



## National Energy Board

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# Reasons for Decision

**Hydro-Québec**

**EH-4-87**

**February 1988**

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**For Exports to Vermont Joint  
Owners**

# **National Energy Board**

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In the Matter of

**Hydro-Québec**

For Exports to Vermont Joint Owners

**EH-4-87**

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## **Abbreviations**

### **Units of Measurement**

MW  
megawatt (1 000 kilowatts)

GW.h  
gigawatt hour (1 000 000 kW.h)

### **Names**

Applicant:

Hydro-Québec

Board:

National Energy Board

## **Recital and Appearances**

IN THE MATTER OF the National Energy Board Act and the Regulations thereunder; and

IN THE MATTER OF an application by Hydro-Québec for a licence to export electricity to Vermont Joint Owners, pursuant to Part VI of the said Act. Filed with the Board under File number 1923-Q1-14.

HEARD at Ottawa, Ontario on 19 January 1988.

BEFORE:

J. Farmer	Presiding Member
J.G. Fredette	Member
C. Senneville	Member

APPEARANCES:

Y. Heurtel	Hydro-Québec
E. Finn	Ontario Hydro
J. Giroux	Attorney General for the Province of Quebec
F.J. Morel	National Energy Board

# Chapter 1

## The Applicant's Evidence

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### The Application

Hydro-Québec's application dated 29 June 1987 and amended 28 October 1987 is for a licence to export firm power and energy to Vermont Joint Owners for the period from 1 March 1988 to 31 October 1990. The amounts applied for are 50 MW of power and 438 GW.h of energy per year. The electricity exported in accordance with the Contract for the Sale of Firm Power and Energy, dated 23 February 1987, between Hydro-Québec and Vermont Joint Owners, would be produced by existing generating facilities and transmitted over the international power lines authorized under Certificates of Public Convenience and Necessity Nos EC-III-17 and EC-III-22.

Hydro-Québec holds Order ELO-213, issued 27 February 1987 and amended 23 October 1987, authorizing it to export 50 MW of power and 400 GW.h of energy per year to the same American customer pursuant to the above mentioned contract. Order ELO-213 expires on 29 February 1988 and, since the annual amount of energy provided for under the contract exceeds the amount for which export can be authorized by order, Hydro-Québec applied to the Board for a licence instead of an order; accordingly, the Board, under section 20(1) of the Act, was obliged to hold a public hearing.

### The Contract

The contract for power and energy between Hydro-Québec and Vermont Joint Owners received the approval of the Government of Québec on 18 February 1987 and was signed on 23 February 1987. This contract describes the terms of sale of firm power and energy. It took effect on 1 March 1987 and will end on 31 October 1990. The contract period may be extended by three years by mutual agreement of the parties.

According to the terms of this contract, Hydro-Québec must make 50 MW of power available to Vermont Joint Owners. The maximum amount of energy that may be delivered per year is 438 GW.h; however, Hydro-Québec may interrupt the delivery of energy for 400 hours in any contract year, which could reduce the amount of energy delivered per year to 418 GW.h.

All of the power and energy provided for under this contract will be produced from hydraulic resources. Hydro-Québec is not required to run thermal generation or purchase power and energy from a third party to fulfil its obligations under the contract.

Article 3.2 of the contract provides that Vermont Joint Owners must take or pay for 50 MW of power at a price of \$125 000 US per month. The price of energy shall be fixed at 67 per cent of the monthly New England Power Pool (NEPOOL) fossil energy cost for the month ending on the last day of the second previous month. For each month, the combined price for power and energy must not be less than 80 per cent of the monthly NEPOOL fossil energy cost.

## **Surplus**

Hydro-Québec provided all the information required by section 6 of the National Energy Board Part VI Regulations. It supplied all the data needed to determine the status of power and energy surpluses that will be available during the proposed export period.

The monthly statement of surpluses indicates that, even during the critical months, Hydro-Québec can provide the 50 MW proposed for export. In its calculation of surpluses, Hydro-Québec considered all of its firm requirements, including firm exports and the amounts of power and energy provided for in the two recent firm contracts signed with New Brunswick Power.

