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Toronto, November 2, 2010

Kirsten Walli
Board Secretary
Ontario Energy Board
Suite 2700
2300 Yonge Street
Toronto, ON M4P 1E4

Dear Ms. Walli:

**RE: Hydro One Networks Inc.
2011 and 2012 Rates (EB-2010-0002)**

Enclosed please find Submissions of the Association of Power Producers Of Ontario ("APPo") for the above-noted matter.

Yours very truly,



Richard King

/mnm

Encl.

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*,
S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF a review of an application filed by
Hydro One Networks Inc. for an order or orders approving a
transmission revenue requirement and rates and other charges for
the transmission of electricity for 2011 and 2012.

**SUBMISSIONS OF THE
ASSOCIATION OF POWER PRODUCERS OF ONTARIO (“APPrO”)**

November 2, 2010

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A. INTRODUCTION

1. APPrO's submissions are confined to the issue of the appropriate Export Transmission Service ("ETS") tariff. APPrO takes no position on any of the other issues in this proceeding.
2. APPrO submits that the current ETS tariff of \$1.00/MWh should remain in place through the current transformation of Ontario's electricity sector (in particular, the incorporation of large volumes of "intermittent" renewable generation being built in response to the *Green Energy and Economy Act, 2009* ("GEA")).
3. APPrO further submits that the Board should refrain from prescribing any fixed date for the IESO to provide a new or updated study on the ETS tariff issue.
4. The bases for APPrO's submissions are set out below.

B. MAINTENANCE OF THE CURRENT ETS TARIFF

(a) Historical Background of ETS Tariff

5. The current ETS tariff of \$1/MWh was established in 2000 as an interim tariff. The Board established the ETS tariff on the basis that the \$1/MWh charge represented a reasonable compromise between the many competing interests and proposals advanced by stakeholders at the time.

Ontario Energy Board, Decision with Reasons (RP-1999-0044: *Ontario Hydro Networks Company Inc. Transmission Cost Allocation and Rate Design 2000*), May 26, 2000, paragraph 3.8.19 and 3.8.25.

6. In its Decision, the Board directed Ontario Hydro Networks Company Inc. (predecessor to Hydro One Networks Inc. ("HONI")) to "monitor and report to the Board at OHNC's next main rates case on the functioning of the [export and wheel-through] market and developments in interconnected jurisdictions and whether the interim tariff should be reviewed." HONI has continued to monitor and report to the Board on the evolution of the export and wheel-through market in Ontario and related developments in interconnected markets.

Ontario Energy Board, Decision with Reasons (RP-1999-0044: *Ontario Hydro Networks Company Inc. Transmission Cost Allocation and Rate Design 2000*), May 26, 2000, paragraph 3.8.19 and 3.8.25.

Exhibit H1, Tab 5, Schedule 2, page 1, lines 19 to 21.

7. In setting the ETS tariff at \$1/MWh, the Board acknowledged that the provincial government's long-term objective of reducing energy costs through competition could be served by the development of larger, open power markets where trade can take place with the minimum of impediment. Setting Ontario's ETS tariff at a relatively low level (compared to ETS charges in interconnected jurisdictions) was consistent with this objective.

Ontario Energy Board, Decision with Reasons (RP-1999-0044: *Ontario Hydro Networks Company Inc. Transmission Cost Allocation and Rate Design 2000*), May 26, 2000, paragraph 3.8.20.

8. In HONI's 2007/2008 rate proceeding, the Board approved a Settlement Agreement that:
- maintained the ETS tariff at \$1/MWh;
 - made the IESO the entity responsible for: (a) negotiating reciprocal arrangements with interconnected jurisdictions to eliminate the ETS tariff; and (b) carrying out a study on the appropriate ETS tariff; and,
 - providing a report to the Board by June 1, 2009 outlining the results of the reciprocal arrangement negotiations and the study, including recommendations for an appropriate ETS tariff.

Ontario Energy Board, Decision with Reasons (EB-2006-0501: *HONI Transmission Rates 2007/2008*), August 16, 2007, Appendix 2, Settlement Proposal, section 7.4.

9. The IESO filed the ETS tariff study and recommendation with the Board on August 28, 2009. The IESO recommendation was to leave the ETS tariff at \$1/MWh.

Exhibit H1, Tab 5, Schedule 2, Attachment 1, *Export Transmission Service (ETS) Charge: Recommendation of an Appropriate ETS Charge for Ontario* (August 2009), p. 9.

