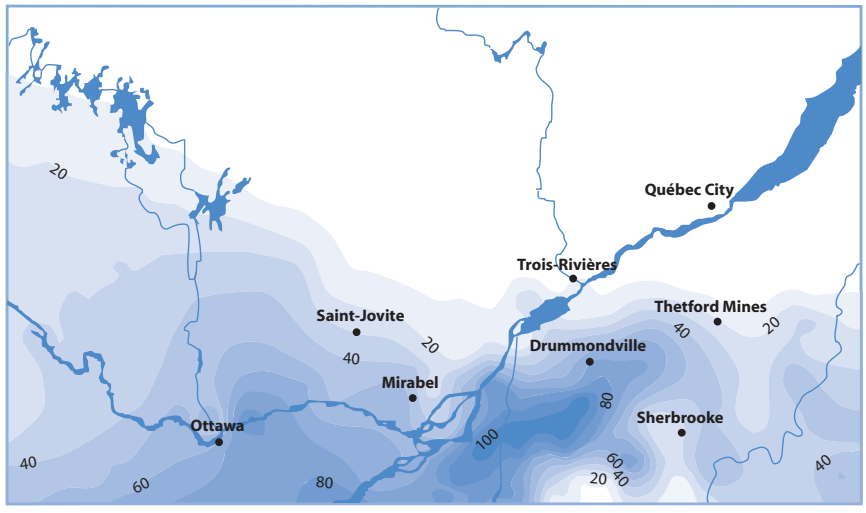
The damage caused by the storm called for a new approach to managing the transmission system. Throughout the power failure, the company adopted special load management measures, such as cyclical load shedding, to restore supply to customers who had been without electricity for several days, and it asked the entire population to reduce consumption during peak hours. It also obtained the cooperation of its large-power customers (5,000 kW or more) in freeing up energy to supply priority loads. A number of temporary links were made to expedite restoration of service to the major centres.



In four weeks, thanks to the initiative, innovative abilities and dedication of employees and others who came to lend a hand, the Hydro-Québec crews in the field, supported by engineering, geomatics and computer technology specialists, repaired some 3,300 km of distribution lines and 600 km of transmission lines. The work crews' autonomy, flexibility and rapid intervention helped speed the safe restoration of service and reassure those who were without power.

All through the state of emergency, Hydro-Québec strove to maintain constant, direct contact with the public and provide an exact picture of the situation as it developed. Hydro-Québec also issued repeated calls for caution through the news media. By the end of the crisis, general public satisfaction with Hydro-Québec had reached 96%.

Thickness of ice, by region, at the height of the storm *(in mm)*



Source: Environment Canada

An experience no one wants to relive

TransÉnergie submitted recommendations to the Québec government to reinforce the power system in the areas with the greatest ice buildup, specifically by looping three lines in the high-voltage system and building an interconnection with Ontario. All the company's units reviewed their emergency intervention strategies to make them even more effective.

in history

The committee of experts headed by engineer Roger Warren, which Hydro-Québec's Board of Directors had asked to assess the validity of the improvements and measures planned to reinforce the transmission and distribution systems, agreed with the proposed projects and made a number of suggestions. A further task of the committee was to give its opinion on transmission system operating methods and strategies and on the management of service restoration in emergency situations. The projects proposed by the company were the subject of extensive discussions regarding the ideal sites for the new installations.

The scientific and technical commission set up by the government to analyze the events surrounding the ice storm began its analysis in May 1998 and commissioned numerous studies. Public hearings also gave Hydro-Québec, along with organizations and individuals from a variety of fields, an opportunity to speak about their experiences during the storm. The commission's mandate, which was to be completed by the end of 1998, has been extended to 1999.

In 1998, the ice storm had a direct financial impact of about $725 million. The Québec government has agreed to pay Hydro-Québec the equivalent of the net value of equipment destroyed and to reimburse up to $200 million of the expenses incurred in implementing the emergency measures.

security right down the line

The ice storm of January 1998 had a major impact on the activities of TransÉnergie. The extent of the damage to the transmission system called for new approaches, as ways were sought to restore power as quickly as possible to customers affected by the outage.

Some 40 rebuilding projects were immediately started. In addition, TransÉnergie was able to call upon its network of interconnections with neighboring systems to speed up restoration of service in certain regions.

In its repairs to the system, TransÉnergie applied stricter ice-loading standards wherever appropriate, to lessen the impact of any similar events in the future. In all cases, TransÉnergie selected the solution that best reconciled the imperatives of speedy power restoration, structural sturdiness and cost.

The experts at TransÉnergie also perfected operating techniques such as thermal de-icing, which may come into use in winter 1998-1999 on lines with voltages ranging between 120 kV and 315 kV.

TransÉnergie began construction of new infrastructures to diversify power supply to strategic load centres in areas with a high risk of ice accumulation, notably by looping the high-voltage systems in three regions and building an interconnection with Ontario.

Altogether, TransÉnergie invested $403 million in 1998 to repair and reinforce its high-voltage transmission system, especially in regions affected by the ice storm. This amount includes $42 million in expenses incurred for emergency measures, which the Québec government has agreed to reimburse.

Transmission System Reliability

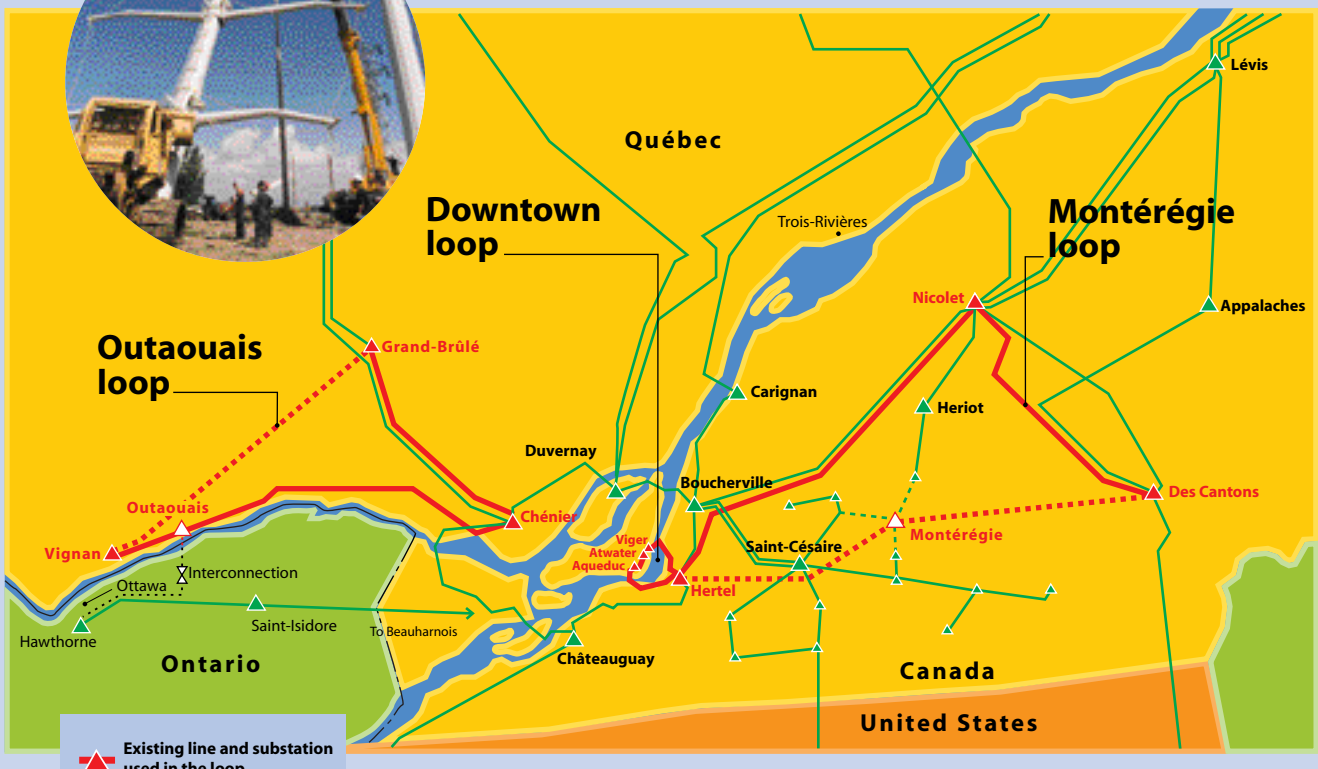
At the beginning of May 1998, the Northeast Power Coordinating Council (NPCC) confirmed that TransÉnergie's transmission system complies with all NPCC reliability criteria, which are among the most stringent in North America. This accreditation corroborates the reliability of the TransÉnergie system; it is also of strategic importance to Hydro-Québec's growth, since it lifts restrictions and adds 250 MW to 400 MW to the company's export capacity to the Northeastern United States, depending on the time of year.

The Continental Energy Market

In addition to strengthening the transmission system, Hydro-Québec continued to develop potential markets for its services in the context of North American deregulation. To heighten its presence in the United States, TransÉnergie set up a subsidiary in Boston, TransÉnergie U.S., under the new holding company H.Q. TransEnergy Inc., which has a mandate to develop and manage TransÉnergie's non-regulated activities.

operation loop

at December 31, 1998



Looping the high-voltage systems increases the number of lines supplying power to areas with high risk of ice buildup.

With the downtown Montréal loop via the 315-kV line connecting Atwater substation and Aqueduc substation, which has been in partial service since December 1998 and will be completed in 1999, the downtown area will have additional transmission capacity of 1,000 MW available.

The 735-kV line linking Hertel substation in La Prairie and Des Cantons substation in Val-Joli will be able to supply Montréal's South Shore (Montérégie region) and Hertel substation with an additional 2,000 MW from a separate source by winter 2000-2001. As of mid-December 1998, the necessary equipment was in place to restore power supply to Saint-Césaire substation from Des Cantons substation in less than two weeks, if need be.

And the new 315-kV line connecting Grand-Brûlé substation and Vignan substation will add some 1,000 MW from a separate source to the transmission capacity of the grid serving the Ottawa Valley (Outaouais region).

In project reports submitted to Québec's ministry of environment and wildlife, Hydro-Québec undertook to comply with existing standards and agreements. Because there was not much time to conduct impact studies for the construction of new lines and substations, Hydro-Québec adapted its information and consultation processes to the circumstances. A direct form of participation and the formation of technical committees have opened up discussions with the local authorities and principal stakeholders with a view to reaching an optimum solution for the regions concerned.

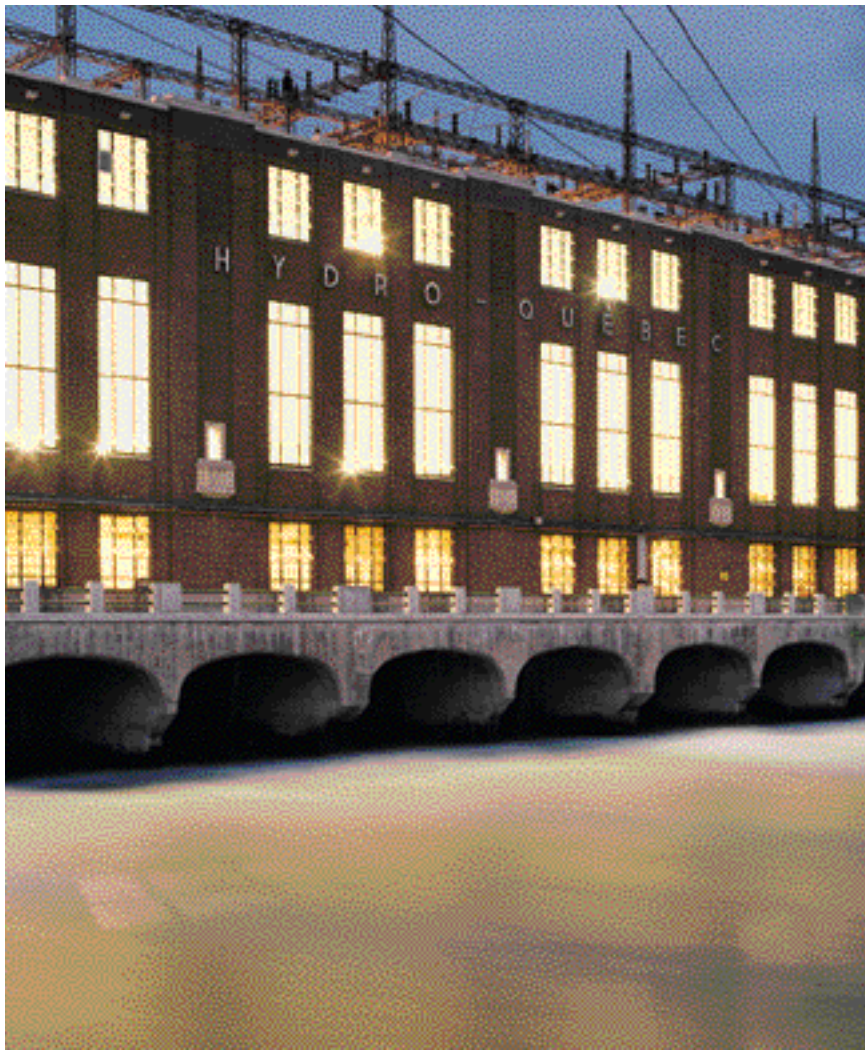
energy without borders

In 1998, in keeping with its strategic orientations, Hydro-Québec ensured an adequate power supply and continued to develop its markets in Québec as well as in neighboring provinces and states.

Diversifying Sources of Supply

Because of the importance of hydropower in Hydro-Québec's total generating plant, fluctuations in runoff can lead to business opportunities, but at the same time they constitute the greatest business risk we face. In 1998, the Energy Services Group took various steps to ensure an energy supply that meets the reliability and security criteria established in 1991. These criteria state that the company must be able to deal with a two-year loss of inflows amounting to 64 TWh, the equivalent of the largest consecutive deficits recorded in the past.

In 1998, Hydro-Québec increased security of supply by starting up Tracy thermal generating station, reducing sales of Québec-generated electricity on the short-term market outside Québec, and optimizing its energy resources through purchase options.



Developing the Large-Industry Market

The company stepped up development of its activities targeting large Québec-based industrial concerns, for example by offering multi-energy services. During 1998, Alcan agreed to buy a minimum of 46 TWh over 22 years at the large-power rate to supply its new aluminum plant in Alma, scheduled to come on stream in June 2001. Hydro-Québec in turn contracted to purchase, on attractive terms, up to 725 MW of the power and energy generated by Alcan's Saguenay–Lac-Saint-Jean facilities.

Hydro-Québec also concluded an agreement to supply 3.5 TWh at the large-power rate for 20 years to Iron Ore of Canada for the mining company's pelletizing plant in Sept-Îles.

Increasing Sales Revenues outside Québec

In 1998, Hydro-Québec sold 18.6 TWh of electricity on external markets, including 3 TWh to the neighboring provinces of Ontario and New Brunswick. Total sales outside Québec generated revenues of $814 million, an increase of 36.6% over the preceding year. This rise in sales outside Québec is mainly the product of an increase in lucrative purchase-resale transactions on external markets.

The company also continued building a structure to support its commercial activities outside Québec. It created the subsidiary H.Q. Energy Marketing, which acts as a holding company and whose mission is to conduct energy transactions in Canada, including sales, purchases and exchanges at the Canada-U.S. border.

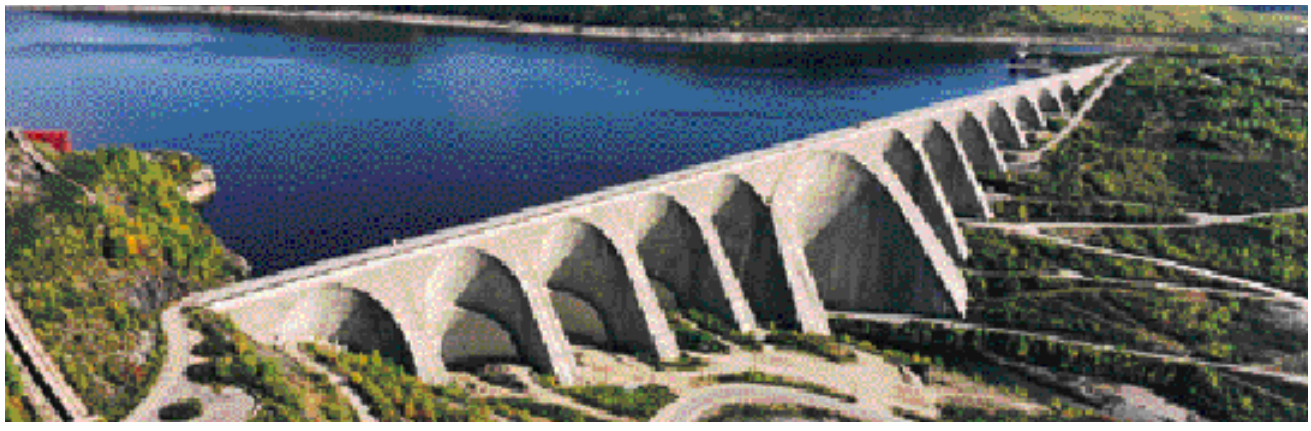
In July 1998, the new subsidiary asked the National Energy Board for a blanket permit to export more power and energy from all Canadian provinces to the United States over the coming years. Hydro-Québec already holds a blanket permit to export up to 4,300 MW of power and up to 30 TWh of energy annually from Québec to the United States.

In addition, Hydro-Québec created H.Q. Energy Services (U.S.), with offices in Pittsburgh. The mission of this subsidiary is to carry out energy-related transactions with companies close to American load centres. It is also responsible for marketing the energy generated outside Québec in the coming years under the thermal supply program laid out in Hydro-Québec's strategic plan.

At the end of 1997, H.Q. Energy Services (U.S.) obtained a license from the American authorities allowing it to act as a power marketer and sell electricity at market prices in the United States. This status provides it with direct access to the wholesale electricity market. The subsidiary also became a full member of the New England Power Pool, which comprises some 125 industry members (producers, transmitters, energy marketers, etc.) in New England, and of PJM, a similar organization covering Pennsylvania, New Jersey and Maryland. And it took steps to become a member of the New York Power Pool. By joining such associations, the subsidiary is involved in drawing up the rules governing the new electricity market, while also developing its business network in the United States.

making the most of our water resources

To assure its Québec customers of a reliable power supply and a high quality of service at a competitive price, Hydro-Québec must develop Québec's hydroelectric potential.



Hydro-Québec's growth and the resulting economic spinoffs throughout Québec depend substantially on the utility's generating capacity. At the end of 1998, the installed capacity of all its generating facilities, including the Churchill Falls power plant in Labrador, totaled 36,828 MW. Energy capability under average runoff conditions amounted to approximately 187 TWh annually.

The company has conducted extensive studies to expand its generating plant and meet growing demand in Québec reliably and at competitive rates. A further goal is to achieve the leeway needed to take advantage of our competitive edge on external markets.

Optimizing Facilities

To improve efficiency and extend the useful life of certain structures, Hydro-Québec continued its refurbishing program at the following generating stations: Shawinigan-2 and Shawinigan-3, La Gabelle, La Tuque, Bersimis-1, Manic-2, Chelsea, Rapides-Farmers, and Beauharnois. Hydro-Québec also considered a plan to replace the existing Grand-Mère plant with a new facility. In addition, the utility resumed operations at 600-MW Tracy thermal generating station. Major efforts were put into dam safety, notably in helping draft the government's new legislation in this regard.

Hydro-Québec studied various rivers that could be further developed to quickly increase the output of existing generating stations at competitive costs.

It also established a unit to manage business subsidiaries under the responsibility of the Generation group to ensure the marketing of their products, services and expertise, both nationally internationally.

Major Potential to be Developed

The Sainte-Marguerite reservoir was impounded sooner than expected, in April 1998. Construction of the Sainte-Marguerite-3 dam was completed in August, midway through building the generating station, spillway and head-race tunnel. To date, this project has injected more than $340 million into the local economy, and the spinoffs should reach some $450 million by the end of the project.

Hydro-Québec began operations to return two generating stations to service: Sept-Chutes, with a capacity of 20 MW, and the 5-MW Chute-Bell facility. Work on these two projects, which were favorably received by the local communities, will be completed in 1999.

Preliminary studies on other projects proceeded; in fact, Québec has significant potential in terms of sites that can be developed at competitive costs.

The project for completing the hydropower development of the Churchill River, in Labrador, and related projects in Québec reached an important stage with the launching of formal negotiations with Newfoundland and Labrador Hydro, based on the parameters announced March 9, 1998. Discussions on this project and several others in Québec are continuing with the communities concerned.

All projects must be profitable and meet environmental requirements. Favorable reception by Aboriginal and local communities remains an essential goal for Hydro-Québec. To involve communities more directly in its projects, Hydro-Québec has proposed a partnership approach that will enable them to benefit from substantial economic spinoffs.

