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BY COURIER

July 22, 2013

Ms. Kirsten Walli
Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, ON.
M4P 1E4

Dear Ms. Walli:

EB-2013-0053 – Hydro One Networks Inc.’s (“HONI”) Section 92 – Guelph Area Transmission Refurbishment Project – Written Submission of HONI

I am attaching two paper copies of the Written Submission of Hydro One Networks Inc. dated today.

An electronic copy of the Written Submission has been filed using the Board’s Regulatory Electronic Submission System.

Sincerely,

ORIGINAL SIGNED BY SUSAN FRANK

Susan Frank
Attach

c. Intervenors in EB-2013-0053 (electronic only)

1 **HYDRO ONE NETWORKS INC. SUBMISSION**

2

3 On March 8, 2013, Hydro One Networks Inc. (“Hydro One”) applied to the Board for an

4 Order granting leave to upgrade transmission line facilities (“Guelph Area Transmission

5 Refurbishment Project”) in the Kitchener-Waterloo-Cambridge-Guelph (“KWCG”) area

6 in southwestern Ontario.

7

8 The proposed project involves upgrading approximately 5 km of the existing 115 kV

9 double circuit transmission line, B5G/B6G, between CGE Junction and Campbell TS to a

10 230 kV double circuit transmission line and replacing approximately 2 km of Optic

11 Ground Wire (“OPGW”) conductor on the existing structures between Cedar TS and

12 CGE Junction. In conjunction with this line work that requires OEB approval, Hydro

13 One will also complete station work that includes the installation of two new 230/115 kV

14 autotransformers at the existing Cedar TS, the installation of four 115 kV circuit breakers

15 at Cedar TS, and the installation of two 230 kV breakers and associated equipment at

16 Guelph North Junction. Guelph North Junction will be upgraded to a switching station

17 and renamed Inverhaugh SS.

18

19 The Ontario Power Authority (“the OPA”) has provided evidence that an integrated

20 package, composed of 1) conservation, 2) distributed generation resources, and 3)

21 transmission reinforcements in the KWCG area, is needed to address the near- and

22 medium-term supply capacity and other reliability needs in the area¹. The KWCG

23 working group, consisting of members from the OPA, the Independent Electricity System

24 Operator (“IESO”), local distribution companies and Hydro One support the proposed

25 project². Load forecasts provided by the local distribution companies in the KWCG area

26 were used in assessing the need for the project³. As discussed in Board Staff

27 Interrogatory 1, electricity demand in the area is expected to grow at a rate of 3% per year

¹ EB-2013-0053, Exhibit B, Tab 1, Schedule 5, page 2

² Exhibit B, Tab 6, Schedule 2 and Exhibit I, Tab 2, Schedule 30, Attachment 1

³ Exhibit B, Tab 6, Schedule 2, page 8

1 (2% net of conservation and distributed generation (“DG”)) between 2010 and 2023.
2 This increase in electricity demand is expected to exceed the system’s load meeting
3 capability in the South-Central Guelph, Kitchener-Guelph and Cambridge subsystems
4 over the next 10 years. Additionally, two of the subsystems in the KWCG area currently
5 fail to comply with the IESO’s ORTAC service interruption criteria. The GATR project
6 will reduce the impact of supply interruptions to customers in the area and is part of an
7 integrated solution to address the electricity needs of the area.

8
9 Environmental Defence has questioned whether CDM and DG are more feasible and
10 cost-effective solutions to address the electricity needs of the KWCG area⁴ than the
11 proposed transmission solution. The OPA has provided evidence that shows that CDM
12 and DG measures alone will not meet the electricity needs in the area in the near- and
13 medium-term.

14
15 In response to Environmental Defence Interrogatory 28, the OPA wrote that additional
16 conservation was not a feasible means of fully addressing the KWCG area’s near- and
17 medium-term needs, and in Environmental Defence Interrogatory 44 explained that while
18 conservation can be an effective resource for helping to address capacity needs, it is not a
19 resource that can be used to restore power to customers following a transmission outage.
20 The amount of additional conservation that would be required to fully address the KWCG
21 area’s capacity needs is significant compared to the amount of planned conservation,
22 especially for the South-Central Guelph and Cambridge subsystems⁵.

23
24 In response to Environmental Defence Interrogatory 21 b) and 26 a), the OPA wrote,
25 while distributed generation is technically capable of meeting the supply capacity needs
26 in the KWCG area, it is the OPA’s view that additional distributed generation is not a
27 feasible or cost-effective option for meeting the area’s near- and medium-term needs
28 “due to the immediate nature and magnitude of the needs, the uncertainty associated with

⁴ Transcript of Motion Hearing, June 18, 2013, page 3

⁵ Exhibit I, Tab 2, Schedule 44, page 1

1 the development of future facilities, as well as siting and connection of facilities at the
2 specific locations at which they are needed”. Additionally, the economic analysis shown
3 in Environmental Defence Interrogatory 26 a) compare the cost of additional distributed
4 generation to that of the recommended transmission reinforcement and demonstrated that
5 “additional distributed generation is not cost-effective compared to the recommended
6 transmission reinforcement”.