10. The IESO study was undertaken on the basis that an appropriate ETS tariff would be one that exemplifies four "principles": (a) simplicity of implementation; (b) consistency with

rates in neighbouring jurisdictions; (c) fair and equitable; and (d) the net Ontario benefit¹. The IESO adopted these four principles from a previous HONI transmission rate proceeding.

Exhibit H1, Tab 5, Schedule 2, Attachment 1, *Export Transmission Service (ETS) Charge: Recommendation of an Appropriate ETS Charge for Ontario* (August 2009), p. 6 and p. 10 (Table 2).

11. The IESO study and recommendation relies upon a quantitative analysis of the ETS tariff carried out by Charles River Associates International (“CRA”). This quantitative analysis examined various ETS tariff design options (as compared to the \$1/MWh status quo) and the impact that each tariff option would have on: (a) import and export volumes; (b) the producer surplus and the consumer surplus; (c) electricity export revenues; and (d) the hourly Ontario energy price (“HOEP”).
12. The CRA analysis concluded that increasing the ETS tariff from \$1/MWh to \$5/MWh (the average embedded network rate², referred to as “Option 2” in the CRA analysis) would increase consumer surplus and increase export revenues.

Exhibit H1, Tab 5, Schedule 2, Attachment 1, Appendix A, *Export Transmission Service (ETS) Tariff Scenario Analysis: Final Report and Findings* (July 30, 2009), p. 3.

13. The IESO also carried out a qualitative analysis of the various ETS tariff options, which involved a consideration of: (a) the potential reliability and operational implications of each tariff option; (b) the potential legal and regulatory implications of each tariff option; and (c) the impact of each tariff option on surplus base-load generation (“SBG”).

Exhibit H1, Tab 5, Schedule 2, Attachment 1, *Export Transmission Service (ETS) Charge: Recommendation of an Appropriate ETS Charge for Ontario* (August 2009), pp. 16 to 26.

¹ The “net Ontario benefit” is measured as the sum of the total surplus (consumer surplus and producer surplus) and export revenues. The “consumer surplus” was defined as the amount that Ontario consumers would benefit by being able to purchase electricity for a price that is less than they would otherwise be willing to pay. The “producer surplus” was defined as the amount that producers benefit by selling at a market price higher than they would otherwise be willing to sell for in the market

² This rate was calculated by dividing the aggregate network revenue requirement for all Ontario transmitters by the annual provincial energy consumption (with 2007 being used as the base year). See Exhibit H1, Tab 5, Schedule 2, page 5, footnote 4.

14. Based on the CRA quantitative analysis and the IESO's qualitative analysis, the IESO stated that while the \$5/MWh ETS tariff (i.e., Option 2) would best satisfy the four rate design principles noted in paragraph 10 above, a number of critical factors had arisen since the commencement of the study that would make any ETS tariff increase inappropriate. These factors included the significant decline in Ontario electricity load due to poor economic conditions, the passage of the GEA, and increased occurrences of SBG. The IESO study concluded that:

“All of these changes have served to highlight the operational benefits of exports. During low load periods, surplus situations can be alleviated or even avoided through exports. As variable renewable resources become more prevalent in Ontario, the supply/demand balance will become more volatile and exports can help smooth out such volatility.”

Exhibit H1, Tab 5, Schedule 2, Attachment 1, *Export Transmission Service (ETS) Charge: Recommendation of an Appropriate ETS Charge for Ontario* (August 2009), p. 9.

15. APPrO submits that the Board should accept the recommendation of the IESO and make no change to the existing ETS tariff, for the following reasons:

- there is no rate-making rationale for increasing the ETS tariff above the current level;
- continued occurrences of SBG events are likely, and establishing a higher ETS tariff would reduce exports, which can create operational issues for the IESO (in managing the provincial supply-demand situation) and higher costs for consumers (for example, through curtailment actions which may trigger Global Adjustment payments, potential physical damage, etc.); and,
- the Board should defer to the judgment of the IESO on this matter

These reasons are elaborated upon below.

(b) No Rate-Making Rationale for Higher ETS Tariff

16. Other intervenors will point to the CRA analysis (and its conclusion that a \$5/MWh ETS tariff would increase consumer surplus and export revenues) to argue that the ETS tariff should be increased.

17. In APPrO's view, the CRA analysis has certain limitations and flaws that prevent it from offering a sound basis upon which to alter the ETS tariff.

CRA Analysis is Not a Rate Design Study

18. The purpose of the CRA analysis was merely to generate quantitative data that the IESO would use to formulate an ETS tariff recommendation. CRA was not engaged in a rate design study, and was not asked for an opinion on an appropriate ETS tariff.

