

RP-2000-0068

ONTARIO ENERGY BOARD**148****DC13**Ligne Grand-Brûlé/Vignau à 315 kV
Boucle outaouaise

Laurentides/Outaouais 6211-09-018

IN THE MATTER OF the *Ontario Energy Board Act, 1998*;

AND IN THE MATTER OF an Application by Hydro One Networks Inc., for an Order or Orders granting leave to construct to make an interconnection with Hydro-Québec

APPLICATION

1. The Applicant is Hydro One Networks Inc. (Networks), a subsidiary of Hydro One Inc. The Applicant is an Ontario corporation with its head office in the City of Toronto. Networks carries on the business, among other things, of owning and operating transmission facilities within Ontario.
2. Networks hereby applies to the Ontario Energy Board (Board) pursuant to section 92 of the *Ontario Energy Board Act, 1998* for an order or orders granting leave to construct to make an interconnection with Hydro-Québec. This Application is made to fulfill part of the requirement pursuant to paragraph 22 of Networks' Transitional Transmission Licence, dated April 1, 1999, to use best efforts to expand inter-tie capacity with neighbouring jurisdictions by approximately 2000 MW within 36 months of the date the competitive market opens. Attached as Schedule A to this Application is a map showing the general location of the proposed interconnection.
3. This Application will be supported by written evidence. This evidence will include details of the Applicant's proposal for the new interconnection with Hydro-Québec. The written evidence will be pre-filed and may be amended from time to time, prior to the Board's final decision on this Application. Further, the Applicant may seek meetings with Board Staff and intervenors in an attempt to identify and reach agreements to settle issues arising out of this Application.
4. The persons affected by this Application are the ratepayers of Networks. It is impractical to set out their names and addresses because they are too numerous.

5. Networks requests that a copy of all documents filed with the Board by each party be served on the Applicant and the Applicant's counsel, as follows:

a) The Applicant:

Mr. David Curtis
Manager, Transmission Regulation
Hydro One Networks Company Inc.

Address for personal service: 13th Floor, North Tower
483 Bay Street,
Toronto, Ontario
M5G 2P5

Mailing Address: 13th Floor, North Tower
483 Bay Street,
Toronto, Ontario
M5G 2P5

Telephone: (416) 345-5922

Fax: (416) 345-5866

Electronic access: david.curtis@HydroOne.com

b) The Applicant's counsel:

Mary Anne Aldred
Senior Legal Counsel,
Hydro One Networks Inc.

Address for personal service: 8th Floor, South Tower
483 Bay Street,
Toronto, Ontario
M5G 2P5

Mailing Address: 8th Floor, North Tower
483 Bay Street,
Toronto, Ontario
M5G 2P5

Telephone: (416) 345-6302

Fax: (416) 345-6972

Electronic access: m.a.aldred@HydroOne.com

DATED at Toronto, Ontario, this 5th day of July, 2000.

HYDRO ONE NETWORKS INC.

By its counsel,



for M. Aldred

Filed 2000-08-10

RP-2000-0068

Exhibit A

Tab 2

Schedule 1

Page 1 of 5

SUMMARY OF PREFILED EVIDENCE

1
2
3 Hydro One Networks Inc. ("Networks") has applied to the Ontario Energy Board for an
4 order granting leave to construct transmission facilities pursuant to Section 92 of the
5 Ontario Energy Board Act.

6
7 The proposed facilities are for a new interconnection with Hydro-Québec
8 ("Hydro-Québec"), pursuant to the condition in Networks' Transitional Transmission
9 Licence. Section 22.1 of its Transitional Transmission Licence requires that Networks
10 "use its best efforts to expand inter-tie capacity to neighbouring jurisdictions by
11 approximately 2000 MW within 36 months of the date the competitive market opens".