The table in Appendix I provides, for the critical months in the export period (January and December), the forecasts prepared by Hydro-Québec for capacity, regular load - including firm contracts for sales outside the province - and excess power. Under the capacity category called emergency aid, the table shows two components that would increase the surpluses in peak periods, specifically the shedding of interruptible loads and assistance from neighbouring systems. During cross-examination by the Board, the witness for the Applicant explained that, in periods of heavy load, such as the winter peak, Hydro-Québec can shed certain industrial loads which are interruptible on a few hours' notice. He also stated that Hydro-Québec can count on purchases from neighbouring utilities, which are estimated at 600 MW throughout the entire period of the proposed licence.

## **Offers of electricity to Canadian utilities**

To demonstrate that the electricity proposed for export is surplus to Canadian needs and that the price complies with the requirements of the Board's regulations, Hydro-Québec followed an established practice of offering the proposed export to interconnected Canadian utilities.

For this purpose, it provided copies of the letters of offer, dated 26 June 1987, sent to New Brunswick Power, Ontario Hydro, St. Lawrence Power Company and Churchill Falls (Labrador) Corporation (CFLCo). Three Canadian utilities, New Brunswick Power, Ontario Hydro and St. Lawrence Power Company, replied that they were not interested in this offer. CFLCo did not reply.

## **Export price and profit**

To evaluate the validity of export prices, the Board has developed the following three criteria: the export price should allow recovery of the applicable costs incurred in Canada, it should not be less than the price of an equivalent service provided to Canadian customers and it should not be less than the least cost alternative on the export market.

To demonstrate that the export price guarantees the recovery of costs, the evidence included the results of the contract profitability analysis. Hydro-Québec indicated that it had offered the interconnected Canadian electrical utilities the amounts of electrical power and energy it intended to export, under the same terms as provided to the American companies. The proposed pricing formula provides for a minimum price that would follow changes in the cost of thermal production of electricity on the NEPOOL market.

The proposed export price would be established in accordance with Article 3.2 of the contract, explained above. According to Hydro-Québec's calculations, the net profit, in current Canadian dollars, which would result from the contract with Vermont Joint Owners for the period from 1 March 1988 to 31 October 1990 would be about 12 million dollars, based on a utilization factor of 80 per cent, and 14 million dollars based on a utilization factor of 100 per cent.

### **Export market**

Vermont Joint Owners is a group of nine corporations which are joint owners of the facilities at the Highgate station in Vermont and are also members of NEPOOL. These corporations provide 93 per cent of the electricity supply in the State of Vermont. One of the corporations also serves 9100 customers in the State of New Hampshire.

## **Chapter 2**

# **Interventions**

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Ontario Hydro and the Attorney General of Québec appeared at the hearing. Neither of these intervening parties submitted evidence at the hearing, and only Ontario Hydro cross-examined the Hydro-Québec witness. In their submissions, both intervening parties supported Hydro-Québec's application.

# Chapter 3

## Decision

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After examining Hydro-Québec's evidence, the Board is satisfied that the Applicant has complied with the criteria stipulated in section 83 of the Act. The evidence produced demonstrated that the energy proposed for export is surplus to the reasonably foreseeable requirements for use in Canada and that the export price is just and reasonable in relation to the public interest.

### Conclusion

For these reasons, subject to approval by the Governor in Council<sup>1</sup>, the Board issued licence EL-175 to Hydro-Québec on 19 January 1988, authorizing the export of firm power and energy for a period beginning on the later of the following dates:

- (a) 1 March 1988; or
- (b) the day of the approval of the licence by the Governor in Council;

and ending on 31 October 1990.

The quantities of power and energy and the price shall be those defined in the contract between Hydro-Québec and Vermont Joint Owners, signed 23 February 1987.

The terms and conditions of licence EL-175 are given in Appendix II.

The foregoing constitutes our Reasons for Decision and Decision in the matter of the present application of Hydro-Québec pursuant to Part VI of the National Energy Board Act.