Hearing Transcript, EB-2010-0002, Vol. 9, p. 20 line 26 to p. 22, line 7.

19. Indeed, the overriding principle in rate design is that tariffs should be based on cost-causation (i.e., that consumers who cause costs to the system should pay for those costs). As confirmed by Dr. Shavel under cross-examination, the CRA analysis did not consider cost causation principles.

Hearing Transcript, EB-2010-0002, Vol. 9, p. 23 lines 2 to 12.

20. Further, the only evidence on cost causation as it relates to the provincial transmission system's network assets (including interconnection assets) is that those assets were designed and built to reliably serve domestic load. Despite not being the cause of the costs of these assets, exports make use of the existing system capacity and generate revenues to offset rates for domestic load. Thus, on the basis of the cost causation principle, there is no evidence to support increasing the ETS tariff.

Hearing Transcript, EB-2010-0002, Vol. 9, p. 36 line 18 to p. 38, line 15, and p. 39, lines 6 to 22.

21. In addition, an ETS tariff evaluation based on the four "principles" used in the IESO study could never have been meant to be determinative. Indeed, from previous proceedings, the Board and parties appear to agree that reciprocal elimination of all ETS tariffs (in Ontario and interconnected jurisdictions) is the most desirable option (i.e., Option 3(1)). This option is not feasible at this time. However, as noted in Table 2 of the IESO study, Option 3(1) does not fair particularly well based on the four principles. Consequently, the four principles must be viewed as merely criteria for consideration and not as a determinative test for the most appropriate ETS tariff.

"Consumer Surplus" Criteria is Flawed

22. One of the key recommendations of the CRA analysis was that an ETS tariff of \$5/MWh would “tend to increase consumer surplus” because a higher ETS tariff would reduce external demand for Ontario power and therefore reduce the HOEP.

Exhibit H1, Tab 5, Schedule 2, Attachment 1, Appendix A, *Export Transmission Service (ETS) Tariff Scenario Analysis: Final Report and Findings* (July 30, 2009), p. 3.

23. On that basis, the CRA analysis concluded that a \$5/MWh ETS tariff would lower the electricity cost to Ontario consumers. However, the CRA analysis did not take into account the Global Adjustment (“GA”)³ when calculating “consumer surplus”:

MR. VEGH: ... You appreciate that HOEP is one component of the energy charges that customers receive on their bill in Ontario?

DR. SHAVEL: Yes. As it is everywhere else generally, yes.

MR. VEGH: And there are other components of the energy charge?

DR. SHAVEL: Yes.

MR. VEGH: And one particular energy charge that is in addition to the HOEP is the global adjustment. Are you aware of that?

MR. SHAVEL: I have heard the term. I am not aware of how that actually operates.

...

MR. VEGH: Now, Mr. Shavel, in your report, when you looked at the cost to customers, you did not address global adjustment, just HOEP, right?

MR. SHAVEL: That’s right.

Hearing Transcript, EB-2010-0002, Vol. 9, p. 24 lines 4 to 16, and p. 25, lines 7 to 10.

24. As noted by the IESO in its study of electricity pricing under Ontario’s “hybrid” market, while HOEP has decreased significantly the GA has risen, resulting in a relatively stable “all-in” Ontario electricity charge. The relationship between the HOEP and the GA is not accidental – there is a direct, inverse relationship between the HOEP and GA. A low

³ The GA is the difference between the total payments made to certain contracted or regulated facilities and any offsetting market revenues.

HOEP means reduced wholesale market revenues, thereby increasing the need for revenue recovery through GA.

Exhibit K9.1, Tab 1, *Effective Pricing in Ontario's Hybrid Electricity Market* (IESO, October 28, 2009), pp. 5 and 9.

25. This was confirmed by the IESO's witness, Mr. Finkbeiner:

MR. VEGH: And so as HOEP goes down, generally global adjustment goes up?

MR. FINKBEINER: That is correct.

...

MR. FINKBEINER: ... but as you've noted, the relationship between global adjustment and HOEP, if the price were to go up, global adjustment will go down. So for every increase in HOEP, there is a decrease in global adjustment ...

...

MR. VEGH: ... As HOEP goes down, there is a pretty clear relationship that global adjustment goes up?

MR. FINKBEINER: Almost with exact symmetry, yes.

Hearing Transcript, EB-2010-0002, Vol. 9, p. 25 lines 19 to 21, p. 26 lines 12 to 16, and p. 26 line 28 to p. 27 line 3.