Hydro-Québec has also put forward a formula encouraging the exchange of information with local communities, from the time preliminary studies begin, in order to learn their concerns and benefit from their knowledge of the local environment.

Diversifying Sources of Power

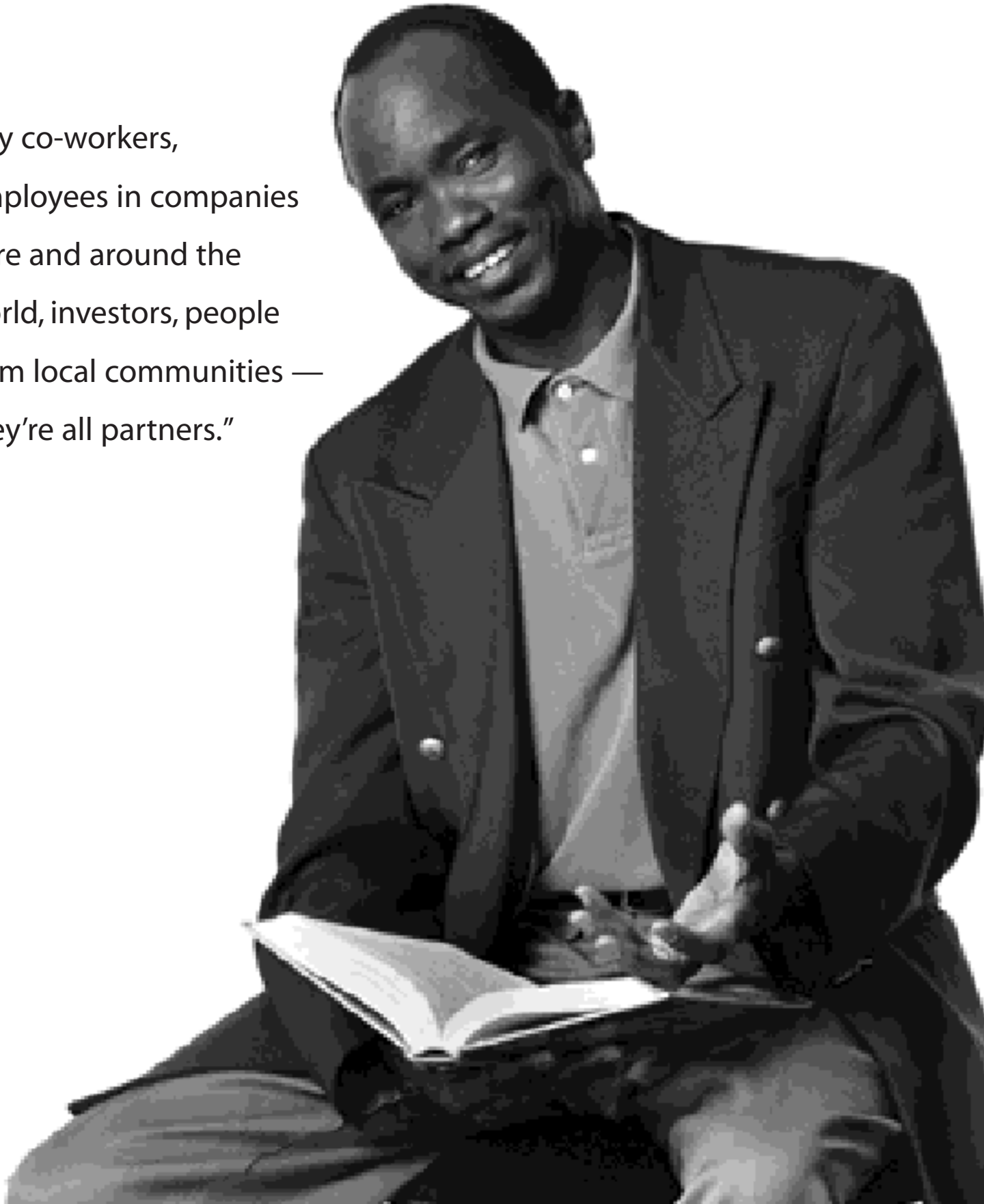
Hydro-Québec has undertaken to diversify its sources of power production. In accordance with the requirements of the new Québec Energy Policy, the company has taken steps to divest, at fair market value, sites and generating stations with a capacity of 50 MW or less. Following public hearings to be held in 1999, the *Régie de l'énergie* will give the Québec government an opinion on the share independent power producers should hold in Hydro-Québec's resource plan, as well as on the price to be paid for the electricity.

In the area of renewable energies, Hydro-Québec inaugurated its wind power test facility at Saint-Ulric-de-Matane. The new installations will be used to test the performance of wind turbines and study ways to integrate this form of energy into the existing grid.

The company is also examining projects for building thermal power plants outside Québec, in particular to protect against fluctuations in runoff. In its strategic plan, Hydro-Québec announced its intention to add 10 TWh of thermal capability to its generating plant by 2002. The energy produced could be sold to American customers or transmitted to Québec if need be.

together
we can do more

"My co-workers, employees in companies here and around the world, investors, people from local communities — they're all partners."



value-added investments

In the energy industry, venture capital is becoming a strategic tool that offers advantageous access to emerging technologies. It is able to provide attractive returns through constant monitoring of technological developments.

Hydro-Québec CapiTech: A Promising Turnaround

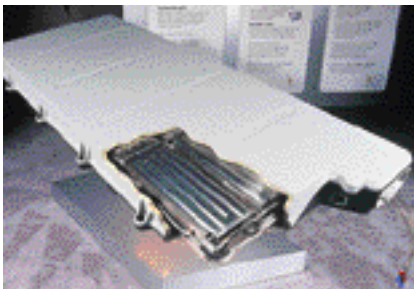
In 1998, Hydro-Québec completely reorganized its technology subsidiaries to ensure their contribution to the company's continued leadership in technology. Seven strategic subsidiaries, previously held in HQ CapiTech's portfolio, were placed under the responsibility of Hydro-Québec business units. HQ CapiTech began the process of divesting some of its holdings and turning around a number of others. New investments or reinvestments were made in some of the companies in its portfolio.

HQ CapiTech brought its activities in line with the orientations of Hydro-Québec's strategic plan by focusing on energy and opting for a partnership approach to investment.

Beyond its role as an investor, HQ CapiTech has positioned itself as a value-added venture-capital company, helping make Québec a hub of the venture-capital market specializing in energy-related technologies in North America. While 1997 was a transition year, 1998 saw the subsidiary acquire the means needed to reach its objectives. HQ CapiTech ended the year with a profit of $1.6 million, compared with cumulative losses of $59.8 million in 1996 and 1997, not including the results of Cedars Rapids Transmission Company.

Pooling Resources and Expertise

HQ CapiTech concluded a number of partnership agreements during the year. It formed its first major partnership with the QFL Solidarity Fund by creating two energy financing and investment funds with a total value of $130 million, under the name Énergie Capital.
HQ CapiTech also established a special collaborative relationship with Hydro-Québec's world-renowned research institute, IREQ, which performs technology audits on its proposed investments.



An investment in an energy-related venture-capital fund was concluded with Nth Power Technologies. This step is one in a series intended to achieve HQ CapiTech's objectives in terms of venture-capital partnerships in Québec and beyond its borders, particularly in initiatives that monitor technological developments.

Domosys was refinanced with major partners: SOFINOV, the Société générale de financement and the QFL Solidarity Fund. M4 Technologies got off to a new start, and a promising investment was made in the Société des Technologies de l'Aluminium (S.T.A.S.).

Lastly, HQ CapiTech improved its internal processes and consolidated its management team. It also adopted a corporate governance policy and drew up an investment policy.

Marketing of Technologies, Rationalization, and Promising Investments

Hydro-Québec carried out an extensive rationalization of its patents and marketing licenses, canceling them where the royalties were unsatisfactory, collecting arrears and dropping unpromising patents. It reiterated its confidence in M3i and increased its stake in that venture; it can now ensure better follow-up and greater vigilance in management practices. Other promising projects include the ACEP polymer-electrolyte battery, a technology Hydro-Québec further developed during the year and which is about to make a breakthrough with its first commercial applications.

"A Beetle with an elastic power plug. The tires repair themselves automatically," explains Vanni Lussier, age 8 1/2. The budding artist's vision of the electric vehicle was shown at the symposium on electricity and the future on October 15.

To profit from their telecommunications assets and expertise, Hydro-Québec and Bell Canada reached an agreement for the January 1999 creation of Connexim, a joint venture that will offer outsourcing of internal telecommunications network management to large and mid-sized companies. Connexim will generate new revenue for the two partners and will create advanced-technology jobs in a high-potential area of the telecom industry. In fact, it already anticipates significant increases in the next few years to its work force, which now stands at 500.

IREQ and LTEE: incubators for innovation

In accordance with the orientations in Hydro-Québec's strategic plan, IREQ (Hydro-Québec's research centre) and LTEE (the electrotechnology research laboratory) embarked on a rigorous process designed to reevaluate their practices and bring them closer to their customers and markets. With this in mind, IREQ held a forum on technological challenges and business opportunities, bringing together some 400 researchers, research managers and R&D users from a variety of backgrounds.

In the last 30 years, Hydro-Québec has invested some $2 billion in its research laboratories, IREQ and LTEE. Over that same period, the company developed more than 200 inventions, obtained close to 1,500 patents and about 100 licenses, half of which are still active, and made several million dollars' worth of sales under license. It produced a significant number of innovations that ensure the reliability of Hydro-Québec's power system.

Fiscal 1998 was full of accomplishments. Following the ice storm in January, an ambitious R&D program for transmission and distribution was launched. One section of this program, line de-icing, was the subject of major research efforts: ice making and de-icing tests, thermal de-icing using the Joule effect in conductors, thermal de-icing of ground wires, and failure analysis. Patent applications were filed, and a mechanical tool for gradually de-icing ground wires was designed.

The laboratories were busy, as well, with a study on static compensator behavior, start-up of the first commercial application of the Droscar process in France, development of baseboard heating units for residential use, and research on two new processes — plasma-assisted wet oxidation and high-density infrared — to name only a few achievements.

IREQ and LTEE also delivered several innovative products related to generation, transmission and distribution technologies.

experts on the world stage

HQI's activities generate considerable economic spinoffs for the Québec economy.

Hydro-Québec International, Investor and Developer

In its *Strategic Plan 1998-2002*, Hydro-Québec gave its subsidiary HQI a new mandate, namely to invest on international energy markets. The company will provide HQI with $1.2 billion in investment capital over the period covered by the plan. As well, in February 1998, HQI and the QFL Solidarity Fund concluded a financial partnership agreement under which the Fund will invest $500 million over five years in projects with HQI, raising the total investment capacity to $1.7 billion.

During 1998, equity commitments totaling $137 million went to the acquisition of companies and the construction and operation of new energy facilities.

A Dynamic International Presence

In January 1998, HQI secured a $240-million contract to build and operate an interconnection between Peru's northern and southern power grids. To carry out this project, the consortium headed by HQI awarded an engineering, supply and construction contract to Hydro-Québec subsidiary SEBJ (Société d'énergie de la Baie James), and an operation and maintenance contract to TransÉnergie, the Hydro-Québec division responsible for electricity transmission.

Elsewhere in Latin America, HQI commissioned a 10.6-MW power plant in Costa Rica, built in partnership with a Costa Rican firm and two Québec companies. The project also involves the construction of a 34.5-kV transmission line approximately 10 km long.

In partnership with the American company Coastal Power and the QFL Solidarity Fund, HQI negotiated the acquisition of a 300-MW hydroelectric generating station in Panama. This project is of major strategic importance since it gives HQI and its partners a key role in a planned interconnection between Central American countries.

In other energy transmission undertakings, HQI reached an agreement with Australia's NorthPower for co-ownership of a direct current interconnection that will link two grids in the states of Queensland and New South Wales. TransÉnergie will supply technical expertise for the system's construction and operation.

HQI made its first investment in the United States through its subsidiary MEG International (Multinationale de l'électricité et du gaz). This project involves building a gas-fired power plant on the site of the Champion International Corporation paper mill in Bucksport, Maine. The plant is slated for commissioning in the year 2000. The electricity generated is intended for Champion International Corporation, to supply its mill operations, and for H.Q. Energy Services (U.S.), a subsidiary of H.Q. Energy Marketing, which may sell it on the open market.

Lastly, in partnership with Dessau-Soprin, a large Québec engineering firm, HQI established Éconoler International. The mission of this new business venture is to invest world-wide in the creation of companies providing ecological energy services and specializing in projects that reduce energy consumption. Éconoler's first project is now under way in Tunisia.

Profiting from Our Services

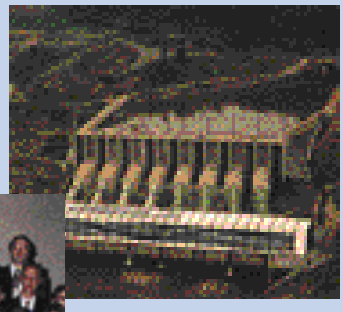
The ice storm of January 1998 had a sizable impact on the activities of the Projects and Construction Division, which contributed to efforts to restore and reinforce the power system and worked on the transmission system loop projects in the Montréal, Montérégie and Outaouais regions.

Strict cost control and innovative technical solutions have yielded savings of some 6% on the costs of this division's various projects.

To ensure the growth of Hydro-Québec's International Affairs and Projects Group, the Projects and Construction Division and SEBJ, a subsidiary of Hydro-Québec, now act jointly as strategic advisors for investments in plant and equipment. They also offer engineering and management services for energy-related projects in Québec and all over the world.

twenty years of international recognition

In addition to its new status as an investor, HQI pursued the mission it has fulfilled for the last 20 years: selling professional services and technologies around the world. In 1998, professional services in the form of technical assistance, training and management for energy generation, transmission and distribution projects brought in revenues of $21 million.



In Asia,

HQI was awarded a contract by Atomic Energy of Canada Limited (AECL) to train Chinese specialists in maintaining Candu nuclear generating stations. This contract follows the one previously signed with AECL for the training of some 230 Chinese specialists in the fields of nuclear plant management, operation and maintenance, as well as technical support. These two contracts are worth a total of $14 million. HQI also supplied technical assistance in the form of equipment to be used in the construction of a control centre for the Bangladesh Power Development Board in Bangladesh.

In Africa,

HQI was awarded a $24.2-million engineering, supply and construction contract for a new 37.4-MW thermal generating station in Senegal, along with a contract to train operating personnel for this plant, which will run on natural gas. HQI signed another contract, with the Cameroon national power authority, to study the behavior of the retaining structures at Song Loulou hydroelectric development, one of the largest in Africa. It also carried out studies for rehabilitating the distribution system in Huambo, Angola. As well, HQI conducted a rate study in Benin and renewed its cooperation agreement with STEG, the Tunisian gas and electric utility.

In the Middle East,

HQI obtained a contract from Kuwait's ministry of electricity and water. The assignment is essentially to assist the ministry in evaluating tenders for metering, prepayment and remote-reading systems for electricity and water meters. HQI will oversee the installation of these systems.

In the Caribbean,

HQI's technical assistance contract with Électricité d'Haïti was extended to cover upgrading the electricity generation and distribution system in the province of Jacmel. The agreement also includes technical marketing assistance.

In Europe,

following the extension of its contract to refurbish hydroelectric generating stations and modernize the control centre for Ukraine's national power system, HQI won a new contract to carry out projects, administer contracts, train engineers, and provide other technical assistance.

In Central America,

HQI, in collaboration with Teqsim International, a subsidiary of Hydro-Québec's TransÉnergie division, concluded an agreement worth nearly $1.5 million to supply a power-system simulator to the Instituto Costarricense de Electricidad in Costa Rica.

the Y2K bug?

we've got it covered

"I'm crazy about computers. My aim is to make life easier for all Hydro-Québec employees who use a computer. I'm needed everywhere."

on the threshold of a new millennium

Employees contribute to the growth and profitability of Hydro-Québec through their relations with the company's customers and partners and through their involvement in developing and promoting its products and services.

To achieve its growth and profitability objectives, Hydro-Québec continued to introduce management tools and practices adapted to the new orientations in its strategic plan.

Rallying Employees: A Corporate Objective

After several years of rationalizing its work force, the company completed the reorganization of its senior management administrative structure and the streamlining of certain areas of activity. It also put into effect a new code of decision-making powers establishing management rules that are better suited to a complex, changing environment.

Conditions for first-line managers were harmonized with those for the company's other managers, which are based on results delivered and the achievement of individual and corporate targets.

In employee relations, Hydro-Québec set up a joint working committee with the Canadian Union of Public Employees, which represents over 70% of the company's employees. To ensure the establishment of a true social contract, this committee was assigned a twofold mandate: to provide each administrative unit with the necessary resources at the appropriate work places, a process that was more than 80% complete by the end of 1998, and to contribute to the company's transformation and growth, an undertaking that will begin in 1999.

A Management System in Harmony

To support its growth objectives, Hydro-Québec introduced new management tools; for example, it is replacing its 150 or so computer systems with SAP R/3, a set of integrated software programs offering data-sharing capabilities. Implementation of the *Harmonie* project will accelerate the re-engineering of processes while facilitating decision making and promoting the integration of better business practices for its approximately 6,000 users.

Hydro-Québec again conducted a survey in 1998 to understand its employees' concerns. While the general satisfaction level fell from 1995, we nevertheless note that average satisfaction with the 17 expectations judged most important by employees rose, particularly with respect to increased responsibility, recognition and empowerment for employees.

In view of the rapid changes in technology and the company's operating environment, Hydro-Québec continued to optimize its management of training activities, an endeavor begun the year before. As a result of the major steps taken, training resources were stabilized at 378 person-years, down 43% from previous years. Training expenses totaled $61 million, or 4.1% of total payroll.

Also noteworthy in 1998 was the utility's reduced rate of work accident frequency, which was 18.56 accidents per million hours worked. This 43.1% reduction in the accident frequency rate is attributable to a 40.3% decrease in the number of incidents despite a 5% increase in the number of hours worked.

At the end of December, Hydro-Québec's work force totaled 20,446, slightly exceeding the target set for 1998. This was mainly due to the need for additional personnel to reinforce the transmission and distribution systems following the damage caused by January's ice storm. In accordance with the strategic plan, the company is maintaining its target of closing the year 2000 with a total work force of 19,500, to be adjusted subsequently in line with corporate growth.

language guidelines

In 1998, as part of the revision of corporate guidelines, the main orientations of the language policy adopted at the end of 1997 were integrated into the corporate governance policy.

Hydro-Québec's standing committee on language met twice in 1998. The committee's endeavors dealt mainly with formulating a directive for the application of the *Charter of the French Language*. This directive was approved in November.

The proposed policy and directive were intended to fulfill the company's obligations under the government's policy concerning the use and quality of French in public administration. The final version of the guidelines was conveyed to the *Office de la langue française*.

Hydro-Québec also provided the *Office de la langue française* with its annual report on the application of the policy on the use of French in information technologies.

Transition to the Year 2000

In 1998, Hydro-Québec adjusted its computer systems to ensure that the transition to the year 2000 will not cause any inconvenience to customers or employees. An inventory was drawn up of all products deemed critical. Because reliability of the power supply to customers is all-important, particular attention was paid to systems used to manage transmission and distribution. Changes were made to more than 2,500 information systems and approximately 15,000 computers, as well as the 895 models of automatic devices installed on the transmission system and in generating stations.

Products certified Year 2000 compliant will undergo integration tests scheduled to end in mid-1999. Since 1997, Hydro-Québec has been requiring that its suppliers take the necessary measures to ensure that their computer systems are ready for this changeover.

a heritage to protect and develop

At the seventh annual E7 Summit, Hydro-Québec reiterated its firm commitment to environmental preservation and endorsed proposed international standards for sustainable development. The E7, an organization comprising the eight largest utilities in the world, plays an active role in protecting the environment and promoting the generation and rational use of electricity.

In Québec, efforts to restore service and increase the reliability of the transmission and distribution systems following the ice storm in January 1998 were undertaken with constant care for protecting the environment. The urgency of the situation led Hydro-Québec to establish new approaches to environmental studies in close cooperation with all the government departments concerned, and to ask the government to streamline its public consultation process.

For the utility's generation projects, new processes for public information and consultation were also developed. These include information and discussion panels designed to maintain relations with local community representatives from the time preliminary studies begin.

The many consultations with Aboriginal and local communities, conducted with a view to maintaining an ongoing dialogue, enabled Hydro-Québec to pinpoint the environmental issues raised by its generation projects and determine the best ways of integrating the planned installations into the host environment.

Beyond the usual measures for mitigating the impact of its projects, Hydro-Québec worked with communities to develop local resources and project sites. In 1998, as part of the Sainte-Marguerite-3 project, Hydro-Québec gave out grants of nearly $4.5 million for six environmental enhancement projects and two regional development projects, including improvements to the Gallix ski hill, construction of an interpretive centre in Port-Cartier for learning about the Rivière aux Rochers salmon, and construction of a community centre in the town of Lac-Daigle.