12
13 The proposed facilities are also responsive to the need to increase the Ontario - Québec
14 interconnection capacity that was identified following the 1998 ice storm affecting
15 Eastern Ontario. This project will reinforce delivery capability in both Provinces and
16 enable another 1250 MW source of supply, thereby improving adequacy of supply during
17 peak demand and emergency conditions. These facilities will also provide the first
18 continuous interconnection between Ontario and Québec, since all current
19 interconnections involve isolating generation and/or load in one Province and connecting
20 it to the other Province's system.

21
22 The proposed facilities are required for the Outaouais/Hawthorne Interconnection (the
23 "Hydro-Québec Interconnection"). These facilities will interconnect with facilities to be
24 constructed in Québec by Hydro-Québec and will increase Ontario's interconnection
25 capacity with Québec by 1250 MW for both imports and exports. A map of the proposed
26 Hydro-Québec Interconnection facilities is provided as Exhibit B, Tab 2, Schedule 2.

27

Filed 2000-08-10
RP-2000-0068
Exhibit A \\
Tab 2
Schedule 1
Page 2 of 5

1 The proposed facilities will replace Networks' two existing single circuit lines between
2 the Hawthorne Transformer Station ("TS") and the Ottawa River crossing at Masson,
3 Québec with two new double-circuit lines. One double-circuit line will be used for the
4 existing circuits, and the other for the new 230kV interconnection circuits. Switching
5 facilities will be added at the Hawthorne TS to incorporate the new circuits.

6
7 In determining the proposed facilities for the expansion of interconnection capacity,
8 Networks considered a number of alternatives. These alternatives were considered based
9 on the unit cost of the additional capacity, the magnitude of the additional capacity
10 relative to Networks' obligation to increase interconnection capacity, and the potential to
11 complete the interconnection within the time frame of Networks' commitment to meet its
12 licence requirement.

13
14 Networks identified interconnection alternatives with each neighbouring jurisdiction.
15 These included interconnections with New York, Manitoba, Michigan, Pennsylvania and
16 Québec. The two lowest unit cost projects (included for comparison purposes) have
17 already been initiated. These projects are the Phase Shifter project at the Ontario border
18 with Michigan (the Michigan Phase Shifter Project) and the upgrade to the existing
19 interconnection with Maclaren Industries at Masson, Québec. The Hydro-Québec
20 interconnection is the next lowest unit cost project, followed by the Niagara
21 reinforcement.

22
23 Networks also considered a number of specific alternatives for a new interconnection
24 with Hydro-Québec. These alternatives were identified in co-operation with Hydro-
25 Québec and were considered based on their estimated unit costs together with other
26 technical criteria. In addition, local area and routing matters were considered, including
27 detailed consultations with the public as part of the Class Environmental Assessment
28 process in accordance with the requirements of the Ontario Minister of the Environment
29 under the Ontario Environmental Assessment Act.

Filed 2000-08-10

RP-2000-0068

Exhibit A

Tab 2

Schedule 1

Page 3 of 5

1
2 Based on this identification and assessment of the specific alternatives for an
3 interconnection with Hydro-Québec, it was concluded that construction of a double
4 circuit 230kV transmission line between Hawthorne in Ontario and Outaouais in Québec
5 with a back-to-back HVDC converter at Outaouais, is the most cost effective and
6 technically preferred option. In Ontario, this option requires building a double-circuit
7 line between Hawthorne and the existing Ottawa River crossing at Masson.

8
9 The estimated cost of the proposed facilities to be constructed by Networks in Ontario is
10 \$96.5 M. The estimated project cost includes contingencies to mitigate the risk of higher
11 construction costs.

12
13 The total cost of the overall project, including the cost of interconnection facilities that
14 will be constructed in Québec by Hydro-Québec is estimated to be \$304.5 M.

15
16 Based on the cost of capital as approved by the Board in RP-1999-0044, construction and
17 operation of the proposed facilities will result in an estimated \$12.3 M increase in
18 Networks' overall transmission revenue requirement in 2003. Assuming the current
19 volume of transmission service provided by Networks, recovery of this additional
20 revenue requirement will require an increase in the average transmission charges of
21 1.04% from those approved by the Board in RP-1999-0044.