26. Moreover, since April 2009, the GA has often been greater than HOEP, and it is not unreasonable to expect that trend to continue in the foreseeable future.

Hearing Transcript, EB-2010-0002, Vol. 9, p. 25 line 26 to p. 26 line 8, and p. 26 lines 23 to 26.

27. Consequently, the conclusion that a \$5/MWh ETS tariff will result in lower electricity costs to Ontario consumers, on the basis of an analysis that ignores the GA, is flawed and can be given no weight.

(c) **Operational and Economic Benefits of Maintaining Existing ETS Tariff**

Operational Benefits of Exports

28. When the ETS study was initially carried out, SBG was not a consideration. However, the scope of the study was subsequently expanded (in response to negative pricing in the

Ontario market) to include a qualitative assessment of the impact of each ETS tariff option on SBG events. CRA's quantitative analysis did not include such an assessment because CRA's model could not accommodate SBG considerations (because SBG events take place on an hour-by-hour basis and the CRA model does not operate on an hourly basis).

Exhibit H1, Tab 5, Schedule 2, Attachment 1, *Export Transmission Service (ETS) Charge: Recommendation of an Appropriate ETS Charge for Ontario* (August 2009), p. 22.

Hearing Transcript, EB-2010-0002, Vol. 9, p. 33 line 19 to p. 34 line 10.

29. When the IESO study was carried out, the study found that SBG was not expected to be a material concern in 2010 or 2015 for any of the ETS tariff options under consideration.

Exhibit H1, Tab 5, Schedule 2, Attachment 1, *Export Transmission Service (ETS) Charge: Recommendation of an Appropriate ETS Charge for Ontario* (August 2009), p. 23.

30. However, by August 2009 (when the IESO made its recommendation on the ETS tariff), there had been high incidences of SBG events over the late spring and summer of 2009. In addition, updated demand forecasts in August 2009 showed lower forecast demand than that relied upon in the CRA analysis. Lower demand can, obviously, increase the likelihood of SBG events.

Exhibit I, Tab 4, Schedule 16, p.2 (response to VECC IR).

31. Low consumer demand and increased SBG events have continued through the first three quarters of 2010. The 2010 provincial load forecast used by CRA in its qualitative assessment was 159 TWh, and the current provincial load forecast for 2010 is in the 144 to 145 TWh range. In addition, whereas the ETS study had predicted no SBG events in 2010, there have been a significant number of SBG events in 2010 (58 hours from March 24 to June 20, 2010; and 196 forecasted hours for the period from August 12 to September 5, 2010).

Hearing Transcript, EB-2010-0002, Vol. 9, p. 34 line 18 to p. 35 line 6.

Exhibit I, Tab 4, Schedule 16, Attachment 1 (response to VECC IR).

32. SBG events have undesirable operational impacts on the electricity system.
33. The IESO is required to balance supply and demand on the provincial electricity system. In SBG situations, one of the more efficient ways to alleviate some (or all) of the surplus is via exports. Alternative methods, such as calling on base-load generation facilities to play that roll, are far more difficult:

- Base-load nuclear facilities are not meant to be dispatched up and down on an hourly or five-minute basis to ameliorate system operation concerns. When nuclear facilities are asked to operate in this manner, there are both short-term and long-term impacts to those facilities.
- Base-load hydroelectric facilities are subject to regulatory requirements regarding their ability to spill water, maintain river levels/flow, and spill inspection. As a result, hydroelectric facilities are also somewhat inflexible in terms of their ability to reduce surplus base-load.

34. Thus, having only base-load nuclear and hydro facilities to mitigate SBG events would negatively impact the IESO (by restricting their operational flexibility). It would also have negative impacts upon the nuclear and hydro base-load facilities (including adverse impacts on the physical facilities, and operational complexity).

Hearing Transcript, EB-2010-0002, Vol. 9, p. 45 lines 7 to 23.

35. Raising the ETS tariff would, obviously, result in lower exports. According to the CRA analysis, increasing the ETS tariff from the status quo of \$1/MWh to \$5/MWh would decrease export volumes by 35% in 2010 and 46% in 2015.

Exhibit H1, Tab 5, Schedule 2, Attachment 1, *Export Transmission Service (ETS) Charge: Recommendation of an Appropriate ETS Charge for Ontario* (August 2009), p. 16.