A Commitment to Sustainable Development

Hydro-Québec continued implementation of an environmental management system in compliance with ISO 14001 and developed tools for reporting annually on its environmental performance. Consequently, in addition to strictly managing the operation of its facilities, Hydro-Québec is acquiring the means to integrate the environment into its decision-making processes at every stage in the development, start-up and management of its products, services and plant.

The recognition of hydroelectricity as renewable, green energy at the national conference of Canadian environment and energy ministers in October 1998 is of strategic importance in the effort to control the greenhouse effect.

Hydro-Québec continued to participate in the Environmental Commitment and Responsibility Program of the Canadian Electricity Association (CEA). Under this program, which the company joined in 1997, each participant is committed to implementing an environmental management system consistent with the internationally accepted ISO 14001 standard by the year 2002 and to report annually to the CEA on its environmental performance as measured by common indicators. As of December 31, 1997, Hydro-Québec's performance compared favorably with the overall performance of member utilities, especially in terms of energy conversion efficiency and atmospheric emissions of carbon dioxide (CO_2), sulphur dioxide (SO_2) and nitrogen oxides (NO_X).

In 1998, the company published its third environmental performance report, which presented the principal achievements of 1997 and outlined the main environmental issues and challenges faced. The report confirms Hydro-Québec's excellence in this field and its determination to continue rigorous environmental management.

The desire to protect resources can also be seen in our pursuit and development of systematic recovery operations designed to maximize the reuse and recycling of waste materials. According to a report covering 1997 and part of 1998, these operations generated over $15 million in revenue, plus substantial savings. Reuse and recycling apply to a wide variety of fields: large-scale sale of metals, vehicles and lead batteries; reconditioning of electrical equipment and reinstallation on the power grid; recovery of cut timber from the site of the Sainte-Marguerite reservoir; recycling and reuse of thousands of printer cartridges; recovery of hundreds of tons of paper; recovery and recycling of tons of glass, metal and plastic; composting of several dozen tons of food waste; large-scale recovery and processing of hazardous solid and liquid waste; and recovery, reuse and recycling of some 20% of distribution poles. And the company has used over 8 million litres of reclaimed oil in its transformers in the past two years.

Hydro-Québec reached a milestone in the management of hazardous waste in 1998 with the completion of its polychlorinated biphenyl (PCB) disposal plan. All PCB-insulated units, which had been removed from the power system over the years and stored, were disposed of.

In addition, Hydro-Québec increased its efforts to advocate the use of hydroelectricity as a way of controlling the greenhouse effect. To this end, it helped found the Canadian Hydropower Association, whose mandate is to promote the comparative advantages of this energy option. Hydro-Québec also takes part in the activities of the International Energy Agency and the World Commission on Dams, which establish environmental guidelines for the construction of new hydroelectric facilities.

do I think I can change the world? you bet!

"I've always found it important to help the people around me. Changing the world is something you do little by little and day by day."

partner in the growth of Québec society

Our activities as a whole serve to enhance the value of Québec's greatest collective resource — Hydro-Québec. The company also contributes to the development of organizations whose mission is to improve the lives of all Quebecers.

Hydro-Québec is concerned about making a significant contribution to the economic, social and cultural growth of the society in which it operates, and ensuring the sustainable development of resources. As the manager of collective resources, it has a duty to play a dynamic role in fostering the full development of Québec society.

Hydro-Québec accomplishes most of its social mission through the economic activity it generates and the resulting benefits enjoyed by Québec society as a whole. As well, in supporting a large number of non-profit associations and organizations and sponsoring events throughout the province, it contributes to the social and cultural development of communities.

The total budget for community involvement is approximately 1% of the average of the following: net income produced in the two previous years, anticipated net income for the current year, and forecast net income for the next two years. For 1998, this amount came to $8.8 million.

Support for Associations and Organizations

Contributions of a philanthropic nature were given in the form of money or material goods to non-profit organizations in the areas of education, health and humanitarian aid.

In education, the company provided support to universities in all regions of Québec, principally by contributing to their basic funding. It also sponsored a dozen research chairs in fields related to its activities, such as the environment, electricity, electrochemistry and hydrology. It supported a research program in small-business management at the Université du Québec à Trois-Rivières, along with a Concordia University program in home automation and building automation. In addition, the company awarded scholarships to university students at the undergraduate and post-graduate levels.

In the health field, Hydro-Québec continued to work with the Québec health-care research fund, in order to take advantage of this organization's expertise to evaluate the research programs the company wishes to encourage. In 1998, Hydro-Québec supported research activities focusing on mental health, children's health, and the environment, and will offer awards for excellence to researchers working in these fields.

Hydro-Québec supported community organizations working to help those in need all over Québec. Areas of special focus were organizations devoted to youth housing and literacy, as well as food banks and organizations specializing in mental health or in home visits to the elderly and isolated. The utility also gave various material goods to organizations dedicated to reintegrating young people into society through job training.

In 1998, Hydro-Québec was still the largest donor to Centraide in Québec, thanks to increased participation by employees and pensioners, whose contribution was then matched by the company's donation. The total contribution amounted to $3,104,548, a new high. Hydro-Québec extends its thanks to employees and pensioners for their generosity.

To encourage employees to volunteer for causes close to their hearts, Hydro-Québec initiated a program called PRISE, under which they can receive up to $1,000 to help an organization carry out a community project of a socioeconomic nature.

Sponsorships

Québec culture remained an important area of sponsorship for Hydro-Québec, which provided financial support to a number of events throughout Québec.

The company sponsored a variety of activities to foster the growth of French-language song, among them the competition *Ma première Place des Arts*, the *Week-ends de la chanson*, the *FrancoFolies de Montréal*, the 10th *Prix Miroir* French-language song awards that are a part of Québec City's summer festival, and the June 24th gala also held in Québec City.

Also in music, it supported the international festival in Lanaudière for a third consecutive year. And it was associated, for the fourth year in a row, with the international voice competition in Trois-Rivières.

Hydro-Québec provided assistance to business organizations that contribute to regional development or to increasing Québec's visibility and influence beyond our borders. For the first time, the company joined the sponsors of the Access 51 directory, an initiative of the Businesswomen in Action Committee of the Board of Trade of Metropolitan Montréal to promote the recruitment of women on corporate boards of directors.

In addition to including concern for the environment in its decision-making processes and involving Aboriginal and local communities in the environmental assessment of its projects, Hydro-Québec gave priority to supporting projects oriented toward sustainable development. It maintained its commitment to the protection and enhancement of its built heritage and the use of its facilities and property by third parties, so long as plant reliability, security and profitability are not compromised.

statement by the Board of Directors on corporate governance

To ensure that the company is well managed, the Board of Directors has established state-of-the-art corporate governance principles which guide its actions in the best interests of its shareholder, employees, customers, and Aboriginal and local communities in which the utility operates. These principles represent fundamental commitments in the following areas: corporate management philosophy, strategic management, risk management, control of activities, communications, and ethics.

In consultation with management, the Board has acquired the necessary tools to fulfill its responsibilities, including:

- a strategic plan describing Hydro-Québec's main orientations for 1998 to 2002, and defining the issues at stake, the business context and the strategies to be pursued;
- an annual business plan comprising the capital and operating budgets, along with annual performance objectives for members of corporate management;
- a monthly review of financial results, allowing the Board to monitor changes in results compared with the targets set in the strategic plan and the business plan;
- a monthly review of the management of financial risks, presented quarterly;
- an annual report on integrated business risk management.

The Board also charged its committees with the preliminary study of a number of issues, in order to benefit from the expertise and experience of each member.

Decision-Making Powers

To increase the company's overall efficiency and revitalize its organization, the Board requested a restructuring of approval powers in 1998.

By giving management and the business, service and corporate units new decision-making responsibilities and by providing managers with increased latitude, the new division of decision-making powers allows the Board to devote as much time as possible to strategic issues and to monitoring financial objectives.

A further aim of the new division of decision-making powers is to establish clear, exclusive accountability and, through the application of these powers, to make effective use of the expertise and skills of more of the company's human resources. This approach also advocates the institution of appropriate controls to support decision making and accountability.

Lastly, the Board asked the Ethics and Corporate Governance Committee to undertake an assessment of the Board's own performance and operation.

New Internal Regulations

At the Board's request, Hydro-Québec's guidelines, in particular its policies and directives, were all reviewed this year from the viewpoint of accountability and flexibility.

The new policies set forth some 100 general principles covering all the company's activities. Organized under nine headings, they are presented as commitments by Hydro-Québec toward its customers, employees, suppliers, business partners, and shareholder.

The company has drawn up approximately 40 directives to standardize the rules essential to its smooth functioning. These directives, which are cross-functional guidelines, leave Hydro-Québec's units the full latitude they need to fulfill their missions effectively.

Hydro-Québec has also instituted an accountability obligation concerning compliance with its policies. In addition, units which establish directives will regularly monitor the effectiveness of their own guidelines.

a simplified purchasing policy

As part of the overhaul of its guidelines, Hydro-Québec combined its policy for the acquisition of goods and services with its policy for awarding and managing professional service contracts. The new policy "Our Acquisition of Goods and Services" is intended to simplify and update the presentation of the concepts involved.

To ensure the security of its supplies, the company also established a three-part strategy: application of supply and partnership agreements, integrated management of inventories, and use of the one-stop approach to the supply of goods.

In 1998, Hydro-Québec's acquisitions from its suppliers totaled $1.56 billion: $776 million in goods and $783 million in labor and services, including professional services. Of these purchases, 74.5% were from companies based in Québec.

The company awarded nearly all its contracts for strategic goods and services to suppliers that are ISO 9000 certified. This practice will enable the company to become involved at an early stage in evaluating quality management for the goods and services purchased.

report of activities of the Board of Directors

The Board of Directors is composed of a maximum of 16 members appointed by the Québec government for terms of no more than five years, as well as a President and Chief Executive Officer appointed by the Board with government approval. The Deputy Minister of Natural Resources is an ex officio, non-voting member of the Board.

The Board of Directors met 13 times during the year, with an attendance rate of over 70%. The Executive Committee held 16 meetings, while the other committees held 29 in all.

With a view to sound corporate governance, the Board regularly monitored the progress of Hydro-Québec's strategic plan as well as its business plan, objectives and the financial results of each of the subsidiaries in which the company is sole shareholder.

and principal committees

Audit

The main role of the Audit Committee is to assure the Board of Directors that the financial statements are in order, that internal controls are adequate and effective, and that suitable mechanisms are being applied to identify and manage the major internal and external risks to which the utility is exposed. The committee reads the internal audit reports and the action plans resulting from recommendations by the unit responsible for internal controls and the General Auditor.

In 1998, this committee monitored, for the second year in a row, the progress of work toward Year 2000 compliance and installation of SAP R/3 software to replace 150 computer systems throughout the utility. It also studied preventive maintenance of overhead distribution system equipment, management of energy supplies, and internal communications. The committee continued to review receivables of more than $1 million.

Finance

The main role of the Finance Committee is to advise the Board on matters of finance, especially the annual financing program, borrowing, management of corporate funds, insurance, the business plan and ensuing annual budget, and the impact of inflation, interest rates and exchange rates on the company's forecasts.

In 1998, the committee examined the annual financing program, as well as issues relating to risk and insurance management. It also conducted an in-depth analysis of the business plan and corporate objectives for 1999 and studied the frame of reference for integrated business risk management and related elements: the 1999 action plan on integrated business risk management, the portfolio of major risks and the evaluation of major risks arising out of current economic conditions.

Human Resources

The main role of the Human Resources Committee is to advise the Board on matters of hiring, total compensation, training, succession planning and other subjects, including the hiring, appointment, annual performance review and compensation of the President and Chief Executive Officer and other senior management staff.

In 1998, the committee recommended that the Board adopt the human resources management policy, and studied various issues related to corporate structure and to management and employee compensation.

Ethics and Corporate Governance

The Ethics and Corporate Governance Committee ensures that the utility is well managed in accordance with the highest standards of ethics and corporate governance and with laws and regulations. The committee also advises the Board on the application and follow-up of the Code of Ethics for Directors and Executives of Hydro-Québec. It formulates recommendations on rules of conduct governing the operation of the company's business.

In 1998, the committee recommended that the Board adopt policies on corporate governance, Hydro-Québec's relations with its business partners, and the acquisition of goods and services. It also recommended the adoption of the Code of Ethics of Hydro-Québec International. Finally, the committee drew up a review procedure enabling the Board to assess its own performance and its members to appraise their individual contributions.

Environment and Corporate Social Responsibility

The primary role of the Environment and Corporate Social Responsibility Committee is to advise the Board on environmental management, public health and safety, relations with Aboriginal communities, social responsibility and corporate image. The committee receives all reports and violation notices related to environmental incidents.

During the past year, the committee recommended the adoption of policies on the environment and the company's social role. It studied the environmental performance assurance program and examined the environmental performance report submitted to the Board.

Pension Fund Management

The pension fund management committee was established to advise the Board on investment management, portfolio performance, evaluation of portfolio managers and the management of the pension plans, including changes in pension obligations.

In 1998, the committee recommended that the Board adopt the revised version of the policy on the management of pension fund investments, and that the pension plans of four nationalized companies be merged with the Hydro-Québec pension plan. It also reviewed the performance of the pension plan portfolio and specialized portfolio managers, as well as the investment strategy for 1999.

financial review

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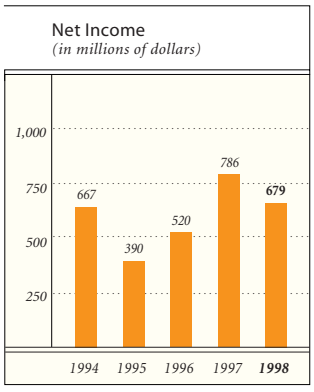


Overview

Although we faced daunting conditions during the year — the ice storm in early 1998, very mild temperatures and instability in financial markets — the 1998 financial results are an overall affirmation of the progress made in carrying out our *Strategic Plan 1998-2002*.

Net income stands at $679 million, down $107 million or 13.6% over 1997, which was one of the best years ever in terms of profitability. Compared with the average net income of the last five years, the results obtained in 1998 are up $54 million, or 8.6%. The exceptional events of 1998 are the reason net income fell below the level targeted in our strategic plan, that is, $925 million. However, the negative financial impact of these events was in large part mitigated by measures taken during the year.

In 1998, to boost sales, we stepped up our efforts on energy markets and continued developing new products. Our growth strategy focusing on alliances and partnerships continues to bear fruit: our 1998 sales are up $389 million, or 4.6%, while revenue from electricity sales passed the $8 billion mark for the first time.

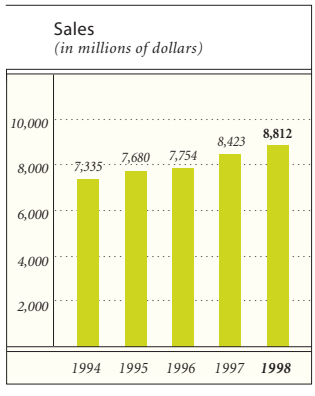
Rigorous management yielded a 2.5% reduction in operating expenses, compared with 1997. As a percentage of revenue, operating expenses are lower than in the preceding year.

The active management of long-term debt and related financial risks limited the increase in financial expenses to 3%, despite the unfavorable financial market fluctuations in relation to 1997, particularly due to the exchange rate on the U.S. dollar and interest rates.

Investments, other than those necessitated following the ice storm, were aimed principally at augmenting generating capacity, and maintaining or enhancing the reliability of both generating facilities and transmission and distribution systems. They will enable us to reach our electricity sales objectives.

As our capitalization rate remained at 25% in 1998, we were able to pay dividends of $279 million at year-end, compared with the $357 million paid last year.

The decline in net income reduced the return on revenue and the return on equity. Return on revenue stands at 7.7%, against 9.3% last year. Return on equity amounts to 5.2%, compared with 6.2% in 1997. However, continued efforts to maintain a dominant position within an increasingly competitive business environment, coupled with a return to more customary operating conditions in 1999, will enable us to reinvigorate growth and enhance our performance and profitability.



1 1998 Highlights

In its analysis, management first summarizes the events that had a decisive impact on the company's activities over the year. This look back is intended to present a complete picture of the financial repercussions of these events, in terms of both results and financial position. The events cited are inextricably linked to our integrated business risk management strategy. The Corporation and its subsidiaries are collectively referrred to as "Hydro-Québec."

1.1 The January Ice Storm

The ice storm had material consequences for the company's activities and accounts. All units were mobilized to respond to the urgency of the situation and to subsequently implement long-term corrective measures. These extraordinary circumstances resulted in substantial costs and forced us to review our plans for 1998.

The financial impact of the ice storm includes the cost of emergency measures, the investments required to promptly return power to customers and repair installations, as well as the business losses related to electricity sales. The Québec government has undertaken to assume all costs related to the emergency measures and the portion of the required investments corresponding to the net cost of restoring the system to its condition prior to the disaster. The Québec government has accordingly applied to the federal government for financial assistance.

The $182 million in expenses incurred in 1998 under emergency measures is mainly related to clearing and repair costs and to additional purchases of fuel oil and electricity. This amount will be reimbursed no later than December 31, 2002.

To promptly restore power to customers and repair installations, we invested $456 million in rebuilding the transmission and distribution systems. The Québec government has granted compensation of $235 million, which corresponds to the net cost of restoring the system to its condition prior to the ice storm. The portion of investments exceeding the compensation granted, or $221 million, is borne entirely by the company. The compensation will be paid in two phases: from 1998 to 2002, the annual payments will range from $10 million to $11.2 million; the balance will be paid in equal annual installments of $36.5 million until 2007.

The Québec government has also granted Hydro-Québec compensation with respect to financing costs assumed by the company for the investments. These costs were based on a fixed financing rate of 7.2%. An annual amount of $16.9 million will be received over 10 years.

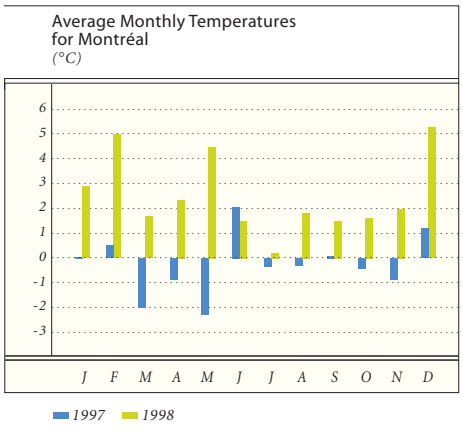
Overall, the compensation granted by the Québec government will ensure that additional costs related to the ice storm are not passed on to customers through electricity rates.

The business losses related to electricity sales are borne entirely by the company. These losses amount to $84 million, of which $72 million is related to sales in Québec and $12 million to sales outside of Québec. The losses comprise the following items:

- reduced demand during power outages;
- higher-than-normal credits granted for service interruptions related to power or fixed charges, depending on the type of customer.

Lastly, as part of a mandate given Hydro-Québec by the civil protection authorities, the Corporation initiated the *Génératrices* mission in January 1998 to ensure access to emergency generators to restore essential electricity service. In cooperation with Emergency Preparedness Canada and the Canadian Armed Forces, Hydro-Québec made 570 generators available to the public, in particular to farmers, strategic industries, hospitals, shelters and school boards. At the end of the mission, it was agreed to maintain a permanent stock of generators to meet emergency situations.

The ice storm underscored the importance of maintaining continuity of electricity service by Hydro-Québec. Accordingly, plans for major projects were reviewed to prioritize work aimed at ensuring the security of electricity supply to Québec customers. A substantial portion of the construction work required for these priority reinforcement projects was undertaken urgently in 1998. (For further information, refer to Investing Activities in the Financial Position section.)



1.2 Exceptionally Mild Weather

In 1998, Hydro-Québec experienced the mildest temperatures in its history. In fact, Québec temperatures recorded in 1998 were the warmest since Environment Canada began compiling weather statistics about 50 years ago. Temperatures were an average 2.5°C above seasonal values, particularly in the more densely populated southern and western regions of Québec.

As indicated in the graph opposite, temperatures were generally high throughout the year. The greatest variances from seasonal values were particularly noted in the months when buildings require heating. The lowest variances were concentrated in the summer when air conditioning is normally used.

Since electricity is the predominant heating source for premises, the mild weather during the months when heating is required had a major impact on electricity sales in Québec. A substantial proportion of the residential and farm sector (70%) uses an all-electric system for home heating. Moreover, the slightly higher demand usually attributable to air conditioning during summer heat waves was absent this year, since temperatures remained close to seasonal values during the summer months.