22
23 If transmission rates were to increase by 1.04%, this would result in an approximate
24 increase of 0.15% or \$1.87 a year in the delivered cost of electricity for the average
25 Ontario residential customer. This is the case as the cost of transmission is assumed to
26 comprise approximately 15% of the typical consumer's delivered cost of electricity.
27 However, this impact does not take into account the reduction in the consumers' cost of
28 electricity supply which is expected as a result of the proposed interconnection. When

Filed 2000-08-10
RP-2000-0068
Exhibit A
Tab 2
Schedule 1
Page 4 of 5

1 this is taken into consideration, the annual electricity cost savings for Ontario consumers
2 is expected to substantially exceed the total cost of the project.

3

4 An independent study carried out by PHB Hagler Bailly ("PHB") for Networks has
5 estimated that Ontario customers are likely to save at least \$240 M annually from lower
6 electricity prices directly related to the additional transmission interconnection capacity.
7 With a more typical degree of price volatility as experienced in other jurisdictions,
8 savings would increase to \$295 M. Even under a very conservative scenario assuming
9 substantially less electricity price volatility than experienced elsewhere, the annual
10 savings for Ontario electricity consumers are estimated to be \$185 M.

11

12 Networks and Hydro-Québec have agreed to the commercial aspects of the project
13 subject to appropriate regulatory and other approvals. Before it goes into operation, any
14 necessary operational or maintenance related conditions with respect to the new
15 interconnection will be incorporated in the new Interconnection Agreement (between
16 Hydro-Québec and the Independent Electricity Market Operator) and the new Facilities
17 Agreement (between Hydro-Québec and Networks). These new Agreements will be
18 created as a result of the unbundling of the legacy Interconnection Agreement between
19 the former Ontario Hydro and Hydro-Québec.

20

21 The design of the proposed facilities is in accordance with the reliability criteria of the
22 Northeast Power Coordinating Council ("NPCC") and the requirements of the
23 Transmission System Code for licenced electricity utilities in Ontario.

24

25 Co-operative discussions with Hydro-Québec and others for the proposed interconnection
26 are ongoing. Technical plans are complete and the necessary information and joint
27 studies of the transmission system implications are underway. The Independent
28 Electricity Market Operator ("IMO") is carrying out a System Impact Assessment in
29 accordance with the Grid Connection Requirements of the Market Rules and the

Filed 2000-08-10
RP-2000-0068
Exhibit A
Tab 2
Schedule 1
Page 5 of 5

1 associated IMO Connection Assessment and Approval procedure. The project impact on
2 the interconnected grid is also being studied to ensure compliance with the requirements
3 of the Northeast Power Co-ordinating Council (NPCC). Based on the substantial work to
4 date, Networks does not anticipate any significant changes to the proposed
5 interconnection arising from these technical reviews.

6
7 The Class Environmental Assessment process required for the Ontario component of the
8 project has been completed and the associated Environmental Study Report has been filed
9 with the Ministry of Environment in accordance with the requirements of the
10 Environmental Assessment Act. The Minister has accepted the Environmental Study
11 Report and no further environmental approvals are required. The proposed project
12 minimizes the environmental impact by using existing rights of way and tower locations.
13 No new private landowner easements will be required.

14
15 The proposed facilities to be constructed, owned and operated by Networks are currently
16 scheduled to be placed in-service by December 31, 2002. Hydro-Québec requires a few
17 months after the proposed facilities are commissioned for testing and commissioning the
18 facilities to be constructed by Hydro-Québec. Both Networks and Hydro-Québec are
19 formally committed and are working to meet or exceed this schedule.

20
21 The proposed construction schedule for the lines must begin early in the winter of
22 2000/01 to allow for an in-service date prior to the peak load period in 2003. It is also
23 necessary to allow for construction during frozen ground conditions in order to comply
24 with the terms of the Environmental Study Report and to reduce construction costs.

25
26 To meet this in-service date, Networks is seeking regulatory approval for leave to
27 construct the proposed facilities by mid-November 2000.

28