

Fil

Ligne Grand-Brûlé/Vignau à 315 kV

RP

Boucle outaouaise

Ex.

Laurentides/Outaouais 6211-09-018

Tab 2

Schedule 1

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## SUMMARY OF PREFILED EVIDENCE

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

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

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

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

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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.

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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.

304.5  
96.5  
208.0

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.

Q. 175M. ?

22  
23 If transmission rates were to increase by 1.04%, this would result in an approximate  
24 increase of 0.15% or \$1.57 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

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Tab 2

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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

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

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

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

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

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