Impact on Sales of Temperature Variances in relation to Seasonal Averages

	1998		1997		Change 1997-1998	
	(negative impact)		(positive impact)		(negative variance)	
	TWh	$M	TWh	$M	TWh	$M
Residential and farm	-3.0	-175	0.6	36	-3.6	-211
General and institutional	-0.7	-42	0.2	14	-0.9	-56
Industrial	—	—	—	—	—	—
Other	-0.1	-8	0.1	2	-0.2	-10
Total	-3.8	-225	0.9	52	-4.7	-277

The mild temperatures of 1998 in relation to seasonal values reduced revenue from sales by $225 million. In comparison with the 1997 results, this year's decline in revenue is more pronounced since last year's temperatures were below seasonal values. Consequently, the 1998 temperature variances resulted in a $277-million drop in revenue from sales compared with last year.

The exceptionally mild temperatures of 1998 were not exclusive to Québec and Canada, where ice storms were followed by heat waves. Abnormally high temperatures were observed all over the world. Several extreme climatic events occurred, including severe droughts, devastating forest fires, precipitation ten times the normal rate, and heat waves in the U.S. It was an exceptional year for temperatures and weather disturbances in Québec as everywhere else.

1.3 Instability in Financial Markets

The financial crisis that began in Asia in July 1997 continued to leave its mark on the global economic situation in 1998. The economic instability resulting from the crisis affected the entire world economy, and the tremors were also felt in the company's financial results. Despite the effects of unfavorable market fluctuations in relation to last year, integrated financial risk management enabled us to reduce the situation's negative effect on net income by more than 40% compared with last year, to the point where the impact did not exceed $100 million.

The Corporation has used an integrated approach to managing its financial risk for several years. Our risk management strategy is aimed at optimizing the risk-return ratio between flows related to currency, interest-rate and aluminum-price fluctuations, and the company's ability to withstand uncertainty related to its results. In the event of favorable market movement, this strategy enables us to maximize potential gains, while limiting, in the reverse situation, the maximum loss to the level established by the Board of Directors at the beginning of the year.

Canadian Dollar Exchange Rate in relation to the U.S. Dollar

Market instability resulted in the appreciation of the U.S. dollar, viewed as a safe-haven currency, in relation to most other currencies. The negative impact was particularly felt in countries that export natural resources, including Canada, with the Canadian dollar hitting an all-time low in 1998.

The sharp fluctuation of the Canadian dollar in relation to the U.S. dollar in 1998 had consequences for the company, primarily in terms of financial expenses arising from the portion of long-term debt denominated in U.S. dollars and from the sales the company makes in that currency. As a result of the variation in the exchange rate, financial expenses rose by approximately $200 million over the preceding year. However, nearly 80% of this adverse effect was offset by the increase in revenue from sales and the use of derivative instruments in active management.

Interest Rates

Despite global economic instability, the U.S. economy performed beyond expectations in 1998. A very low inflation rate, coupled with forecasts of an impending economic slowdown, led to an appreciable drop in the long-term price of money. In Canada, we experienced a rise in short-term interest rates over the first eight months of the year in order to support the Canadian dollar on the markets. The rates then declined, reflecting the U.S. trend.

The adverse effect of the change in interest rates on financial expenses, related mainly to the variable-rate portion of our long-term debt, amounts to approximately $100 million compared with 1997. However, the company took advantage of lower long-term rates to renegotiate more advantageous terms for certain debts and thereby limit the negative impact of the interest rate variation. Gains were also realized, compared with last year, as a result of the use of derivative instruments in short-term active management. The negative effect of the interest rate variation on net income was thus offset by more than 70%.

Price of Aluminum

The worldwide economic slowdown resulted in increased reserves of the main base metals, including aluminum, due, in particular, to reduced Asian demand. The low demand, combined with sustained production, intensified the downward trend in the price of aluminum that began in July 1997.

The electricity the company supplies to certain industrial clients in the metals sector is billed at a price based on the price of aluminum. The deteriorating market prices in 1998 resulted in a loss of revenue of nearly $40 million in relation to 1997 prices. However, the negative price fluctuation and the effect on net income were offset entirely by the use of derivative instruments.

1.4 Our Position and Actions on Energy Markets

The strategic plan submitted in fall 1997 was approved by the government in 1998. The orientations adopted for 1998-2002 reflect the business opportunities our core activities offer in Québec and the restructuring of the North American energy markets. Hydro-Québec is the key player in the industrial strategy aimed at Québec becoming an energy hub.

We have taken steps to gain a firm foothold in a deregulated market. In 1997, we obtained our license from the Federal Energy Regulatory Commission, through our subsidiary HQ Energy Services (U.S.), thereby gaining access to the wholesale market and allowing us to conclude transactions in the United States under U.S. market conditions. In 1998, among other initiatives, we opened business offices in Pittsburgh and Boston, and entered the New England market directly as a full member of New England Power Pool.

This year, we took advantages of the changes that marked our business environment. For example:

- short-term sales and purchases for resale, on the rise in a highly active deregulated market. On a business basis, the company purchased electricity at low prices on markets outside Québec for sale at higher prices. Unit prices were higher in 1998 for both sales and purchases;
- storage agreements, under which customers outside Québec store in our reservoirs the energy they buy or produce for future use according to their needs. Storage options also ensure they will be able to store energy in the future. These transactions help optimize the value of our reservoirs;
- tolling, whereby one form of energy is converted into another. By recommissioning Tracy generating station, Hydro-Québec was able to offer services to convert fuel oil into electricity;
- purchase options, as instruments for managing energy needs more flexibly in an age of open markets. Purchase options guarantee that we can purchase energy in a specific timeframe without having to commit to a firm process right away. These options allow us to control prices and minimize energy supply risks.

In 1998, the significant growth in revenue from new commercial activities and the increase in energy purchased for resale are tangible proof of our actions. (For further information, refer to Sales outside Québec, Other Operating Income and Other Expenses in the section Electricity Segment Activities.)

The deregulation of the wholesale electricity market also has a downside. Market players are in the learning phase, which increases the risks. In June 1998, runaway prices in the American Midwest, which soared as high as U.S. $7,000 per megawatthour within a short period, is just one example. Vigilance is necessary and this crisis has proven two irrefutable facts: the material aspect of energy-related operations, which are not only financial, and the importance of sound credit risk management. With this in mind, we are keeping a watchful eye on the agreements we sign to ensure that the transactions are workable and that the energy sold will reach its destination. In addition, we have already instituted credit risk control mechanisms for the counterparties with whom we negotiate on the energy market. Finally, we are diversifying our purchase options portfolio and are dealing only with companies with high credit ratings.

To capitalize on the growth potential from the convergence of the different forms of energy, we adopted the partnership model currently favored by the industry. Our project to construct a cogeneration plant in Maine, in which HQ Energy Services (U.S.) and Hydro-Québec International are involved, marks the first milestone in our thermal-energy supply plan in the United States. In the retail market, our affiliations with Enbridge and other gas suppliers assure us of a timely presence on the deregulated Ontario and U.S. markets.

Finally, we are increasing our growth potential by investing internationally as an industrial partner through our subsidiary Hydro-Québec International.

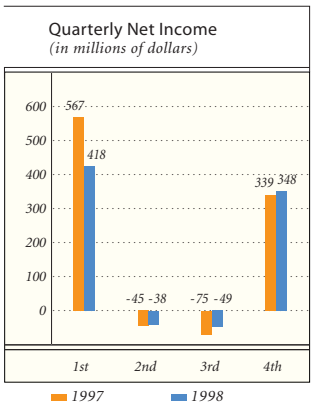
2 Results

In 1998, Hydro-Québec adopted the new recommendations of the Canadian Institute of Chartered Accountants with respect to segmented information. The analysis of results is therefore presented for the Electricity, Gas, and Expertise and Technology segments. The main components of these segments are shown at the beginning of the analysis of segmented results and are illustrated at the end so as to provide an additional reference to this new method of segment reporting.

2.1 Consolidated Results

Hydro-Québec's consolidated net income totals $679 million, compared with $786 million in 1997. Consolidated sales stand at $8.8 billion, up 4.6% over last year. Total expenditure is also up, to $5 billion, an increase of 8.7%. Expressed as a percentage of total revenue, the operating margin dipped from 45.8% in 1997 to 43.6% in 1998. Financial expenses rose 3%, to $3.2 billion.

Comparative quarterly results are reflective of the overall trend for 1998. Activities in the first three months of the year show a $150-million decline in income over the corresponding period in 1997. This decrease is mainly due to the exceptional events at the beginning of the year, specifically the ice storm and the mild weather. However, the results for the remaining three quarters reveal the efforts that were made: they exceed the results of each of the corresponding quarters in 1997, narrowing the gap to $107 million.



2.2 Electricity Segment Activities

The Electricity segment is Hydro-Québec's core business and corresponds essentially to the major components of electricity service: the generation, transmission and distribution of electricity. In 1998, these activities were carried out in the company's business units and in the following subsidiaries and affiliates: Churchill Falls (Labrador) Corporation, HQ Energy Marketing, Cedars Rapids Transmission Company, Société d'énergie de la Baie James, and Hydro-Québec International (generating activities).

The Electricity segment accounts for 97% of Hydro-Québec's consolidated assets. In 1998, revenue from this segment represented 93% of consolidated revenue, against 95% in 1997.

Net income in the Electricity segment is lower in 1998 than in 1997 due to the major impact of unusual events during the year.

Electricity Segment

(in millions of dollars)	**1998**	*1997*
Revenue		
Electricity sales	**$8,007**	$7,927
Other operating income	**185**	95
	8,192	8,022
Expenditure		
Operations	**1,563**	1,606
Other expenditure	**2,844**	2,574
	4,407	4,180
Operating profit	**3,785**	3,842
Financial expenses	**3,088**	3,022
Net income	**$ 697**	$ 820

2.2.1 Revenue

Electricity Sales

Revenue from electricity sales is up slightly, by 1%, to $8,007 million, topping $8 billion for the first time. Total volume of sales, however, dropped by 0.7% to 161.4 TWh. The ice storm and mild temperatures left their mark on electricity sales in Québec. Because of favorable market conditions, the growth in sales outside Québec tempered the fall in revenue and total volume of sales.

Total Electricity Sales

	Sales			*Sales Revenue*		
	1998	*Change 1997-1998*		**1998**	*Change 1997-1998*	
	TWh	*TWh*	*%*	*$M*	*$M*	*%*
In Québec	**142.8**	-4.5	-3.1	**7,193**	-138	-1.9
Outside Québec	**18.6**	3.4	22.4	**814**	218	36.6
Total	**161.4**	-1.1	-0.7	**8,007**	80	1.0

Electricity Sales in Québec

Electricity sales across all markets in Québec totaled 142.8 TWh, down 4.5 TWh, or 3.1%, from the previous year. Overall demand nonetheless rose 1.3 TWh, or about 1%, excluding the effect of the ice storm and mild temperatures. This growth is comparable to 1997 and is the result of a small increase in demand from the majority of our customers.

Revenue from electricity sales in Québec totaled $7,193 million, a decrease of $138 million, or 1.9%. The ice storm and mild temperatures curtailed sales revenue by $349 million compared with the preceding year. This drop was partially offset by the slight growth in demand and rate increases, which pushed up revenue by $214 million, equivalent to 2.9% of revenue in 1997.

The following tables show an analysis of the variation in sales and revenue by sector between 1997 and 1998. The first table compares sales and revenue by sector, irrespective of the source of the variation. The second table shows the effect on sales and revenue of the major events for the year reported in 1998 Highlights.

Electricity Sales in Québec, by Sector

	Sales			*Sales revenue*		
	1998	*Change 1997-1998*		**1998**	*Change 1997-1998*	
	TWh	*TWh*	*%*	*$M*	*$M*	*%*
Residential and farm	**47.7**	-3.5	-6.8	**2,906**	-160	-5.2
General and institutional	**28.8**	-0.8	-2.7	**1,894**	9	0.5
Industrial	**61.8**	0.0	0.0	**2,177**	15	0.7
Other	**4.5**	-0.2	-4.3	**216**	-2	-0.9
Total	**142.8**	-4.5	-3.1	**7,193**	-138	-1.9

Ice Storm

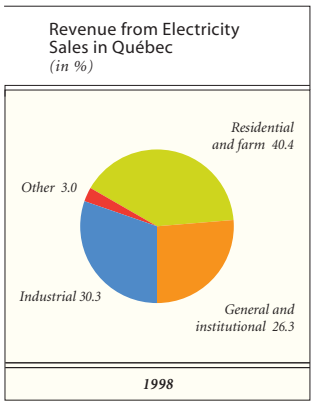
The ice storm is responsible for a drop in demand of 1.1 TWh, or more than 0.7% of total consumption in Québec. Residential and farm customers, who were hit the hardest by the power outages, show the greatest decline in consumption, down 0.6 TWh, or 1.2%, compared with 1997. Overall demand from customers in the general and institutional sector and the industrial sector is down 0.5 TWh, or 0.5%, compared with the preceding year. Lost revenue due to the ice storm amounts to $72 million.

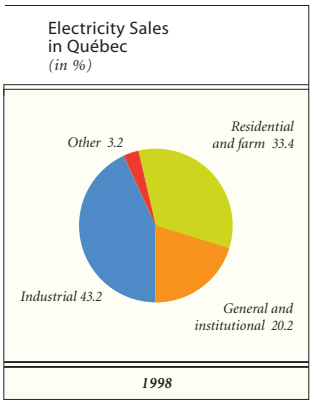
Mild Temperatures

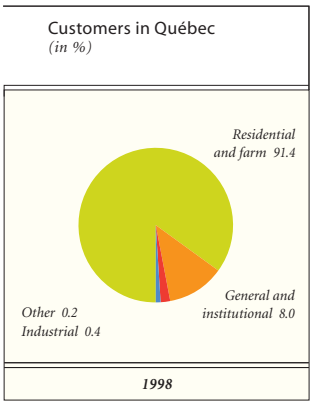
Unseasonable temperatures resulted in an unusual drop in total demand of 4.7 TWh, or 3.2%, from the previous year's sales. Nearly 77% of this decrease, or 3.6 TWh, stems from the residential and farm sector, which is the most sensitive to changes in climatic conditions. The general and institutional sector shows a 0.9 TWh decline and the Other sector only a slight variation of 0.2 TWh. Mild temperatures caused sales to fall by $277 million, or 3.8% of 1997 sales revenue.

Sales Variation Factors, by Sector

	Ice storm		*Mild temperatures*		*Financial markets*	*Other variations*		*Rate increases*
	TWh	*$M*	*TWh*	*$M*	*$M*	*TWh*	*$M*	*$M*
Residential and farm	-0.6	-39	-3.6	-211	—	0.7	44	46
General and institutional	-0.2	-18	-0.9	-56	—	0.3	56	27
Industrial	-0.3	-13	0.0	0	-3	0.3	5	26
Other	0.0	-2	-0.2	-10	—	0.0	7	3
Total	-1.1	-72	-4.7	-277	-3	1.3	112	102







Financial Markets

Fluctuating financial markets caused sales revenue to decline in the industrial sector by $3 million compared with 1997. Although U.S.-dollar sales generated additional revenue of $34 million due to the exchange rate, the downward pressure on the price of aluminum resulted in a $37-million drop in revenue.

Other Sales Variation Factors

In the residential and farm sector, demand edged up 0.7 TWh, primarily because of the addition of nearly 25,000 new residential customers. This growth in demand is reflected in the $44 million rise in revenue. Rate increases also generated an additional $46 million.

Sales to the general and institutional sector are higher than last year by 0.3 TWh. Revenue rose by $83 million, with $37 million of that increase due to growth in demand and the balance primarily the result of rate increases.

The growth in demand in the industrial sector, which first began in 1997, continued in 1998, with an increase of 0.3 TWh. Despite difficult market conditions worldwide, production by the Québec smelting and refining industry resulted in a 0.7 TWh rise in consumption. Aluminum plants ship more than 95% of their exports to the Eastern United States, where demand is steady. In the pulp and paper industry, however, the higher demand observed early in the year was more than offset by the effects of work stoppages which hobbled activities in the second half of the year, resulting in a decline compared with 1997. Sales revenue for the industrial sector grew by $31 million, driven by growth in demand and rate increases.

Sales to the Other sector are unchanged, reflecting the loyalty of our independent distributors. Revenue is up $10 million. This sector includes customers of the nine municipal systems and one regional cooperative. Since the wholesale market opened up in the spring of 1997, these customers have been able to obtain their energy supplies from a producer of their choice. None of these customers took advantage of this opportunity in either 1997 or 1998, which is a clear indication of our strong competitive position in the deregulated North American market.

Electricity Sales outside Québec

The volume of electricity sales outside Québec was 18.6 TWh, 3.4 TWh or 22.4% higher than in 1997. Corresponding revenue also grew by $218 million, or 36.6%, to $814 million. The increase in volume and revenue related to electricity sales outside Québec is explained by a fluctuating exchange rate, higher unit prices and more short-term sales.

The volume of sales to the other Canadian provinces was 0.8 TWh less than a year earlier because of more attractive market conditions in the U.S.

Over 80% of electricity sales outside Québec were to the United States. The volume of U.S.-market sales went from 11.4 TWh to 15.5 TWh, an increase of 4.1 TWh, or 36%.

Because of the ice storm, sales deteriorated by 0.3 TWh, or $12 million. Exchange rate fluctuations pulled up revenue by $48 million as a result of U.S.-dollar sales. Unit prices associated with firm and short-term sales were up in 1998, generating an additional $33 million in revenue compared with 1997.

Electricity Sales outside Québec*

	Sales			Sales Revenue		
	1998	Change 1997-1998		1998	Change 1997-1998	
	TWh	TWh	%	$M	$M	%
Other provinces						
Firm sales	**0.5**	—	—	**24**	1.0	4.3
Short-term sales	**2.5**	-0.8	-24.2	**92**	-19.0	-17.1
	3.0	-0.8	-21.1	**116**	-18.0	-13.4
United States						
Firm sales	**10.2**	1.3	14.6	**467**	90	23.9
Short-term sales	**5.3**	2.8	112.0	**229**	144	169.4
	15.5	4.1	36.0	**696**	234	50.6
Total	**18.5**	3.3	21.7	**812**	216	36.2

**Excluding sales of 0.04 TWh, for $2 million, in other countries.*

Variation Factors - Sales outside Québec

	Ice storm		Exchange rate	Increase in unit prices	Variation in volume	
	TWh	$M	$M	$M	TWh	$M
Firm sales	-0.2	-8	30	26	1.5	43
Short-term sales	-0.1	-4	18	7	2.1	104
Total	-0.3	-12	48	33	3.6	147

Taking into account these different variation factors, sales volume and revenue increased nearly 25% compared with 1997. This growth is largely attributable to increased purchases for resale made outside Québec during off-peak hours under favorable terms.

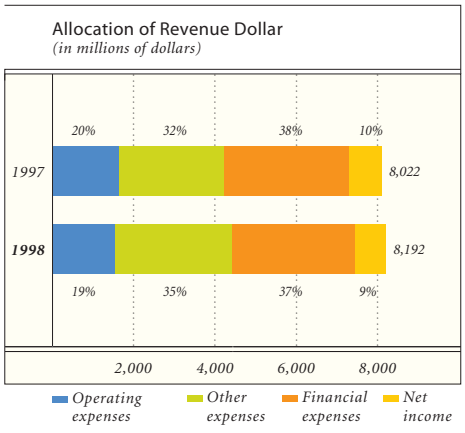
As a result, Hydro-Québec was able to increase its market share in the United States. Revenue from sales to the U.S. totaled $696 million, which is $234 million, or 51%, more than the previous year.

Other Operating Income

Other operating income rose to $185 million, nearly twice as much as the previous year. This growth stems specifically from energy storage and tolling services. The rise in these activities, which will continue to grow in the coming year, reflects our goal of maximizing the commercial potential of our assets.

Demand for storage and the sale of storage options are experiencing strong growth and generated revenue of $53 million in 1998, compared with $7 million in 1997.

New tolling agreements were also concluded this year. Offered as complementary services, tolling and storage afford profitable business opportunities and, at the same time, a unique way to manage our energy supply. It was in the context of this type of agreement that Tracy generating station was in operation at the close of 1998. Tolling services, including the resale of fuel oil to supply the station, generated revenue of $39 million.



2.2.2 Expenditure

Our operating margin decreased slightly, from 47.9% of total revenue in 1997 to 46.2% in 1998. Below-forecast revenue and larger energy purchases have a direct effect on the operating margin. With this in mind, intense efforts were made to control operating expenses in order to offset the decline in our margin and thus maintain a satisfactory performance.

Total expenditure, which includes operating expenses and other expenses, rose to $4,407 million, an increase of $227 million, or 5.4%.

Operating Expenses

Operating expenses decreased by $43 million, or 2.7%, to $1,563 million. This corresponds to 19% of revenue, compared with 20% in 1997. Efforts to reduce operating expenses in the Electricity segment are in keeping with our objective of stabilizing consolidated expenditure through to 2002.

Payroll expense amounts to $1,092 million, or 70% of operating expenses in 1998, a 5% drop. The decrease in payroll costs is largely the result of staff reductions. Total staff averaged 20,913 in 1998, a 2.8% decline over the previous year. Although many employees have left the company in recent years, mainly in response to severance packages, the average age of staff members has continued to climb, reaching 42.7 at the end of 1998. A program to recruit recent graduates has been announced in order to ensure succession.