7
8 Generation options and other transmission options were also assessed and determined
9 either not to address the capacity and restoration needs of the entire area or they were
10 more costly alternatives⁶.

11
12 To meet the TSC and the IESO ORTAC, Hydro One as a transmitter is required to ensure
13 that the transmission system supplying a local area has sufficient capability under peak
14 demand conditions to withstand specific outages prescribed by ORTAC and in the event
15 of a major outage the system must meet prescribed service interruption standards. Based
16 on the application of ORTAC criteria, the OPA has identified that three of the four
17 sources of supply to the KWCG area have reached or are close to reaching their load
18 meeting capability⁷. The OPA also noted in response to Environmental Defence
19 Supplemental Interrogatory 5-S, that the Waterloo-Guelph 230 kV and the Kitchener and
20 Cambridge 230 kV subsystems have not been compliant with the ORTAC restoration
21 criteria since the 2007 revisions came into effect.

22
23 The cost of the line portion of the GATR project is estimated to be \$28 million, and
24 together with the cost of the associated station upgrades, it will have minimal impact on a
25 typical residential customer’s electricity bill (0.04%)⁸. Hydro One has proposed a cost-
26 effective solution to address the electricity needs in the KWCG area. As shown in the
27 response to Board Staff Interrogatory 6 and section 6.0 of Exhibit B, Tab 1, Schedule 5,
28 the GATR project is the most cost-efficient option to address the supply capacity needs

⁶ Exhibit B, Tab 1, Schedule 5, Section 6

⁷ Exhibit B, Tab 1, Schedule 5, page 12

⁸ Exhibit B, Tab 4, Schedule 3

1 and to reduce the impact of supply interruptions in the KWCG area.

2
3 Hydro One conducted stakeholder and community consultation to provide information
4 about the project to residents, government ministries, agencies and municipal staff and
5 elected officials in a defined study area, and feedback received was considered and
6 incorporated as appropriate.

7
8 Hydro One undertook engagement activities with the Mississaugas of the New Credit
9 First Nation, Six Nations of the Grand River First Nation and Haudenosaunee
10 Confederacy Council. To date, no issues or concerns have been raised by these First
11 Nations.

12
13 The GATR project is expected to have minimal environmental impact. A Class
14 Environmental Assessment (“Class EA”) was completed for this project and the final
15 Environmental Study Report was filed with the Ministry of Environment in October
16 2012. No residual adverse effects due to construction, operation or maintenance of the
17 refurbished facilities were identified. Hydro One will address any mitigation measures
18 required by the Ministry of Environment and other provincial or federal ministries,
19 departments or agencies^[1], and as well will abide by any commitments Hydro One has
20 made during the consultation process.

21
22 The IESO’s System Impact Assessment report concluded that the proposed GATR
23 Project is expected to have no material adverse impact on the reliability of the integrated
24 power system. Hydro One, in response to Board Staff Interrogatory 7, Part 2, has
25 indicated how the SIA’s project specific and general requirements have and will be
26 fulfilled to receive conditional approval. Hydro One’s Customer Impact Assessment
27 concluded that the short-circuit levels observed at customer connection points are within
28 the requirement of the Transmission System Code.

29

^[1] Exhibit B, Tab 6, Schedule 1

1 Some new land rights will be required from Campbell TS to CGE Junction to
2 accommodate the proposed transmission facilities; as well temporary rights for
3 construction purposes will also be required at specific locations along the corridor⁹.
4 Hydro One will follow standard construction practices and will consult with landowners
5 to minimize impacts of construction¹⁰. The form of the land agreements to be used to
6 secure the needed rights were filed at Exhibit B, Tab 6, Schedule 7, Attachments 1,2, 3
7 and 4.

8
9 In summary, Hydro One believes that the Guelph Area Transmission Refurbishment
10 Project is in the public interest and should be approved. The transmission solution
11 provided in the application is cost-effective and results in minimal impact to ratepayers.
12 The Project is part of an integrated package composed of CDM and DG resources and
13 will assist in meeting the near- and medium-term supply capacity and reliability needs in
14 the KWCG area as identified per the ORTAC criteria. It is the OPA's view that
15 additional conservation is not a feasible means of fully addressing the KWCG area's
16 near- and medium-term needs, and additional distributed generation is neither feasible
17 nor cost-effective compared to the recommended transmission reinforcements. Hydro
18 One has consulted with appropriate parties and believes that the environmental impact of
19 this project is minimal. Finally, the OPA, the IESO and the KWCG working group are
20 all in support of this project.

21
22 All of which is respectfully submitted for the Board's consideration.

⁹ Exhibit B, Tab 6, Schedule 6, page 1

¹⁰ Exhibit I, Tab 1, Schedule 7, page 2