36. These lower export levels reduce the ability of the IESO to manage the electricity system (i.e., balance supply and demand on an intra-hour basis) with flexible marginal resources (i.e., generation that is meant to operate with intra-hour variability). An example provided by Mr. Finkbeiner in cross-examination highlights the issue:

- Assume a scenario where domestic load overnight was 11,000 MW, and at the same time there was 12,000 MW of “inflexible” nuclear generation on-line. There is, in this scenario, 1,000 MW of SBG.
- Further assume that: (a) the next MW of available generation was a flexible generation resource; and (b) there was also 2,000 MW of exports scheduled during the overnight period.
- In that scenario, the IESO would run the full 12,000 of MW of nuclear, and export 2,000 MW of electricity. At a provincial demand of 11,000 MW, the IESO would also schedule 1,000 MW of the flexible generation resource. Having the marginal resource be flexible means that any intra-hour variability (e.g., wind) can be managed efficiently, without having to take the nuclear facility out-of-service (i.e., the flexible generation resource is balancing the intermittent wind resource).
- If the amount of export demand was lower (e.g., 500 MW), then the IESO would be unable to balance supply and demand without taking some of the nuclear off-line.
- As noted by Mr. Finkbeiner, managing the surplus by taking a nuclear unit off-line is not ideal:

“Without the exports, you would have been lock-step in the middle of the nuclear marginal resource. When you move a nuclear unit, it is very chunky ... You either shut them off, or they take large chunks of reductions, typically, in their operation to meet dispatch requests from the IESO. So where ... you can get away from these inflexible resources, that export, by increasing market demand, can get you into that variable level. ... [T]hat is where an export gets you out of the surplus range of supply and into the more flexible range of supply. And that is really where exports provide that benefit to manage supply.”

Hearing Transcript, EB-2010-0002, Vol. 9, p. 74 line 22 to p. 76 line 6.

Economic Benefits of Existing ETS Tariff

37. Further, mitigating SBG events by taking inflexible generation facilities off-line also has cost consequences. The example given by Mr. Finkbeiner was a nuclear unit taken out of

service to mitigate an SBG event. In that situation, the nuclear unit is off-line for a period of time (e.g., three days). During that time, the IESO still has an obligation to meet supply, which may mean replacing that nuclear unit with a natural gas plant. There are costs associated with this, including: (a) the marginal cost difference resulting from replacing cheaper supply from a nuclear unit with more expensive supply from a natural gas facility for three days; and (b) paying the nuclear generator costs under its OPA contract for being curtailed.

(d) Deference to IESO

38. The Board has broad jurisdiction when it comes to the exercise of its rate-making jurisdiction. This jurisdiction encompasses the Board's obligation to be guided by the statutory objectives in subsection 1(1) of the *Ontario Energy Board Act, 1998*, which include, inter alia: (a) protecting the interests of consumers with respect to electricity pricing and service reliability; (b) promoting economic efficiency and cost effectiveness in generation and transmission; and (c) promoting generation from renewable energy sources.

Ontario Energy Board, Decision with Reasons (EB-2006-0501: *HONI Transmission Rates 2007/2008*), August 16, 2007, pp. 14 to 16.

39. The operational and economic consequences associated with increased SBG events are directly linked to these objectives of the Board. The prevalence of SBG, going forward, was considered in this proceeding, and is expected to increase over historical incidents of SBG events.

Hearing Transcript, EB-2010-0002, Vol. 9, p. 15, lines 1 to 12.

40. The IESO is the expert when it comes to understanding and assessing these operational and economic consequences. Therefore, to the extent that the design of an ETS tariff can impact upon these objectives, the IESO's recommendation should be given considerable deference. Indeed, the Board acknowledged the IESO's "very considerable expertise" on the issue of the ETS tariff. It is appropriate for the Board to place considerable reliance on the IESO's judgment as to the appropriate level for the ETS tariff.

C. REVISITING THE ETS TARIFF

41. APPrO further submits that, for the reasons noted in paragraph B(d)39 above, the Board should refrain from setting a hard deadline by which a new or updated ETS study must be prepared.
42. The evidence of the IESO is that the ETS tariff should remain at \$1/MWh (in order to not dampen exports) until the IESO has had an opportunity to more fully assess the consequences of the GEA and Ontario's economic recovery. It is unknown at what point in time, these factors will stabilize sufficiently to permit the IESO to meaningfully revisit the issue of an appropriate ETS tariff. The Board should, APPrO submits, allow the IESO to determine when the issue should be revisited. Setting an arbitrary deadline now for a full study could result in unnecessary time and funds being spent for no good reason.

All of which is respectfully submitted this 2nd day of November, 2010.

**ASSOCIATION OF POWER
PRODUCERS OF ONTARIO ("APPrO")**



By its Counsel, Ogilvy Renault LLP
Per: Richard J. King