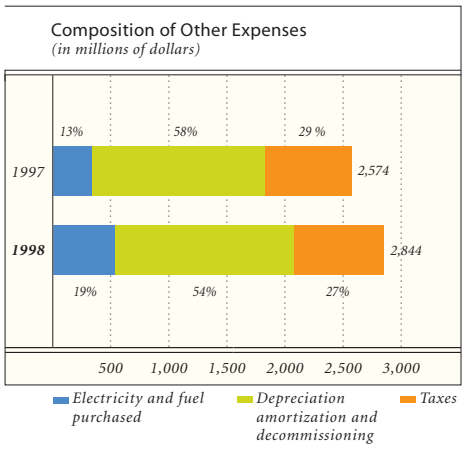
In the context of major projects carried out under difficult conditions due to the ice storm, employee safety was of prime importance. In fact, the number of cases requiring medical care and lost hours decreased by 40.3%, compared with 1997, despite an increase of approximately 5% in working hours.

Lastly, in 1998 we allocated over $20 million to converting all our systems and applications affected by the Year 2000 Issue. As at December 31, 1998, 94% of systems and applications had been converted, while 98% had been certified compliant following tests we administered to ensure they would make the Year 2000 transition successfully. All systems and applications will be converted or certified by the end of June 1999, and comprehensive testing will be conducted in 1999, as scheduled.

Other Expenses

Electricity and fuel purchased

Electricity and fuel purchased totaled $536 million. The $218 million increase over 1997 is primarily due to firm and short-term purchases of electricity.



Firm purchases of electricity amounted to $269 million, up $29 million over 1997. The cost of firm purchases from Churchill Falls was $108 million, while the volume of purchases was up 12%. Purchases from independent power producers amounted to $125 million, a 23% increase, as a result of the commissioning of five new generating stations and the indexation of prices paid under contractual agreements.

Electricity purchased on the short-term market totaled $176 million, an increase of $122 million. Purchases for purposes of resale to markets outside Québec, made during off-peak hours under favorable terms, were more substantial this year.

As for the secure management of our supply, short-term energy purchase options resulted in an expense of $21 million as amortization of premiums paid. We exercised these options so as to mitigate the risks related to the runoff situation in 1998 and 1999.

Lastly, fuel purchased amounted to $60 million, an increase of $34 million. In fact, the actual fuel expense is equivalent to that of the previous year, if the cost of fuel oil resold as part of tolling operations at Tracy generating station is excluded.

Depreciation, amortization and decommissioning

Depreciation, amortization and decommissioning totaled $1,533 million, compared with $1,501 million in 1997. This is the lowest increase in ten years, both in relative terms (2.1%) and in monetary terms ($32 million). The increase this year is explained by the offsetting effect of the various expense components.

Depreciation of fixed assets, which represents 88% of the expense, stands at $1,349 million, up $76 million. This change is attributable to the usual change factors for the expense: growth related to prior years' commissionings, the impact of the annual review of the useful lives of our fixed assets and the increase inherent in our sinking fund method of amortization.

However, the decrease in our investments in marketing programs is progressively reducing the corresponding amortization, which was brought down to $68 million this year, a drop of $20 million. Amortization of deferred charges related to the portion written off for Grande-Baleine and to the write-off of Nottaway-Broadback-Rupert ends this year, as these charges have been expensed since 1996.

Taxes

The expense related to taxes amounted to $775 million, up 2.6 %, or $20 million. The $11 million increase in capital tax reflects the depreciation of the Canadian dollar, since this tax is based on the company's paid-up capital. The $7-million increase in the tax on gross revenue is explained by the fact that this expense varies according to the growth of electricity sales in Québec.

2.2.3 Financial Expenses

Interest

Interest expense amounted to $2,951 million in 1998, compared with $2,970 million in 1997, down $19 million or 0.6%.

On the one hand, the unfavorable fluctuation in 1998 financial markets increased interest expense. The rise in the exchange rate for the U.S. dollar pushed up interest expense on debt denominated in U.S. currency. The movements in interest rates, mainly the increase in Canadian short-term rates, had a negative impact on the variable-rate portion of long-term debt. However, the higher short-term interest rates were partially offset by the renegotiation of debt at appreciably lower interest rates.

On the other hand, the use of derivative instruments allowed us to considerably reduce the negative variance resulting from market fluctuations. Moreover, the 1998 debt repayments and the increase in the capitalized borrowing costs on fixed assets in progress yielded a positive variance compared with last year.

Exchange loss

Exchange loss stands at $137 million in 1998, up $85 million. This increase is mainly due to two factors. An increase of $60 million stems from the unfavorable change in the exchange loss amortization expense, explained primarily by the higher exchange rate for the U.S. dollar than at year-end 1997. Losses resulting from the conversion debt securities not hedged by future ongoing revenue streams in U.S. dollars are amortized over the remaining term of the debt securities.

Also, exchange losses associated with debts denominated in U.S. dollars and hedged by continued future revenue streams in that currency exceeded prior-year exchange losses by $17 million.

2.3 Gas Segment Activities

The Gas segment includes natural gas transmission and distribution activities and comprises, more specifically, Noverco, Novergaz, and our gas brokerage activities.

The $15-million segment profit recorded this year exceeds that of 1997 by $4 million. The increase is largely attributable to the effect over the entire year of the proportionate consolidation of Noverco's results. In 1997, the year our investment in Noverco was acquired, the results recorded covered three quarters.

Hydro-Québec has been active in the direct-purchase natural gas market since October 1997. It now ranks fourth among some 30 suppliers to large Québec businesses. This brokerage activity is in line with the company's objective to offer its customers new products. In 1998, this activity generated sales of $49 million and a profit of $1 million.

Following the ice storm, residential customers opted to diversify their supply, resulting in a breakthrough for gas in this sector. In addition, the effects of weather on the financial results were evened out by the gas rate stabilization mechanism.

Lastly, we should mention the performance of the investment we made in Enbridge, through Noverco, which has appreciated since our acquisition.

2.4 Expertise and Technology Segment Activities

The Expertise and Technology segment comprises the commercialization of technologies and know-how developed by Hydro-Québec. This year the segment combines Hydro-Québec CapiTech, the expertise activities of Hydro-Québec International, and the holdings of three business units: Gestion Production HQ, HQ TransEnergy and Hydro-Québec Valtech.

The new organizational structure for Hydro-Québec's subsidiaries and investments was implemented in 1998. The distinction was made between subsidiaries and investments deemed strategic and related to the company's primary mission, as opposed to those related to the commercialization of technologies. The transfers were conducted between HQ CapiTech and strategic holdings under the responsibility of the business units.

The Expertise and Technology segment posted a net loss of $33 million in Hydro-Québec's 1998 consolidated results, compared with a $45 million loss in 1997. The segment should soon reach the breakeven point.

HQI's expertise services generated a profit of $1.6 million in 1998, a performance in line with the zero-deficit position targeted at the beginning of the year. This year, HQI provided expertise services to markets in Africa, the Middle East, the Americas, Asia and Europe. The aim for 2002 is a more substantial profit.

HQ CapiTech also closed 1998 with a profit of $1.6 million, in keeping with the anticipated 1998 profitability target. Relaunched early in 1998, HQ CapiTech oriented its activities as a venture capital investment company and focused investments on the energy sector. One tangible result of these decisions was the creation of Énergie Capital in partnership with the Québec Federation of Labor Solidarity Fund. HQ Capitech plans to pursue its management policy, based on growth and profitability principles, and to continue to improve Hydro-Québec's long-term return.

The business unit holdings are in a deficit position at the close of this first year. In accordance with the new orientations, business unit managers are accountable for the commercialization of technologies and expertise in relation to their unit missions and the financial results of the subsidiaries. Activities in 1998 were characterized by reorganizations and restructurings.

Finally, the segment's contribution to Hydro-Québec's consolidated results for 1998 was affected by prior-year losses of $17 million. HQI added a $7-million loss, related to the decline in value of HQI's investment in Morocco. Nouveler, whose activities have been taken over by HQ CapiTech and the holdings of the business units, wrote off additional investments amounting to nearly $10 million.

3 Financial Position

3.1 Operating Activities

Cash from operating activities totaled $1,832 million at the end of 1998, down $540 million, or 22.8%, from 1997.

Cash attributable to income, that is, cash before dividends and change in non-cash items, amounted to $2,297 million compared with $2,357 million in 1997, a drop of $60 million, or 2.5%. Net income, readjusted to add back depreciation and amortization expense, shows additional cash inflows of $102 million, compared with the preceding year, proof of the company's ability to increase its internally generated funds. However, cash outflows due to the ice storm, which totaled $182 million and will be reimbursed by the Québec government, are the primary reason for the $60 million decline in cash attributable to income.

Operating Activities

(in millions of dollars)	**1998**	*1997*	*Change 1997-1998*
Net income	**679**	786	(107)
Depreciation of fixed assets	**1,383**	1,297	86
Amortization of deferred charges	**399**	276	123
Other	**(164)***	(2)	(162)
Cash attribuable to income	**2,297**	2,357	(60)
Dividends and change in non-cash items	**(465)**	15	(480)
Total	**1,832**	2,372	(540)

**Includes expenditures of $182 million related to the ice storm, to be reimbursed by the Québec government.*

Moreover, the payment in 1998 of $357 million of dividends declared at the year-end essentially explains the decrease of $540 million in cash during the year, as no dividend was paid in 1997.

The self-financing rate for the year is 44.5%, down from last year's rate of 60.4%, primarily due to the decline in cash inflows related to operating activities. However, our ability to generate funds internally is still excellent, since, applied in full to the funds required for investing activities, the rate equals nearly 80% of cash outflows for the year, despite the additional expenditure related to the ice storm.

3.2 Investing Activities

The investment program increased by $198 million, or 9,3 %, over 1997, to $2,331 million. The investment mix differs considerably from last year, when the interest in Noverco was acquired for $482 million. In 1998, investments are lower, but investments in fixed assets increased substantially because of the corrective work made necessary by the ice storm at the beginning of the year.

The following analysis focuses on the Corporation's investing activities and represents substantially all Hydro-Québec's investments.

The investment in fixed assets rose by $432 million, or 27.8%, to $1,986 million at year-end. If we exclude the investment in fixed assets related strictly to the ice storm, a decline of $182 million, or 11.7%, can be seen. This variation is explained by the reallocation of budget appropriations in order to focus efforts on priority projects. Investments to ensure the continued reliability of assets, excluding those investments related to the ice storm, represented half of the amounts invested, compared with nearly two-thirds in 1997. However, if we include this type of investment related to the ice storm, the proportion remains the same as in 1997, or nearly two-thirds of the investment in fixed assets.

Ice Storm

The ice storm required additional investments of $614 million in fixed assets in 1998. Our priority was to rebuild those sections of the transmission and distribution systems incapacitated by the abnormal accumulation of ice on lines and structures. These were rebuilt to more stringent standards and required investments of $456 million.

In addition, we undertook major projects, worth $158 million, in regions hit by the ice storm. Some of these projects, aimed at enhancing our transmission system, will continue through to 2001. The work primarily involves three loop projects and a major interconnection with the high-voltage Ontario grid. Once completed, these projects will provide us with greater flexibility in terms of electrical supply sources and will have cost nearly $1 billion. In the coming years, we also expect to complete the work to consolidate and strengthen our distribution system, including a program to put distribution lines underground in high-density urban centers. The program will first have to be submitted to the *Régie de l'énergie*.

All the distribution projects and more than half the transmission projects were completed during the year. The commissioning of these installations, valued at $454 million, represents nearly three-quarters of the total year's investments related to the ice storm.

Investment in Fixed Assets
(other than investments related to the ice storm)

In the coming years, we expect to increase energy sales in order to meet the demand of our Québec customers and to benefit from the growth potential in other markets. To support this targeted growth in electricity sales, our investments in installations will largely concentrate on the generation and transmission sectors. This was the focus for investments in 1998. Nearly 60% of amounts invested in fixed assets relate to generation and transmission activities, which alone accounted for capital expenditures of $820 million. The most important development project in terms of electricity generation remains the construction of Sainte-Marguerite-3 generating station. The dam was completed in 1998 which enabled us to begin reservoir impounding earlier than expected. Capital expenditures amounted to $251 million. With the commissioning of this generating station, scheduled for 2001, we will add 882 MW of capacity to the current generating facilities.

Investments in Fixed Assets

(in millions of dollars)	*Related to ice storm*	*Other*	*Total*
Generation	—	525	525
Transmission	361	295	656
Distribution	252	217	469
Other	1	335	336
Total	**614**	**1,372**	**1,986**

The common denominator of other major projects is installation optimization. Various upgrading and rehabilitation projects were carried out, for a total investment of $247 million. The aim of these projects is to modernize the generating stations and maintain their efficiency, while prolonging their useful lives. In some cases, the work will also boost capacity. This rehabilitation and upgrading program, begun in the early 90s, will continue in the coming years.

An amount of $295 million was invested in transmission, mainly to improve system continuity and enhance reliability. Specifically, we worked on our transmission system in order to bring it into line with the requirements of the Northeast Power Coordinating Council, whose standards are among the toughest in North America. Because of this work, completed in 1998, certain restrictions on the use of our interconnections were lifted, so we are now able to use our installations at full capacity to transit electricity to the U.S. market. The work to improve the robustness of the entire system, combined with the new interconnections, will support our strategies to develop new markets.

We have invested $217 million in distribution, primarily to respond to the growing number of customers and to assure continuity of service and installations. These continuity investments preserve the quality of supply, which is key to providing the service to which consumers are entitled and to maintaining customer satisfaction.

Other investments principally involve telecommunication installations, $132 million, and support equipment, $186 million, including $107 million in computer technology. Implementation of the SAP R/3 software package required disbursements of $58 million in 1998. Once the implementation is completed in 1999, this software package will replace some 150 business systems, modernize management information technology, and facilitate the transition to the year 2000.

Commissionings

The value of commissionings increased slightly, to $1,539 million at the end of 1998, up $136 million, or 9.7%, compared with 1997. The increase is the result of major projects made necessary by the ice storm, most of which were completed in early 1998, enabling us to reach our objective of restoring the system in time to confront the winter of 1998-1999. However, when the commissionings related to the ice storm are excluded, a drop of $319 million, or 22.7%, is noted, matching the trend observed in recent years with the successive commissionings of the large generating stations in Phase II of the La Grande complex coming to an end.

Major upgrading and rehabilitation of hydroelectric generating stations represent the majority of commissionings related to generating activities. In transmission and distribution, projects related to the ice storm represent almost half of commissionings, while the others stem mainly from activities designed to ensure the continued operation of these assets. Finally, commissionings total $164 million for telecommunications, and $136 million for support equipment, including $63 million for computer technology.

Commissionings

(in millions of dollars)	*Related to ice storm*	*Other*	*Total*
Generation	—	243	243
Transmission	202	328	530
Distribution	252	199	451
Other	1	314	315
Total	**455**	**1,084**	**1,539**

From 1998 to 2002, commissionings will focus on electricity generating and transmission facilities, in line with our program to complete the development of Québec's hydroelectric potential.

3.3 Financing Activities

Activities are financed primarily through funds from operations and borrowed capital. In the years to come, the company plans to finance its investment program through funds from operations in order to gradually reduce the level of its long-term debt.

With a year-end capitalization rate before dividend pay-outs of 25.4%, Hydro-Québec was able to declare dividends of $279 million to the shareholder. After the dividend payment, the capitalization rate stands at 25.0%, compared with 25.1% in 1997. Over the next few years, we expect to pay dividends representing up to approximately 50% of net income.

Interest coverage remained relatively stable, declining to 1.19 times gross interest expense compared with 1.21 times in 1997. This ratio should show a positive change in the near future as financial expenses are gradually reduced and revenue grows.

The following analysis focuses on the financing activities of the Corporation and represents substantially all Hydro-Québec's financing.

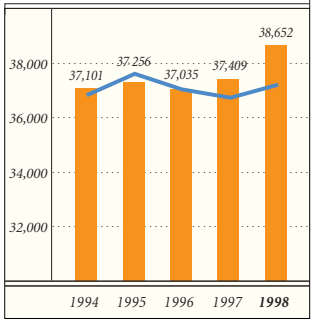
In 1998, the Corporation pursued its financing activities in accordance with its strategies to diversify sources of funding, manage foreign exchange risk, stagger debt refinancing, and manage the early redemption options contained in its debt securities.

Financing for the year totaled $2,472 million, up more than $500 million, or nearly 30%, over the previous year. Financing of maturing debt accounted for $1,359 million and $892 million went to repayment in advance of long-term debt; the balance of the financing corresponds to the company's net requirements. The financing program at the beginning of the year amounted to $1,981 million. Actual financing, which exceeded the initial program by $491 million, is due primarily to earlier-than-planned investments, expenses, and lost revenue resulting from the ice storm.

Favorable market conditions early in the year, coupled with our maturity and early-redemption schedule, allowed us to achieve the key targets in our program in the first six months.

We floated two key issues in the first quarter of 1998. A public offering of 750 million Deutsche marks, or $584 million, maturing in ten years, signaled our return to this market after a seven-year absence. Convertible into euros, this issue was well received by European investors and thereby strengthened our position in their eyes on the eve of the single European market. Earlier in the year, we re-opened a Canadian issue, maturing in 2003 and bearing interest at 5.5%, in order to increase the amount outstanding by $500 million, to $850 million.

Variation in Debt*
(in millions of dollars)



	1994	1995	1996	1997	1998
Total variation	*3,142***	*155*	*(221)*	*374*	***1,243***
Effect of exchange rate	*899*	*(397)*	*61*	*784*	***1,610***

Debt without effect of exchange rate

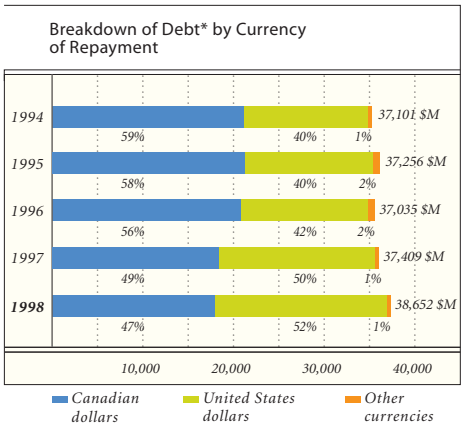
** Includes debt payable within one year and financial assets related to debt, but excludes perpetual debt.*

*** Includes prefinancing of $800 million for 1995.*

We then focused our activities on the Canadian, European and U.S. medium-term note markets. By the end of July, in response to investor demand, we had borrowed over $700 million on these markets. Accordingly, nearly 75% of our financing was realized at a time when financial markets were reacting violently to the financial problems in Russia and their impact on the operations of numerous speculators. However, we did not have to turn to financial markets during this period, as credit risk management of our portfolio indirectly generated more than $500 million in cash, enabling us to meet our cash requirements for the year.

As mentioned, our financing program also included $892 million of early redemptions. The exercise of these options allowed us to call in debt bearing interest at an average annual rate of 10.56%, and to replace it with issues at rates around 5.5%. In 1999 and 2000, the Corporation will be able to exercise a call right on $417 million and $660 million of bond issues bearing interest at average rates of 11.32% and 12.80% respectively.

At year-end, long-term debt totaled $38,652 million, up $1,243 million, or 3.3%, from $37,409 million the preceding year. The increase is primarily due to the conversion of our currency-denominated debt, reflecting the variation in year-end exchange rates, which amounted to $1,610 million. Excluding the effect of the exchange rates, long-term debt fell $367 million compared with1997. The variable-rate portion of the debt, including perpetual debt, increased by 0.5% during the year, to 29.2% at December 31, 1998.



* Includes debt payable within one year and financial assets related to debt, but excludes perpetual debt.

Short-Term Financing

For cash purposes, we have $350 million in credit lines in Canadian or U.S. dollars with the principal Canadian banks and a U.S.$50 million line of credit with a U.S. bank. We also have three revolving lines of credit of U.S.$600 million each. Our authorized commercial paper program totals U.S.$2,750 million.

Credit Ratings

Hydro-Québec is rated by the three main U.S. credit rating agencies. All our credit ratings were confirmed in 1998: Standard & Poor's rates us A+ (stable), Moody's, A2, and Duff & Phelps, AA-. The credit ratings assigned by the Canadian agencies CBRS and DBRS are, respectively, A and A (low). These ratings were raised in 1998 from negative to stable.

Financial Risk Management

Because of the possible repercussions on the company's financial position from fluctuations in financial variables, it has adopted a comprehensive financial risk management approach based on optimization models. The company thus uses hedging instruments without having recourse to leverage, in accordance with the parameters established by the Board of Directors.