J. Farmer  
Presiding Member

J.G. Fredette  
Member

C. Senneville  
Member

Ottawa Canada  
February 1988

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<sup>1</sup> Approved by Order in Council P.C. 1988-245 dated 11 February 1988 dated 11 February 1988.

# Appendix I

## Capacity, demand and excess of power - Capability, Load and Excess of Energy

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### HYDRO-QUÉBEC

#### Capacity, demand and excess of power (MW)

	1988 January	1989 January	1989 December	1990 January
1. Capacity	28,576	28,712	29,571	29,746
2. Regular load*	26,579	25,865	24,917	25,799
3. Gross excess (1-2)	1,997	2,847	4,654	3,947
4. Required reserve	2,868	3,085	3,034	3,450
5. Net excess (3-4)	-871	-238	1,620	497
6. Emergency aid**				
- interruptible load	700	750	750	850
- neighbouring systems	600	600	600	600
- total	1,300	1,350	1,350	1,450
7. Total excess (5+6)	429	1,112	2,970	1,947

#### Capability, Load and Excess of Energy (GW.h)

	1988	1989	1990
1. Total Capability	172,120	166,755	172,275
2. Load			
- Regular Load*	136,008	128,053	131,730
- Losses	13,324	12,964	13,355
- Total	149,332	141,017	145,085
3. Excess (1-2)	22,788	25,738	27,190

\* Includes domestic load plus all other firm commitment.

\*\* Loads that could be interrupted or available power at the peak period.

## Appendix II

### Licence No. EL-175

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IN THE MATTER of an application by Hydro-Quebec (hereinafter also referred to as "the Licensee") pursuant to the provisions of the *National Energy Board Act* (hereinafter referred to as "the Act") for a licence under Part VI thereof for the exportation of electricity, filed with the Board under File No. 1923- Q1-14.

WHEREAS an application dated 29 June 1987 (amended 28 October 1987), has been made by the Licensee to the National Energy Board (hereinafter referred to as "the Board"), under Part VI of the Act for a licence for the exportation of firm power and energy at points on the international boundary line between Canada and the United States of America;

AND WHEREAS a public hearing has been held on 19 January 1988, at which the Licensee and all interested parties have been heard;

AND WHEREAS the Board, having taken into account all such matters as to it appear to be relevant has satisfied itself that the firm power and energy to be exported does not exceed the surplus remaining after due allowance has been made for the reasonably foreseeable requirements for use in Canada and that the price to be charged by the Licensee for the firm power and energy to be exported by it is just and reasonable in relation to the public interest;

NOW THEREFORE, the Board, pursuant to section 82 of the Act, and subject to the conditions hereof, hereby issues this licence to Hydro-Québec for the exportation of sale transfers of firm power and energy at points on the international boundary line between Canada and the United States of America.

THIS LICENCE is subject to the following terms and conditions:

1. The term of this licence shall commence on the later of
  - (a) 1 March 1988, or
  - (b) the day of its approval by Governor in Counciland shall end on 31 October 1990.
2. The class of inter-utility export transfer authorized hereunder is sale transfers of firm power and energy.
3. The power and energy to be exported shall be in accordance with the Firm Power Contract between the Licensee and Vermont Joint Owners dated 23 February 1987, hereinafter referred to as the "Contract".
4. Any amendment or addition to, or termination or substitution of, the Contract shall not be effective until approved by the Board.

5. The power and energy to be exported hereunder shall be transmitted over the international power lines for which the Board has issued Certificate of Public Convenience and Necessity Nos. EC-III-17 and EC-III-22.
6. The quantity of power that may be exported hereunder shall not at any time exceed 50 MW.
7. The quantity of energy that may be exported hereunder shall not exceed 438 GW.h in any consecutive 12-month period throughout the term of the licence.
8. The price to be charged by the Licensee for exports made hereunder shall not be less than the prices defined in Section 3.1 of the Contract.
9. The Licensee, within 15 days after the end of each month during the term of this licence, shall file with the Board a report in such form and detail as the Board may specify, setting forth for that month information pertaining to transactions under the licence.

ISSUED in the City of Ottawa, in the Province of Ontario this 19th day of January 1988.

National Energy Board

J.S. Klenavic  
Secretary