4 Risks, Uncertainties and Outlook

4.1 Risks and Uncertainties

All companies develop by seizing opportunities available in their sphere of activity. Every opportunity involves a certain number of business risks which, over time, a company learns to identify and manage. The business environment has changed radically in recent years, with the focus now on market globalization, deregulation and technological development. These changes create many opportunities for growth, along with new and different risks.

In its business strategy, Hydro-Québec has chosen to capitalize on new development opportunities in order to consolidate its gains, particularly with regard to the competition, and also to build on its asset base, expertise and technology. We have therefore chosen to extend our management of business risks. Until very recently, we had been managing our principal business risks, according to traditional principles, in each area of expertise of our personnel and for each type of risk, as is the case in most businesses. We have now replaced this traditional approach with a renewed and proactive management method that considers all risks and opportunities that arise. Management of our financial risks, which has been consistent with the rules for integrated management for several years now, serves as a model for the integrated management of the company's other business risks.

Our integrated business risk management approach is guided by three principles. First, to influence decision making by adding risk analysis as a permanent component. Second, to put the approach at the core of the company's planning process so as to better manage the volatility of net income, over the short term, and anticipate and assess the positive and negative repercussions of events on the company's orientations over the longer term. And third, to provide for continuous improvement of the process using monitoring and evaluation indicators.

The change is significant. All managers are concerned with managing the risks inherent in their activities. Opportunities are gauged based on their related risks, which allows us to assess their performance. When integrated in the planning process, risk management makes it possible to compare individual risks according to the significance of their impact, to deal with such risks on a priority basis and to monitor them. Moreover, the integrated portfolio of principal business risks includes

plans to mitigate the various risks in order to moderate their overall impact on the company, since the convergence of several risks can amplify the impact on operations and results. By using a portfolio, all the mitigative measures can be adjusted to, for example, take offsetting risks into consideration. In addition, the overall residual risk — that is, the risk that remains after applying the mitigative measures — can be determined in order to adequately measure the overall risk faced by the company.

This new approach, initiated in early 1998, has the full support of management and was endorsed by the Board of Directors in the fall of 1998. The Board is kept informed of the progress of the approach and must receive the assessment of our business risk portfolio and our level of residual risk. A new independent administrative unit is responsible for the coordination and implementation of the integrated business risk management process throughout the Corporation and its subsidiaries.

4.2 Outlook

New Business Environment

The traditionally stable electricity sector has undergone dramatic changes in recent years. These changes will radically transform the landscape of the energy sector, particularly in North America, and will affect both producers and consumers. Some of the changes can already be seen: the opening of the wholesale market, increased transit opportunities and energy source convergence, not to mention the major mergers and acquisitions in the industry.

In Québec, under the reciprocal agreement that now gives us access to the U.S. market as a wholesaler, the electricity wholesale market and electricity transit have been open to competition for more than a year. However, because of our favorable competitive position, none of our competitors has yet offered to sell wholesale energy in Québec.

Since 1998, the Corporation has had its rates set, resource plan approved and investment projects authorized by the *Régie de l'énergie*. Gaz Métropolitain and Company, Limited Partnership, managed by Gaz Métropolitain, inc., a wholly owned subsidiary of Noverco Inc., in which Hydro-Québec holds a 41% interest, is also subject to the *Régie de l'énergie*.

The company's position in this new environment is excellent. Its rates are among the lowest in North America. Its hydroelectric supply enables it to produce, at low cost, clean, renewable energy that can also be stored. Its geographic proximity to the Northeastern U.S. market offers numerous business and growth opportunities, and there are several interconnections linking it to that market. In addition, the Corporation's growth is assured because of its very sound financial position.

To preserve an advantageous competitive position and develop new markets, the company has adopted the "business first" approach dictated by the new reality. It plans to be a major player in the global energy sector. It is focusing its strategies on growth, the development of new markets and the commercialization of research and development activities. Also included in its orientations is the preservation of low and stable rates for Québec customers. These strategies will yield sustained growth in revenue and a marked improvement in profitability.

In this context, the company has taken many steps, with more to come: equity participation, alliances and partnerships, concluded or pending, will enable us to develop new markets and to offer a complete line of energy products to a larger North American client base. These steps will also help us to penetrate the international market as an industrial partner.

More recently, in early 1999, the company set up Connexim in conjunction with Bell Canada. This new company will optimize the management of the internal telecommunication administrative networks of its partners and offer management telecommunication services to other Québec companies. Also, the fiber-optic transmission system used to manage the Corporation's power system will be optimized by leasing its excess capacity.

1999 Financial Outlook

Some of the events of 1998 will have an impact on fiscal 1999. Work to reinforce the transmission and distribution systems made necessary by the ice storm will continue this year and extend to 2001. Tight control over our hydroelectric reservoirs will require the implementation of various mechanisms to secure energy supply. In addition, the Year 2000 issue is a major concern and will receive continued attention. The transition toward integrated business risk management is also a priority in 1999. At the same time, various matters will continue to be dealt with at the *Régie de l'énergie*, mainly those regarding the manner of determining and implementing electricity rates. Nevertheless, the Corporation has undertaken not to raise its rates until April 2002.

Assuming that no exceptional event similar to the ice storm or unusually warm temperatures disturbs the weather picture, the growth in revenue and rigorous control of our operating expenses will enable us to attain an unprecedented net income of over $900 million in 1999. This represents a marked improvement, in keeping with our growth and enhanced profitability objectives. These forecasts are based on normal runoff and temperatures, established using historical data.

We do not anticipate any significant changes in the Québec economy, even if economic growth in 1999 is less sustained than last year. Increased profitability will be achieved through growth in revenue. Higher operating expenses will result mainly from activities to generate additional revenue and to capitalize on business opportunities.

The 1999 investment program is approximately $2.5 billion, an increase over 1998. Almost $400 million will be invested in major projects resulting from the ice storm, especially transmission projects, aimed at improving the system. Other significant projects will chiefly affect generation. Approximately one-third of amounts invested will go toward ensuring the continuity of assets, mainly in generation, transmission and distribution, while almost $600 million has been earmarked for development.

In 1999, expected financing for the Corporation amounts to $2.5 billion, a level equivalent to that of 1998. Nearly 60% of our cash requirements will be met by our operating activities.

Electricity

- Generation
- Churchill Falls (Labrador) Corporation Limited *(34.2%)*
- Energy Services
- H.Q. Energy Marketing Inc. *(100%)*
- H.Q. Energy Services (U.S.) Inc. *(100%)*
- TransÉnergie
- Cedars Rapids Transmission Company, Limited *(100%)*
- Distribution and Customer Services
- IREQ
  R&D activities
- Hydro-Québec International *(100%)*
  Generating activities
- Société d'énergie de la Baie James *(100%)*

Gas

- Noverco Inc. *(41%)*
- Noverco Energy Services (U.S.) Inc. *(100%)*
- Gaz Métropolitain, inc. *(100%)*
- Enbridge Inc. *(8.9%)*
- Novergaz Inc. *(49.995%)*
- Brokerage activities

Expertise and Technology

- Hydro-Québec CapiTech Inc. *(100%)*
- Hydro-Québec International *(100%)*
  Expertise activities
- Gestion Production H.Q. inc. *(100%)*
- HQ TransEnergy Inc. *(100%)*
- TransÉnergie U.S. Ltd. *(100%)*
- Hydro-Québec Valtech Inc. *(100%)*
- IREQ
  Proposed activity: marketing of infrastructures

Hydro-Québec business unit or division

Hydro-Québec activity

Subsidiary, joint venture or holding

management report

Hydro-Québec's consolidated financial statements and all additional information contained in the Annual Report are the responsibility of Management and are approved by the Board of Directors. Management's responsibility also includes the selection of appropriate accounting practices in accordance with generally accepted accounting principles, taking into account generally accepted accounting methods and practices of competent regulatory bodies. As required, Management makes judgments and prepares reasonable estimates regarding operations in view of materiality. Financial information contained elsewhere in the Annual Report is consistent with that in the financial statements.

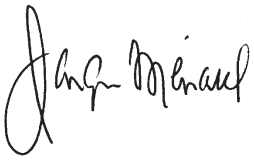
Management, in keeping with its responsibilities, maintains a control system, designed among other things to provide reasonable assurance that the company's assets are adequately safeguarded and that the accounting records form an appropriate basis for the preparation of reliable financial statements. An internal auditing process allows evaluation of the sufficiency and efficiency of control, as well as of the company's policies and procedures. Recommendations ensuing from this process are submitted to Management and the Audit Committee.

The Board of Directors assumes its responsibility for the consolidated financial statements principally through its audit committee, composed solely of directors who do not hold full-time positions at Hydro-Québec or in one of its subsidiaries. This committee's mandate is to ensure that the financial statements present fairly the company's financial position, changes in financial position, and results of operations. The Audit Committee meets regularly with Management, the General Auditor and the external auditors to review the results of their audits and the reports on the company's accounting methods and policies and on the control systems. The General Auditor and the external auditors have full and unrestricted access to the Audit Committee, with or without Management's presence.

The company has also established a code of ethics primarily to ensure the proper management of its resources and the orderly conduct of business.

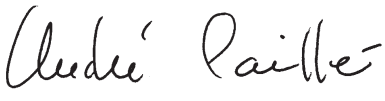
The consolidated financial statements have been audited jointly by accounting firms Samson Bélair/Deloitte & Touche and PricewaterhouseCoopers in accordance with generally accepted auditing standards. Their responsibility consists in expressing their professional opinion on the fairness of the financial statements. The Auditors' Report, which appears overleaf, specifies the extent of their audit and gives their opinion on these financial statements.

In the opinion of Management, these financial statements incorporate, within reasonable limits, all important elements and data available at February 26, 1999.



L. Jacques Ménard

Chairman of the Board



André Caillé

President and
Chief Executive Officer

Daniel Leclair

Vice President Finance
and Chief Financial Officer

Montréal, Canada

February 26, 1999

auditors' report

To the Minister of Finance of Québec

We have audited the consolidated balance sheet of Hydro-Québec as at December 31, 1998 and the consolidated statements of operations, retained earnings and changes in financial position for the year then ended. These financial statements are the responsibility of Hydro-Québec's Management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by Management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of Hydro-Québec as at December 31, 1998 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles as described in Note 1. As required by the *Auditor General Act (R.S.Q., c. V-5.01)*, we report that, in our opinion, these principles have been applied on a basis consistent with that of the preceding year.

Samson Bélair
Deloitte & Touche

Chartered Accountants

PricewaterhouseCoopers

Chartered Accountants

Montréal, Canada

February 26, 1999

consolidated statement of operations

For the year ended December 31

(in millions)	Notes	1998	1997
Revenue		**$8,812**	$8,423
Expenditure			
Operations		**1,681**	1,724
Electricity and fuel purchased		**899**	529
Depreciation, amortization and decommissioning	2	**1,589**	1,545
Taxes	3	**799**	771
		4,968	4,569
Operating income		**3,844**	3,854
Financial expenses	4	**3,154**	3,062
Income before non-controlling interest		**690**	792
Non-controlling interest	14	**11**	6
Net income		**$ 679**	$ 786

consolidated statement of retained earnings

For the year ended December 31

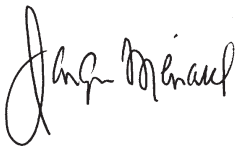
(in millions)	Notes	1998	1997
Balance at beginning of year		**$8,514**	$8,085
Net income		**679**	786
		9,193	8,871
Dividends	15	**279**	357
Balance at end of year		**$8,914**	$8,514

consolidated balance sheet

As at December 31

(in millions)	Notes	1998	1997
Assets			
Fixed assets	5	**$48,042**	$47,653
Current assets			
Cash and investments		**295**	395
Accounts receivable		**1,824**	1,732
Financial assets related to debt		**179**	131
Materials, fuel and supplies		**270**	240
		2,568	2,498
Other long-term assets			
Investments	6	**451**	288
Deferred charges	7	**4,933**	4,068
Other assets	8	**610**	202
Financial assets related to debt	9	**691**	488
		6,685	5,046
		$57,295	$55,197
Liabilities and equity			
Long-term debt	10	**$37,623**	$37,131
Current liabilities			
Borrowings		**59**	46
Dividends payable		**279**	357
Accounts payable		**1,001**	1,033
Accrued interest payable		**1,408**	1,354
Current portion of long-term debt		**2,496**	1,319
		5,243	4,109
Other long-term liabilities	11	**457**	382
Perpetual debt	12	**552**	552
Non-controlling interest	14	**132**	135
Shareholder's equity	15		
Share capital		**4,374**	4,374
Retained earnings		**8,914**	8,514
		13,288	12,888
		$57,295	$55,197

Yvon Lamontagne
Chairman of the Audit Committe



L. Jacques Ménard
Chairman of the Board

consolidated statement of changes in financial position

For the year ended December 31

(in millions)	1998	1997
Operating activities		
Net income	**$ 679**	$ 786
Depreciation of fixed assets	**1,383**	1,297
Amortization of deferred charges	**399**	276
Change in non-cash items	**(186)**	372
Dividends	**(279)**	(357)
Other	**(164)**	(2)
	1,832	2,372
Investing activities		
Fixed assets	**(2,097)**	(1,590)
Investments	**(174)**	(450)
Marketing programs	**(9)**	(37)
Other	**(51)**	(56)
	(2,331)	(2,133)
Financing activities		
Issue of long-term debt	**1,723**	1,432
Maturity of long-term debt and sinking fund redemption	**(1,787)**	(1,797)
Repayment in advance of long-term debt	**(48)**	(81)
Receipts (disbursements) resulting from credit risk management	**427**	(19)
Other	**71**	79
	386	(386)
Decrease in cash	**(113)**	(147)
Cash at beginning of year	**349**	496
Cash at end of year	**$ 236**	$ 349

Cash comprises cash and short-term investments less short-term borrowings.

(Tabular amounts are expressed in millions, unless otherwise indicated.)

Note 1 Significant Accounting Policies

Under the provisions of its Act, Hydro-Québec's mandate is to supply power and to pursue endeavors in energy-related research and promotion, energy conversion and conservation, and any field connected with or related to power or energy.

The consolidated financial statements have been prepared in accordance with generally accepted accounting principles in Canada and take into account generally accepted accounting methods and practices of regulatory bodies, in accordance with the *Hydro-Québec Act*. The regulatory accounting practices adopted by the Corporation, which differ from the accounting practices otherwise applied in unregulated enterprises, are in particular related to certain deferred charges, including those concerning major projects canceled or postponed and personnel reduction and renewal measures, as well as depreciation of fixed assets disposed of and of fixed assets declared fully depreciated subsequent to a review of their useful lives.

Consolidation

The consolidated financial statements include the accounts of the Corporation and its subsidiaries, all of which are wholly owned (collectively "Hydro-Québec").

The investment in the jointly controlled enterprise, that is, the joint venture, is accounted for using the proportionate consolidation method. The excess of the cost of this investment in the joint venture over the share of the fair value of the net assets acquired is recorded as consolidated goodwill and amortized on a straight-line basis over a period that does not exceed 40 years. Each year, Hydro-Québec reviews the book value of goodwill to determine whether there has been a permanent impairment in value by measuring the estimated fair value of the investment using the discounted cash flow method.

The consolidation of partially owned subsidiaries in the financial statements of the joint venture results in non-controlling interest in the financial statements of Hydro-Québec.

Rate determination

Under the *Act respecting the Régie de l'énergie,* assented to on December 23, 1996, the *Régie de l'énergie* has exclusive jurisdiction to determine or modify the rates and conditions under which electricity is transmitted or supplied by Hydro-Québec. With the exception of Section 52, the sections of the Act relating to rate determination came into force on May 2, 1998.

Revenue

Revenue from sales of electricity is recorded on the basis of cyclical billings and also includes revenue accrued in respect of electricity delivered but as yet unbilled.

Foreign currency translation

Revenue and expenditure resulting from transactions in foreign currencies are translated into the Canadian dollar equivalent at exchange rates in effect at the transaction date. Monetary assets and liabilities are translated into Canadian dollars at exchange rates in effect at the balance sheet date, and non-monetary items are translated into Canadian dollars at exchange rates in effect at the transaction date.

The exchange gains or losses resulting from the translation of current monetary items are included in the consolidated statement of operations. Those resulting from the translation of long-term monetary items are deferred and amortized on a straight-line basis over the remaining term of the debt securities, except when they relate to debt securities hedged by future revenue streams in United States dollars, in which case they are deferred until the date of repayment of such debt.

Currency swaps used to manage exchange risks related to the repayment of the principal amount of long-term debt are presented at rates in effect at the balance sheet date. Those that constitute financial assets are presented as Financial assets related to debt, while those representing financial liabilities are presented as Long-term debt. Gains or losses on these currency swaps are deferred and amortized on a straight-line basis over their remaining terms.

Note 1 Significant Accounting Policies (continued)

Fixed assets

Fixed assets are carried at cost, which comprises materials, direct and indirect labor, and an appropriate allocation of the administration overhead, engineering and management expenses and borrowing costs capitalized during construction. Capitalized borrowing costs are based on the previous year's average cost of long-term debt issued by the Corporation.

The costs of fixed assets in progress are transferred to fixed assets in service when the facilities are completed and in commercial operation. As for generating facilities, the costs are transferred in installments as units of the facilities are completed and brought into operation.

Fixed assets are depreciated over their useful lives. Under the *Hydro-Québec Act*, the depreciation period is restricted to a maximum of 50 years. The depreciation periods for the main classes of fixed assets are as follows:

Hydraulic generation	50 years
Nuclear generation	30 years
Thermal generation (other than nuclear)	15 to 20 years
Transmission	40 to 50 years
Distribution	25 to 40 years
Administration buildings and service buildings	50 years
Construction, operating and research equipment	3 to 30 years

Fixed assets are depreciated according to the sinking fund method at the rate of 3%, with the exception of construction, operating and research equipment, which are depreciated according to the straight-line method.

Fixed assets declared fully depreciated subsequent to a review of their useful lives are amortized over a three-year period under the straight-line method.

Upon disposal of fixed assets, their cost and the cost of their dismantlement, net of accumulated depreciation and salvage value, are charged to a separate account and amortized over a maximum period of 10 years according to the sinking fund method, at the rate of 3%. However, when the fixed assets are replaced, the cost of dismantlement, less the salvage value, is added to the cost of the new fixed assets and then depreciated according to the method appropriate to the new asset.

Short-term investments

Short-term investments are shown at amortized cost. The book value of the investments approximates their fair value.

Deferred charges

Marketing programs

The deferred charges related to marketing programs are amortized on a straight-line basis over a period that does not exceed five years after the year in which they were incurred.

Development expenses

Deferred development expenses are amortized on a straight-line basis over a period of five years after the year in which they were incurred.

Cancellation or postponement of major projects

Project costs are reviewed periodically. Costs deemed irretrievable at the time of cancellation of a major project or its postponement to a later date are deferred and amortized on a straight-line basis over a period of three years.

Personnel reduction and renewal measures

Since 1996, the Corporation has been taking steps to improve its profitability and competitiveness so as to strengthen its position in the changing energy sector. Accordingly, the Corporation has introduced various temporary measures to facilitate the reduction and renewal of its personnel from 1997 to 2000. The most significant of these measures are severance pay and improvements to the Pension Plan. The cost of these measures is deferred and amortized on a straight-line basis over a period of 60 months, beginning the month following each individual commitment. The amortization is recorded in Expenditure – Operations.

Note 1 Significant Accounting Policies (continued)

Postretirement benefits

Pension Plan

The costs of the Pension Plan are determined periodically by independent actuaries. The pension expense charged to operations for the year is based on best estimate assumptions and comprises the total of the following:

- The cost of pension benefits provided in exchange for employees' services rendered during the year, calculated using the projected benefit method prorated on years of service, and
- Amortization over the employees' expected average remaining service life, according to the straight-line method, of (i) adjustments arising from changes in the Plan or in assumptions, (ii) experience gains or losses, and (iii) the Plan surplus determined upon adoption of the 1986 recommendations of the Canadian Institute of Chartered Accountants.

The cumulative difference between amounts recorded as pension expense and contributions made to the pension funds is reflected in Deferred charges.

Other postretirement benefits

In addition to pension benefits, the Corporation offers its current and retired employees group life-insurance, medical and hospitalization plans. These plans are not funded. Postretirement expenses from these plans are charged to operations for the year in which the benefits are vested to employees in exchange for services rendered and include amortization, under the straight-line method and over the employees' expected average remaining service life, of the initial estimate of liabilities upon adoption of this accounting policy in 1993.

The cumulative difference between the amounts recorded as other postretirement benefits and the premiums paid to insurance companies is shown under Other long-term liabilities.

Sinking funds

The sinking funds are created through the purchase of the Corporation's debentures, Government of Canada bonds, or bonds issued or guaranteed by the Gouvernement du Québec. The Corporation's debentures are deducted from long-term debt. Government issued or guaranteed bonds are presented as Financial assets related to debt.

Sinking fund securities are carried at amortized cost, a method in which the difference between the cost and the par value at maturity is amortized over the remaining term of the security. The book value of the securities does not necessarily approximate their fair value.

Derivative instruments

The Corporation uses different derivative instruments to mitigate foreign exchange and interest rate risks related to long-term debt, as well as the risk of price changes in raw materials inherent in certain sales contracts for electricity.

Interest exchanges, concluded in accordance with the swap agreements used to change long-term interest rate exposure, are matched to interest expense on the borrowings to which they are related.

Derivative instruments used in the short term to manage financial risks over a period of no more than three years are recorded at cost. Gains or losses realized are deferred and charged to operations on a basis consistent with the recognition of the gains or losses of the underlying position.

Decommissioning of nuclear generating station

The future costs of decommissioning the Gentilly-2 nuclear generating station are charged progressively to operations and reflected in Other long-term liabilities. These estimated costs essentially consist of the cost of dismantlement and the cost for final disposal of the irradiated fuel.

The Corporation revises these costs periodically in accordance with the various assumptions and estimates underlying the calculations, and with any technological advances that may arise in the decommissioning of nuclear generating stations.

Energy storage

The Corporation enters into energy storage agreements with its customers in order to optimize the use of its reservoirs. The resulting energy flows are valued at the Corporation's marginal production costs. In a context where this cost tends toward nil, no amount is recorded in the financial statements for energy stored.

Premiums received on storage options are deferred and amortized until the options are exercised. Income from energy storage is deferred and amortized over the terms of the agreements using the straight-line method.

Reclassification

Some figures of the previous year were reclassified in order to respect the presentation adopted in the current year.

Note 2 Depreciation, amortization and decommissioning

	1998	1997
Depreciation of fixed assets	**$1,383**	$1,297
Amortization of marketing programs	**73**	92
Amortization of major projects canceled or postponed	**63**	63
Write-off of projects	**7**	56
Decommissioning of nuclear generating station	**9**	8
Other	**54**	29
	$1,589	$1,545

Note 3 Taxes

	1998	1997
Capital tax	**$ 334**	$ 322
Tax on gross revenue as municipal real estate tax on certain immovables	**216**	209
Loan guarantee fees	**189**	188
Municipal, school and other taxes	**60**	52
	$ 799	$ 771

Note 4 Financial expenses

	1998	1997
Interest		
Interest on debt securities	**$3,272**	$3,153
Amortization of borrowing discount and expenses	**56**	55
	3,328	3,208
Less		
Capitalized borrowing costs	**165**	153
Net investment income	**145**	45
	310	198
	3,018	3,010
Exchange loss	**136**	52
	$3,154	$3,062

Note 5 Fixed assets

	1998			
	In service	*Accumulated depreciation*	*In progress*	*Total*
Generation				
Hydraulic	$23,413	$ 4,318	$2,204	**$21,299**
Nuclear	1,629	596	10	**1,043**
Thermal, other than nuclear	1,066	465	10	**611**
	26,108	5,379	2,224	**22,953**
Transmission				
Substations	10,062	2,057	330	**8,335**
Lines	7,189	1,260	325	**6,254**
Sundry	124	46	73	**151**
	17,375	3,363	728	**14,740**
Distribution				
Substations	85	48	11	**48**
Lines	7,724	1,672	97	**6,149**
Sundry	1,329	502	23	**850**
	9,138	2,222	131	**7,047**
Other				
Administration buildings and service buildings	1,709	324	13	**1,398**
Construction, operating and research equipment	1,645	1,040	132	**737**
Sundry	1,704	658	121	**1,167**
	5,058	2,022	266	**3,302**
	$57,679	$12,986	$3,349	**$48,042**

Note 5 Fixed assets (continued)

	1997			
	In service	*Accumulated depreciation*	*In progress*	*Total*
Generation				
Hydraulic	$23,185	$ 3,954	$2,005	$21,236
Nuclear	1,612	543	14	1,083
Thermal, other than nuclear	1,053	402	13	664
	25,850	4,899	2,032	22,983
Transmission				
Substations	9,773	1,820	247	8,200
Lines	7,064	1,182	197	6,079
Sundry	109	43	—	66
	16,946	3,045	444	14,345
Distribution				
Substations	111	55	12	68
Lines	7,543	1,602	78	6,019
Sundry	1,305	470	11	846
	8,959	2,127	101	6,933
Other				
Administration buildings and service buildings	1,698	283	15	1,430
Construction, operating and research equipment	1,613	993	88	708
Sundry	1,508	409	155	1,254
	4,819	1,685	258	3,392
	$56,574	$11,756	$2,835	$47,653

As at December 31, 1998, the Corporation has cumulative costs related to suspended draft-design projects amounting to $681 million, recorded under Fixed assets in progress. The Corporation has therefore ceased capitalizing the related borrowing expenses.

Given the longer timeframe for completing some of these projects, the Corporation periodically reviews the costs accumulated for these projects.

During such reviews, Management must use estimates and make assumptions that have an impact on the amounts shown for draft-design projects at the balance sheet date. Such projects are assessed in terms of profitability based on market conditions that will prevail at the time of their commissioning, compliance with sustainable development principles and how well local communities receive them. A significant change in the assessment of these criteria could result in a change to the balance for draft-design projects.

Note 6 Investments

	1998	1997
Noverco Inc. (Note 14)		
Notes[a]	**$ 126**	$ 127
Stock options[b]	**35**	35
Churchill Falls (Labrador) Corporation (Note 17)		
Bonds[c]	**62**	63
Common shares	**34**	34
Enbridge Inc.		
Common shares[d]	**119**	—
Other	**75**	29
	$ 451	$ 288

Investments are recorded at cost, unless otherwise indicated.

a) Subordinate debentures, interest rate based on the annual average rate of Government of Canada bonds with terms of over 10 years plus 4.45%, due in 2031, redeemable.

b) This cost approximates fair value.

c) General Mortgage, 7 1/2 %, due 1999 through 2010 (par value of $68 million in 1998 and $70 million in 1997).

d) Investment held by Noverco Inc. on an equity basis.

Note 7 Deferred charges

	1998	1997
Deferred charges related to debt[a]	**$3,981**	$3,081
Pension expense	**365**	368
Marketing programs	**142**	204
Development expenses	**107**	76
Major projects canceled or postponed	**—**	63
Personnel reduction and renewal measures	**178**	171
Other	**160**	105
	$4,933	$4,068

a) Mainly comprises the deferred exchange loss of $3,852 million ($2,600 million as at December 31, 1997).

Note 8 Other assets

	1998	1997
Goodwill	**$ 203**	$ 202
Government reimbursement for the ice storm (Note 19)	**407**	—
	$ 610	$ 202

Note 9 Financial assets related to debt

	1998	1997
Currency swaps	**$ 868**	$ 556
Sinking funds	**2**	63
	870	619
Less		
Current portion	**179**	131
	$ 691	$ 488

Note 10 Long-term debt

Composition and maturities

Debentures and other long-term debt of Hydro-Québec are summarized by year of maturity in the following table. The maturities are translated into Canadian dollars at the exchange rates in effect at the balance sheet date and include requirements of the sinking funds.

						1998	1997
Year of maturity	*Canadian dollars*	*United States dollars*	*Other currencies*	*Debt of the Corporation*	*Subsidiaries and joint venture*	*Total*	*Total*
1998	$ —	$ —	$ —	$ —	$ —	**$ —**	$ 1,319
1999	934	1,002	523	2,459	37	**2,496**	2,592
2000	897	799	992	2,688	28	**2,716**	2,557
2001	1,671	753	1,171	3,595	5	**3,600**	3,423
2002	434	1,978	449	2,861	164	**3,025**	2,670
2003	1,080	1,133	285	2,498	34	**2,532**	—
1- 5 years	5,016	5,665	3,420	14,101	268	**14,369**	12,561
6-10 years	3,688	2,475	1,889	8,052	207	**8,259**	8,978
11-15 years	1,697[a]	2,038	134	3,869	—	**3,869**	2,783
16-20 years	11	997	576	1,584	52	**1,636**	2,668
21-25 years	4,619[a]	3,005	—	7,624	—	**7,624**	7,763
26-30 years	(269)	1,227	—	958	68	**1,026**	914
31-35 years	241	2,683	—	2,924	—	**2,924**	2,767
36 and more	410	—	—	410	2	**412**	16
	15,413	18,090	6,019	39,522	597	**40,119**	38,450
Less							
Current portion	934	1,002	523	2,459	37	**2,496**	1,319
	$14,479	$17,088	$5,496	$37,063	$560	**$37,623**	$37,131

a) Includes $82 million and $182 million in zero-coupon bonds, shown at their discounted value at an interest rate compounded semi-annually of 10.95% and 10.67% respectively. Their par value will reach $282 million and $1,729 million in 2010 and 2020 respectively.

The debentures of the Corporation are guaranteed by the Gouvernement du Québec. Other long-term debt of the Corporation, which is not guaranteed by the government, totals $250 million as at December 31, 1998 ($251 million as at December 31, 1997).

Note 10 Long-term debt (continued)

Repayments

Repayments of long-term debt, including the current portion, to be made in Canadian dollars and in foreign currencies, with their Canadian dollar equivalent, are shown in the following table. Also shown are the effects of currency swaps and sinking funds allocated to repay debt, which are presented on the balance sheet under Financial assets related to debt.

				1998	1997
	Long-term debt		*Financial assets related to debt*		
	In Canadian dollars and currency units	*At the closing exchange rates at the balance sheet date*[a]	*Currency swaps and sinking funds*	*Total*	*Total*
Debt of the Corporation					
Canadian dollars	$15,413	$15,413	$ (2)	**$15,411**	$15,282
United States dollars[b]	11,688	18,090	(167)	**17,923**	16,999
Other currencies[c]					
Japanese yen	77,000	1,149	(141)	**1,008**	1,169
Deutsche marks	2,362	2,236	(372)	**1,864**	1,170
Pounds sterling	400	1,056	(18)	**1,038**	1,379
Swiss francs	546	619	(79)	**540**	587
French francs	2,500	685	(17)	**668**	623
ECUs	125	225	(68)	**157**	157
Belgian francs	1,000	49	(6)	**43**	43
		6,019	(701)	**5,318**	5,128
		39,522	(870)	**38,652**	37,409
Subsidiaries and joint venture[d]		597	—	**597**	422
		$40,119	$(870)	**$39,249**	$37,831

a) Includes $395 million of financial liabilities comprised of currency swaps ($442 million in 1997).

b) These repayments are 85% hedged by future revenue streams in United States dollars and 6% by currency swaps (85% and 7% as at December 31, 1997).

c) These repayments are 94% hedged by currency swaps that translate the repayments into Canadian or United States dollar equivalents (89% as at December 31, 1997).

d) Representing 534 million in Canadian dollars, 47 million in United States dollars and 16 million in Australian dollars (380 million in Canadian dollars, 20 million in United States dollars and 22 million in Australian dollars as at December 31, 1997).

Note 10 Long-term debt (continued)

Allocation of debt by currency at time of issue and at time of repayment

The following table shows the allocation of debt converted into Canadian dollars after taking the swaps into account, according to the currency at time of issue and the currency at time of repayment.

	1998		1997	
	At time of issue	*At time of repayment*	*At time of issue*	*At time of repayment*
Debt of the Corporation				
Canadian dollars	**$15,411**	**$18,160**	$15,282	$18,312
United States dollars	**17,923**	**20,156**	16,999	18,555
Other currencies	**5,318**	**336**	5,128	542
	38,652	**38,652**	37,409	37,409
Debt of the subsidiaries and the joint venture				
Canadian dollars	**534**	**550**	380	402
United States dollars	**47**	**47**	20	20
Other currencies	**16**	**—**	22	—
	597	**597**	422	422
	$39,249	**$39,249**	$37,831	$37,831

Interest rates

The interest rates of Hydro-Québec presented in the following table take into account nominal interest rates on borrowings, the related discounts and expenses, as well as the effect of interest rate swaps.

				1998	1997
Year of maturity	*Canadian dollars*	*United States dollars*	*Other currencies*	*Weighted average*	*Weighted average*
1- 5 years	8.40	7.82	7.78	**8.03**	7.57
6-10 years	7.22	7.92	6.00	**7.15**	7.43
11-15 years	10.14	9.89	14.96	**10.14**	10.06
16-20 years	10.44	8.69	4.59	**7.29**	8.76
21-25 years	10.22	9.24	—	**9.83**	9.88
26-30 years	8.99	8.62	—	**8.63**	8.76
31-35 years	9.01	9.32	—	**9.29**	9.29
36 and more	5.36	—	—	**5.36**	6.18
Weighted average	9.14	8.93	6.41	**8.80**	8.91

The variable-rate portion of the Corporation's debt amounts to 28.2%, or 29.2% after perpetual debt, as at December 31, 1998 (27.7%, or 28.7% after perpetual debt, as at December 31, 1997). For information purposes, an increase of 1% in the interest rate would reduce net income by $47 million ($44 million in 1997).

Fair value

As at December 31, 1998, the fair value of Hydro-Québec's debentures and other long-term debt amounted to $50,947 million ($46,850 million as at December 31, 1997). However, currency and interest rate swaps, used to manage financial risk resulting from long-term debt, show a positive fair value of $1,346 million ($993 million as at December 31, 1997).

Fair value is obtained by discounting future cash flows, based on term and closing interest rates as at the balance sheet date for similar securities available on financial markets. The fluctuation in the fair value of debentures and other long-term debt is explained by the latter's sensitivity to financial market interest rates. However, Management intends to retain these debt securities until maturity. Therefore, as at December 31, 1998, the Corporation did not foresee any significant debt repayments that could result in the realization of this fair value.

The Corporation has undrawn revolving standby credits totaling U.S. $1,800 million which expire between 2001 and 2003. Any borrowing under these lines of credit will bear interest at a rate based on the Eurodollar London Interbank Offered Rate (LIBOR).

Note 11 Other long-term liabilities

	1998	1997
Accounts payable	**$164**	$141
Other postretirement benefits	**228**	185
Decommissioning of nuclear generating station	**65**	56
	$457	$382

Note 12 Perpetual debt

Perpetual notes in the amount of U.S. $400 million bear interest at a rate based on the Eurodollar London Interbank Offered Rate (LIBOR), established twice yearly. They are guaranteed by the Gouvernement du Québec and are redeemable. These notes are shown on the balance sheet at the exchange rate in effect as at date of issue ($613 million at the exchange rate in effect at balance sheet date), an amount that approximates fair value. As at December 31, 1998 and 1997, the LIBOR rate for perpetual notes was 5.69% and 5.94%, respectively.

Note 13 Derivative instruments

Derivative instruments used by the Corporation are always associated with a reverse risk position.

Hydro-Québec concludes currency swaps in order to manage the foreign exchange risk associated with repayments of principal on long-term debt and with interest payments. Some of these currency swaps allow for interest rate exchanges to change the company's long-term exposure to interest rate risk. Interest rate swaps that do not allow for exchanges of principal are also used to manage this risk.

The valuation of these swaps, with terms through 2017, shows a positive fair value of $1,346 million (positive fair value of $993 million as at December 31, 1997).

The following table shows the notional amount of these swaps expressed in Canadian dollars or in other currencies.

	1998	1997
Canadian dollars	**(2,732)**	(3,052)
United States dollars	**(1,458)**	(1,012)
Other currencies		
Japanese yen	**77,000**	90,000
Deutsche marks	**2,244**	1,093
Pounds sterling	**310**	517
Swiss francs	**547**	536
French francs	**2,500**	3,175
ECUs	**125**	125
Belgian francs	**1,000**	1,000
Australian dollars	**18**	25

Data in brackets represent amounts payable.

Note 13 Derivative instruments (continued)

In managing short-term financial risks, Hydro-Québec makes continual comprehensive evaluations of the impact of variations in exchange rates, interest rates and prices of raw materials. In this respect, Hydro-Québec held, as at December 31, 1998 and 1997, options and forward contracts designed to hedge several needs. The fair value of these instruments is $8 million as at December 31, 1998 ($53 million as at December 31, 1997) and is allocated by specific risk in the following table. These derivative instruments mature in or prior to June 2000.

The fair value of derivative instruments reflects the amount that the Corporation would receive (*financial assets*) or pay (*financial liabilities*) as at the balance sheet date in terminating these instruments.

	1998	1997
Exchange risk		
Forward exchange contracts, options and swaps		
Financial assets	**$ 7**	$21
Financial liabilities	**(8)**	—
	(1)	21
Interest rate risk		
Forward rate agreements, options and swaps		
Financial assets	**1**	12
Financial liabilities	**—**	(1)
	1	11
Risk of price change in raw materials		
Forward contracts, options and swaps		
Financial assets	**16**	23
Financial liabilities	**(8)**	(2)
	8	21
	$ 8	$53

The fair value of derivative instruments is determined based on the spot rates or forward rates or prices available at market closing as at the balance sheet date. Without this information for a given instrument, reference is made to the available forward rate or price for an equivalent instrument. Different valuation models recognized by financial markets are used to estimate the fair value of options.

Credit risk

Derivative instruments include an element of risk, since a counterparty might not meet its obligations. However, this risk is moderate as the Corporation deals only with Canadian and international financial institutions with high credit ratings. Credit risk exposure is also reduced by applying a credit policy that limits credit risk concentrations. As at December 31, 1998, the Corporation did not foresee incurring any loss due to counterparty default.

Note 14 Interest in a joint venture

In 1997, Hydro-Québec acquired an interest in Noverco Inc., a holding company that oversees Gaz Métropolitain, inc. As at December 31, 1998, Hydro-Québec holds 41% of the outstanding common shares of Noverco Inc. and options on an additional portion of 9%.

Gaz Métropolitain and Company, Limited Partnership, the main subsidiary of Gaz Métropolitain, inc., is involved primarily in the distribution of natural gas by pipeline. Most of its operations are monitored and controlled by the *Régie de l'énergie*. In addition, the Régie's decisions result in the adoption of accounting methods and practices specific to the regulated entities, notably as regards rate stabilization accounts, certain deferred charges, fixed assets and related depreciation, and excess return, if any.

Note 14 Interest in a joint venture (continued)

The Noverco Inc. shareholders' agreement provides for joint control by the principal shareholders: Hydro-Québec, Enbridge Inc. (formerly IPL Energy), and Laurentides Investissements S.A. (Gaz de France). Under the agreement, Hydro-Québec granted mechanisms to the joint owners allowing for an eventual liquidity of their interests under certain conditions.

The share of the results and cash flow items included in the consolidated financial statements corresponds to the operations of the joint venture from October 1, 1997 to September 30, 1998 (from the dates of acquisition through to September 30, 1997 for 1997). The share of the balance sheet items recorded in the consolidated financial statements reflects the financial position of the joint venture as at September 30, 1998.

	1998	1997
Operations		
Revenue	**$ 518**	$ 322
Expenditure and financial expenses	**476**	304
Non-controlling interest	**11**	6
Share of net income	**$ 31**	$ 12
Balance sheet		
Current assets	**$ 89**	$ 81
Long-term assets	**930**	739
Current liabilities	**130**	96
Long-term liabilities	**553**	398
Non-controlling interest	**129**	135
Share of net assets	**$ 207**	$ 191
Changes in financial position		
Operating activities	**$ 69**	$ 143
Investing activities	**(222)**	(110)
Financing activities	**164**	(47)
Share of the increase (decrease) in cash	**$ 11**	$ (14)

Note 15 Shareholder's equity

The authorized share capital comprises 50,000,000 shares with a par value of $100 each, and 43,741,090 shares were issued and paid.

Under the *Hydro-Québec Act*, any dividends to be paid by the company are declared once a year by the Gouvernement du Québec, which also determines the terms and conditions of payment. For a given financial year, they cannot exceed the distributable surplus, equal to 75% of operating income and the year's net investment income, less interest on debt securities and amortization of borrowing discount and expenses. This calculation is made on the basis of the consolidated financial statements.

However, in respect of a given financial year, no dividend may be declared in an amount that would have the effect of reducing the rate of capitalization to less than 25% at the end of the year. The government declares the dividends for a given year within 30 days after the transmission by Hydro-Québec to the government of the financial data relative to the distributable surplus. On expiry of the time prescribed, any distributable surplus or part thereof that has not been subject to a dividend declaration may no longer be distributed to the shareholder as a dividend.

For 1998, the Gouvernement du Québec declared dividends of $279 million, which is the maximum amount that could have been declared.

Dividends declared are deducted from the retained earnings of the year for which they were declared.

Note 16 Pension Plan

The Hydro-Québec Pension Plan is a contributory defined benefit pension plan, based on final pay, that is offered to the employees of the Corporation. The benefits payable are guaranteed by the Corporation. As at December 31, 1998, there were 19,776 contributors to the Plan. An actuarial valuation was made in 1998 in order to determine the present value of accrued benefits based on employees' expected basic salary until retirement. The assets of the pension funds are valued at fair value.

As at December 31, 1998, the date of the most recent valuation, the Pension Plan showed a surplus as follows:

Assets of the pension funds	$7,383
Present value of accrued benefits	6,376
Surplus	**$1,007**

For the year ended December 31, 1998, pension expense amounted to $53 million ($101 million in 1997).

Note 17 Commitments and contingent liabilities

Electricity purchased

On May 12, 1969, Hydro-Québec signed a contract with Churchill Falls (Labrador) Corporation [CF(L)Co] whereby Hydro-Québec undertook to purchase substantially all the power generated at the Churchill Falls generating station, which has a rated capacity of 5,428 MW. Under this agreement, Hydro-Québec could be required to provide additional funding to service the debt of CF(L)Co and to pay its expenses should CF(L)Co be unable to do so. Maturing in 2016, this contract will be automatically renewed for a further 25 years in accordance with existing terms and conditions.

On May 28, 1990, Hydro-Québec signed a firm power purchase contract with New Brunswick Power Corporation to provide Hydro-Québec with blocks of power of up to 400 MW between 1991 and 1998, 300 MW between 1998 and 2002, and 200 MW between 2002 and 2011.

As at December 31, 1998, Hydro-Québec had signed contracts with 67 independent power producers representing a potential capacity of 436 MW. Hydro-Québec expects to purchase approximately 370 MW of power and energy annually over the initial term of these contracts, which mature through 2021. The majority of these contracts include renewal clauses.

Taking into account all of the electricity purchase contracts, Hydro-Québec expects to make the following minimum payments in each of the next five years:

1999	$404
2000	$351
2001	$340
2002	$316
2003	$298

Energy storage

The Corporation offers its customers outside Québec the possibility of storing a specified quantity of energy in its reservoirs. This service optimizes the use of the Corporation's facilities while generating rental income.

In this context, the Corporation entered into energy storage agreements representing a potential of approximately 9.6 TWh. These agreements cover periods ranging from 1 to 5 years and extend until 2004. As at December 31, 1998, approximately 2 TWh were stored in Corporation reservoirs under these agreements.

Certain provisions enable the Corporation and/or the counterparty to convert certain energy storage contracts into energy purchase/sale contracts.

Projected capital expenditures

The Corporation projects capital expenditures amounting to $2,127 million for 1999.

Litigation

In the normal course of business, Hydro-Québec is party to claims and legal proceedings. Management is of the opinion that their settlement will not have a material effect on the financial position or consolidated operating results of Hydro-Québec, given the provision for these items.

Note 18 Segmented information

The context in which Hydro-Québec operates is constantly changing. The opening of North American energy markets, the introduction of the *Régie de l'énergie* and the growth and profitability orientations proposed by Hydro-Québec necessitated the review and adjustment of certain management practices.

These considerations were taken into account in the segmentation, resulting in an approach based primarily on products and services. Three segments were thus established: Electricity, Gas, and Expertise and Technology. The segments include their own particular economic characteristics and differ in nature, production processes, and technology, as well as in target customer base.

The Electricity segment is Hydro-Québec's core activity and encompasses the generation, transmission and distribution of electricity.

The Gas segment represents natural gas transmission and distribution activities, principally through the Corporation's interest in Noverco shares and debentures.

The Expertise and Technology segment groups together activities related to the marketing of Hydro-Québec-developed technology and expertise. The information provided relates chiefly to the Corporation's subsidiaries in these sectors, namely Hydro-Québec CapiTech and Hydro-Québec International.

The following tables contain information related to the results and assets by segment, as well as certain geographical information.

Segments

	1998				
	Energy				
	Electricity	*Gas*	*Expertise and Technology*	*Eliminations for consolidation purposes*	*Hydro-Québec*
Revenue	**$ 8,192**	**$ 568**	**$ 71**	**$(19)**	**$ 8,812**
Depreciation, amortization and decommissioning	**$ 1,533**	**$ 48**	**$ 8**	**—**	**$ 1,589**
Financial expenses	**$ 3,088**	**$ 50**	**$ 16**	**—**	**$ 3,154**
Net income (loss)	**$ 697**	**$ 15**	**$ (33)**	**—**	**$ 679**
Capital expenditures	**$ 1,986**	**$ 95**	**$ 16**	**—**	**$ 2,097**
Total assets	**$55,724**	**$1,425**	**$194**	**$(48)**	**$57,295**

Segments

	1997				
	Energy				
	Electricity	*Gas*	*Expertise and Technology*	*Eliminations for consolidation purposes*	*Hydro-Québec*
Revenue	$ 8,022	$ 333	$ 68	$ —	$ 8,423
Depreciation, amortization and decommissioning	$ 1,501	$ 34	$ 10	—	$ 1,545
Financial expenses	$ 3,022	$ 20	$ 20	—	$ 3,062
Net income (loss)	$ 820	$ 11	$ (45)	—	$ 786
Capital expenditures	$ 1,554	$ 19	$ 17	—	$ 1,590
Total assets	$53,899	$1,102	$222	$(26)	$55,197

There was no intersegment revenue for the year ended December 31, 1997.

Geographical information

	1998		1997	
	Revenue	*Fixed assets and goodwill*	*Revenue*	*Fixed assets and goodwill*
Québec	**$7,809**	**$48,155**	$7,778	$47,843
Canada, outside Québec	**146**	**—**	134	—
United States	**831**	**65**	479	—
Other countries	**26**	**25**	32	12
	$8,812	**$48,245**	$8,423	$47,855

The amounts presented for each segment are based on the financial information used to establish the consolidated financial statements of Hydro-Québec.

Note 19 Government reimbursement

As a result of the ice storm that struck southwestern Québec in January 1998, the Gouvernement du Québec has agreed to assume:

- the cost of emergency measures;
- the net cost of restoring the network to the condition it was prior to the disaster, and compensation for related financing expenses.

Government assistance amounts to $434 million in 1998, of which $182 million was deducted from expenditure, $17 million went to reduce financial expenses and $235 million was subtracted from the cost of fixed assets. Assistance relating to fixed assets is amortized over 10 years under the sinking fund method at the rate of 3%.

The reimbursement recorded in Other assets corresponds to the reimbursement of the cost of emergency measures, receivable in 2002, and to the installment payments, from 2000 to 2007, of the compensation for the net cost of restoring the network.

Note 20 Uncertainty due to the Year 2000 Issue

The Year 2000 Issue arises because many computerized systems use two digits rather than four to identify a year. Date-sensitive systems may recognize the year 2000 as 1900 or some other date, resulting in errors when information using year 2000 dates is processed. In addition, similar problems may arise in some systems which use certain dates in 1999 to represent something other than a date. The effects of the Year 2000 Issue may be experienced before, on, or after January 1, 2000, and, if not addressed, the impact on operations and financial reporting may range from minor errors to significant systems failure which could affect an entity's ability to conduct normal business operations. Although the Corporation has taken steps to address the Year 2000 Issue, it is not possible to be certain that all aspects of the Year 2000 Issue affecting the entity, including those related to the efforts of customers, suppliers, or other third parties, will be fully resolved.

consolidated financial information

(in millions of dollars)	**1998**	1997	1996	1995	1994
Operations					
Revenue	**$ 8,812**	$ 8,423	$ 7,754	$ 7,680	$ 7,335
Expenditure					
Operations	**1,681**	1,724	1,619	1,764	1,813
Electricity and fuel purchased	**899**	529	275	273	289
Depreciation, amortization and decommissioning	**1,589**	1,545	1,427	1,228	1,091
Taxes	**799**	771	760	731	666
	4,968	4,569	4,081	3,996	3,859
Operating income	**3,844**	3,854	3,673	3,684	3,476
Financial expenses	**3,154**	3,062	3,153	3,294	2,809
Income before non-controlling interest	**690**	792	520	390	667
Non-controlling interest	**11**	6	—	—	—
Net income	**$ 679**	$ 786	$ 520	$ 390	$ 667
Summary of balance sheet					
Total assets	**57,295**	55,197	53,760	53,755	51,608
Long-term debt	**37,623**	37,131	36,404	36,958	36,047
Shareholders' equity	**13,288**	12,888	12,459	11,939	11,549
Annual investments					
Fixed assets	**2,097**	1,590	2,056	2,717	3,167
Other	**234**	543	(9)	51	124
Total investments	**2,331**	2,133	2,047	2,768	3,291

consolidated financial ratios

Interest coverage[a]	**1.19**	1.21	1.11	1.05	1.07
Capitalization (in %)[b]	**25.0**	25.1	24.9	23.4	23.5
Self-financing (in %)[c]	**44.5**	60.4	55.9	43.6	47.6
Return on equity (in %)[d]	**5.2**	6.2	4.3	3.3	6.0
Return on revenue (in %)[e]	**7.7**	9.3	6.7	5.1	9.1

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

b) *Shareholder's equity divided by sum of shareholder's equity, long-term debt, perpetual debt, short-term borrowings and current portion of long-term debt, less financial assets related to debt.*

c) *Cash provided from operations less dividends paid, divided by sum of investments, maturity of long-term debt and sinking fund redemption.*

d) *Net income divided by average shareholder's equity.*

e) *Net income divided by revenue.*

Note: Throughout the five-year review, certain figures for previous years have been revised to reflect the presentation for the current year.

operating statistics

(in millions of kilowatthours)	**1998**	1997	1996	1995	1994
Electricity sales					
In Québec					
Residential and farm	**47,701**	51,246	50,294	48,842	49,437
General and institutional	**28,815**	29,560	29,158	29,108	28,315
Industrial	**61,773**	61,837	59,797	59,254	56,580
Other	**4,519**	4,648	5,261	4,832	4,670
	142,808	147,291	144,510	142,036	139,002
Outside Québec					
Firm sales	**10,788**	9,378	9,483	8,856	8,648
Short-term sales	**7,777**	5,864	9,409	15,090	10,405
	18,565	15,242	18,892	23,946	19,053
Total sales	**161,373**	162,533	163,402	165,982	158,055

(in millions of dollars)					
Revenue from electricity sales					
In Québec					
Residential and farm	**$2,906**	$3,066	2,945	$2,834	$2,866
General and institutional	**1,894**	1,885	1,835	1,843	1,809
Industrial	**2,177**	2,162	2,061	2,041	1,839
Other	**216**	218	226	221	226
	7,193	7,331	7,067	6,939	6,740
Outside Québec					
Firm sales	**493**	400	337	283	274
Short-term sales	**321**	196	251	354	245
	814	596	588	637	519
Total revenue from sales	**$8,007**	$7,927	$7,655	$7,576	$7,259

(at December 31)					
Number of customer accounts — Electricity					
In Québec					
Residential and farm	**3,182,033**	3,157,096	3,127,136	3,099,545	3,054,270
General and institutional	**280,067**	280,396	280,570	279,447	271,317
Industrial	**12,803**	13,002	13,198	13,386	13,156
Other	**6,066**	6,222	6,308	6,525	6,846
Outside Québec	**61**	52	48	41	27
Total customer accounts	**3,481,030**	3,456,768	3,427,260	3,398,944	3,345,616

operating statistics

(in kilowatthours/customer)	**1998**	1997	1996	1995	1994
Average annual consumption - Electricity					
In Québec					
Residential and farm	**15,050**	16,309	16,154	15,874	16,283
General and institutional	**102,826**	105,390	104,133	105,700	104,685
Industrial	**4,787,677**	4 720,382	4,498,721	4,464,924	4,266,164
Other	**735,514**	741,899	819,917	722,758	683,048

(in %)					
Rate increases					
Average increase at May 1	**1.6**	1.6	1.3	0.3	1.0
Inflation rate	**0.9**	1.6	1.6	2.1	0.2

(in thousands of kilowatts)					
Installed capacity*					
Hydroelectric	**29,203**	29,203	29,220	28,932	28,207
Thermal**	**2,269**	2,194	2,193	2,193	2,193
Total installed capacity	**31,472**	31,397	31,413	31,125	30,400

* *In addition to its own generating stations, Hydro-Québec has access to most of the generation from Churchill Falls power plant (nominal capacity 5,428 MW).*

** *Includes Gentilly-2 nuclear power station, which has a nominal capacity of 675 MW.*

(in thousands of kilowatts)					
Peak power requirements*	**35,275**	32,305	34,642	33,594	35,443

* *Total power requirements at annual peak for the winter beginning in December, including McCormick generating station and interruptible power. The annual peak for winter 1998-1999 occurred at 6 p.m. on January 14, 1999.*

(in millions of kilowatthours)					
Total requirements*	**176,921**	182,263	182,679	185,937	178,419

* *Includes McCormick generating station.*

(in kilometres)					
Lines (overhead and underground)					
Transmission and subtransmission	**32,144**	32,090	30,557	30,831	30,478
Distribution	**105,705**	104,640	104,078	102,785	101,285
	137,849	136,730	134,635	133,616	131,763

Number of employees*					
Permanent at December 31	**17,468**	17,164	19,553	20,231	20,528
Temporary *(year's average)*	**3,379**	3,252	3,767	4,621	4,878
Women *(in %)*	**27.4**	27.0	25.9	26.7	27.0

* *These figures exclude employees of subsidiaries and of the Noverco joint venture.*

consolidated results by quarter

(in millions of dollars)	1st quarter	2nd quarter	3rd quarter	4th quarter	12-month period
	(unaudited)				*(audited)*
1998					
Revenue	$2,414	$2,012	$1,948	$2,438	$8,812
Expenditure					
Operations	407	457	374	443	1,681
Electricity and fuel purchased	204	196	217	282	899
Depreciation, amortization and decommissioning	401	395	404	389	1,589
Taxes	203	208	199	189	799
	1,215	1,256	1,194	1,303	4,968
Operating income	1,199	756	754	1,135	3,844
Financial expenses	776	786	803	789	3,154
Income (loss) before non-controlling interest	423	(30)	(49)	346	690
Non-controlling interest	5	8	—	(2)	11
Net income (net loss)	$ 418	$ (38)	$ (49)	$ 348	$ 679

(in millions of dollars)	1st quarter	2nd quarter	3rd quarter	4th quarter	12-month period
	(unaudited)				*(audited)*
1997					
Revenue	$2,411	$1,945	$1,775	$2,292	$8,423
Expenditure					
Operations	439	438	398	449	1,724
Electricity and fuel purchased	98	182	133	116	529
Depreciation, amortization and decommissioning	373	380	382	410	1,545
Taxes	190	200	196	185	771
	1,100	1,200	1,109	1,160	4,569
Operating income	1,311	745	666	1,132	3,854
Financial expenses	744	783	741	794	3,062
Income (loss) before non-controlling interest	567	(38)	(75)	338	792
Non-controlling interest	—	7	—	(1)	6
Net income (net loss)	$ 567	$ (45)	$ (75)	$ 339	$ 786

Note: Certain figures in the consolidated results by quarter have been reclassified to reflect the presentation for the current year.

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3 *Finance*
4 *Human Resources*
5 *Audit*
6 *Pension Fund Management*
7 *Ethics and Corporate Governance*

teamwork

"Hydro-Québec's growth is founded on the combined talent and expertise of everyone and on their full commitment to the success of our collective project."

André Caillé

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generating facilities

Hydroelectric	Installed capacity *(in kilowatts)*
Robert-Bourassa	5,328,000
La Grande-4	2,650,500
La Grande-3	2,304,000
La Grande-2-A	1,998,000
Beauharnois	1,656,860
Manic-5	1,528,000
La Grande-1	1,368,000
Manic-3	1,183,200
Manic-5-PA	1,064,000
Manic-2	1,015,200
Bersimis-1	936,000
Laforge-1	837,900
Bersimis-2	798,000
Outardes-3	756,200
Carillon	654,500
Outardes-4	632,000
Outardes-2	453,900
Brisay	446,500
Laforge-2	304,000
Trenche	302,400
Paugan	250,100
Beaumont	243,000
La Tuque	224,000
Rapide-Blanc	201,600
Shawinigan-2	191,500
Manic-1	184,410
Shawinigan-3	171,900
Les Cèdres	153,000
Chelsea	150,700
Grand-Mère	149,575
Rapides-des-Îles	146,520
La Gabelle	136,580
Première-Chute	124,200
Rapides-Farmers	98,250
Rapides-des-Quinze	94,560
Chute-des-Chats	89,300
Bryson	61,000
Hart-Jaune	48,450
Rivière-des-Prairies	48,300
Rapide-2	48,000
Rapide-7	48,000
Chute-Hemmings	28,800
Hull-2	27,280
Lac-Robertson	23,760
Drummondville	16,200
Saint-Narcisse	15,000
Mitis-1	6,400
Mitis-2	4,250
Chute-Burroughs	1,600

Thermal	Installed capacity *(in kilowatts)*
Nuclear	
Gentilly-2	675,000
Oil	
Tracy	600,000
Gas-turbine	
Bécancour	428,200
La Citière	280,000
Cadillac	162,000
Diesel	
Îles-de-la-Madeleine	67,200
Blanc-Sablon*	8,000
La Tabatière*	6,800
La Romaine	4,933
Obedjiwan	4,900
Kuujjuaq	3,935
Kuujjuarapik	3,405
Povungnituk	2,870
Port-Menier	2,790
Inukjuak	2,735
Weymontachie	2,295
Salluit	2,000
Kangiqsualujjuaq	2,000
Kangiqsujuaq	1,520
L'Île-d'Entrée	1,190
Ivujivik	1,050
Kangirsuk	1,050
Umiujaq	1,050
Quaqtaq	975
Akulivik	850
Tasiujaq	670
Aupaluk	550
Clova	530
Saint-Augustin*	400

Total installed capacity at December 31, 1998**	*(in kilowatts)*
Hydroelectric generating stations (49)	29,203,395
Thermal generating stations (29)	2,268,898
Total generating stations	31,472,293

* *Kept in reserve since the commissioning of Lac-Robertson generating station.*

** *Hydro-Québec also has access to most of the generation from Churchill Falls power plant, which has a nominal capacity of 5,428 MW.*

Under construction	Commissioning date	Installed capacity *(in kilowatts)*
Sainte-Marguerite-3 hydroelectric generating station	2001	882,000

major facilities

building automation
All the automated controls used to manage various processes (heating, air conditioning, lighting, etc.) in an apartment or office building.

commercial paper
A promissory note issued by Hydro-Québec for its short-term financing, generally for less than one year.

corporate governance
A set of rules governing the composition and functioning of the Board of Directors as well as relations between the Board and management.

energy capability
The maximum quantity of energy that may potentially be generated by all hydraulic inflows in a given time interval (one year, for example), under optimum conditions.

Federal Energy Regulatory Commission (FERC)
An autonomous agency of the United States Department of Energy that controls access to American energy transmission systems and wholesale electricity markets.

green energy
Renewable energy that is in accord with principles of sustainable development, notably with respect to the reduction of greenhouse gases.

greenhouse gases
Gases that absorb the energy given off by the Earth (in the form of infrared radiation) and radiate it back toward Earth, thereby warming the surface of the planet. The principal greenhouse gases are water vapor, carbon dioxide and methane.

integrated enhancement and development program
A program to ensure that Hydro-Québec's projects integrate harmoniously into their environment and provide opportunities for the company to participate actively in the development of the communities affected. The program has three main components: enhancement of the environment and certain municipal infrastructures, support for regional development, and support for development of Aboriginal communities.

ISO (International Organization for Standardization)
An international organization responsible for developing worldwide standards and whose membership includes the national standards organizations of some 100 countries, based on one organization per country.

load shedding
A process that involves removing a load from a power system in order to prevent or offset an abnormal operating condition (low frequency, low voltage, instability, overload, etc.).

loop
A set of high-voltage lines and substations circling a given geographic area and allowing multiple lines to supply power in order to improve security of supply and reliability of the transmission system.

polymer-electrolyte battery (ACEP)
An all-solid battery with high energy density, made of polymer film and a sheet of lithium rolled together in strips. This battery is designed to power electric vehicles and to act as a backup battery for telecommunications networks, among other applications.

sustainable development
A planning, intervention and management concept aimed at achieving development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

swap
A financial operation in which two parties, for example Hydro-Québec and a bank, agree to swap interest rates (interest rate swap) or exchange rates (currency swap) as per their agreements.

tolling agreement
An agreement under which a power producer converts fuel into electricity on behalf of a client. The client supplies the fuel and pays a fee for the use of the producer's generating plant.

venture capital
Capital invested in an innovative business undertaking (cutting-edge technologies, new ideas, high-risk markets). In return for greater risk, investors hope for above-average returns.

watt (W)
A unit used to measure power.
The most common multiples are:
- kilowatt (kW) = 1,000 watts
- megawatt (MW) = 1 million watts
- gigawatt (GW) = 1 million kilowatts
- terawatt (TW) = 1 billion kilowatts

watthour (Wh)
A unit used to measure electric energy.
The most common multiples are:
- kilowatthour (kWh) = 1,000 watthours
- megawatthour (MWh) = 1,000 kilowatthours
- gigawatthour (GWh) = 1 million kilowatthours
- terawatthour (TWh) = 1 billion kilowatthours

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