ONTARIO ENERGY BOARD

In the Matter of the *Electricity Act, 1998,* s. 33;

And in the Matter of the *Ontario Energy Board Act, 1998,* s. 33*;*

And in the Matter of an application by Acciona Wind Energy Canada Inc., Brookfield Power Wind Prince LP, CP Renewable Energy (Kingsbridge) Limited Partnership, Erie Shores Wind Farm Limited Partnership, Greenwich Windfarm, LP, Talbot Windfarm, LP, Enbridge Renewable Energy Infrastructure Limited Partnership, Kruger Energy Port Alma LP, Kruger Energy Chatham LP, Suncor Energy Products Inc., Canadian Renewable Energy Corp., Canadian Hydro Developers, Inc., and Gosfield Wind Limited Partnership (collectively the "Renewable Energy Supply Generators") for an order revoking the Renewable Access Amendments passed by the Independent Electricity System Operator ("IESO") on November 29, 2012.

APPLICATION

1. The Applicants, Acciona Wind Energy Canada Inc., Brookfield Power Wind Prince LP, CP Renewable Energy (Kingsbridge) Limited Partnership, Erie Shores Wind Farm Limited Partnership, Greenwich Windfarm, LP, Talbot Windfarm, LP, Enbridge Renewable Energy Infrastructure Limited Partnership, Kruger Energy Port Alma LP, Kruger Energy Chatham LP, Suncor Energy Products Inc., Canadian Renewable Energy Corp., Canadian Hydro Developers, Inc. and Gosfield Wind Limited Partnership (collectively the "Renewable Energy Supply Generators") hereby apply to the Ontario Energy Board (the "OEB" or the "Board") for an order:

    a) Revoking the Renewable Access Amendments passed by the Independent Electricity System Operator ("IESO") on November 29, 2012 and referring them back to the IESO for further consideration;[1]

[1] The Renewable Access Amendments are:
MR-00381-R02: Dispatching Variable Generation
MR-00381-R03: Floor Prices for Variable and Nuclear Generation
MR-00381-R04: Market Schedule and Congestion Management Settlement Credits (CMSC) for Variable Generation
MR-00381-R05: Tie Breaking for Variable Generation
MR-00381-R06: Publication Requirements: 5-Minute Forecast for Variable Generation.
Copies of these Amendments are included at Schedule A.

b) That the Board provide directions for documentary production;

c) That the Renewable Energy Supply Generators are eligible for their costs in this application; and

d) Providing such further and other relief as the Renewable Energy Supply Generators request and that this Board considers appropriate.

2. The grounds for this application are set out below.

The Statutory and Legal Context

3. Section 33 of the *Electricity Act, 1998* ("*EA*") provides in relevant part as follows:

> 33(4) Any person may apply to the Board for review of an amendment to the market rules by filing an application with the Board within 21 days after the amendment is published under subsection (1).
>
> (9) If, on completion of its review, the Board finds that the amendment is *inconsistent with the purposes of this Act* or *unjustly discriminates against or in favour of a market participant or class of market participants*, the Board shall make an order,
>
> (a) revoking the amendment on a date specified by the Board; and
>
> (b) referring the amendment back to the IESO for further consideration.

4. The Renewable Energy Supply Generators submit that the Renewable Access Amendments are inconsistent with the purposes of the *EA* and unjustly discriminate against Renewable Energy Supply Generators and in favour of the OPA. Before addressing the substantive claims in relation to these grounds of appeal, it is important to address the context of this review more generally.

5. First, the Board's interpretation of its mandate under s. 33 of the *EA* is governed by its statutory objectives, and in particular, those in relation to the use and generation of electricity from renewable energy sources in ss. 1(1).5 of the *OEB Act*, which provides:[2]

> "The Board, in carrying out its responsibilities under this or *any other Act in relation to electricity*, shall be guided by the following objectives:
>
> …

The Pending Appeal relates only to the dispatch and floor price provisions of the Renewable Access Amendments as they relate to renewable facilities. The Pending Appeal will not address any of these amendments as they relate to dispatch or floor prices for nuclear facilities.

[2] *Ontario Energy Board Act*, ss. 1(5) (emphasis added). (See Schedule B).

> 5. *To promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario*, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities."

6. Second, in promoting the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, the Board is not to question the appropriateness of that policy or whether the Government should have chosen a different way to implement that policy. As the Board has noted in interpreting its similar mandate under s. 96(2) of the *OEB Act*:[3]

> While the Government's policies in respect of renewable energy form part of the criteria in section 96(2), the Board does not have the power to enquire into the appropriateness of that policy.

7. Third, the Board has held that interpreting s. 33 of the *EA* involves a consideration of the "impact or effect" of the market rules.[4] It is therefore not necessary for an applicant to demonstrate that the IESO was subjectively motivated for its rule to have that impact or effect, only that the rule does have the impact or effect. While intention may be relevant, it is not a necessary condition of finding that a market rule violates the requirements in s. 33 of the *EA*. Thus, in this appeal, it is not necessary for the Applicants to demonstrate that the IESO *intended* the Renewable Access Amendments to be inconsistent with the

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[3] Hydro One Networks Inc. Application for an Order granting leave to construct to upgrade existing transmission line facilities in London West, Procedural Order No. 2, June 15, 2012, pp. 2-3 (EB-2012-0082) (see Schedule C). See also McLean's Mountain Wind LP Application for an Order granting leave to construct a new transmission line and associated facilities, Procedural Order No. 1, January 27, 2012, p. 4 (EB-2011-0394) (see Schedule D). Subsections 96(1) and (2) of the *OEB Act* read as follows:

> 96. (1) If, after considering an application under section 90, 91 or 92 [i.e., for leave to construct transmission or distribution lines] the Board is of the opinion that the construction, expansion or reinforcement of the proposed work is in the public interest, it shall make an order granting leave to carry out the work.
>
> (2) In an application under section 92, the Board shall only consider the following when, under subsection (1), it considers whether the construction, expansion or reinforcement of the electricity transmission line or electricity distribution line, or the making of the interconnection, is in the public interest:
>
> 1. The interests of consumers with respect to prices and the reliability and quality of electricity service.
>
> 2. *Where applicable and in a manner consistent with the policies of the Government of Ontario, the promotion of the use of renewable energy sources*.

See also Decision with Reasons regarding the review of an application filed by Hydro One Networks Inc. under section 78 of the *Ontario Energy Board Act, 1998*, seeking changes to the uniform provincial transmission rates, December 16, 2009, pp. 9-10 (EB-2008-0272) (see Schedule E), in which the Board noted that "[t]he new regulatory construct created by the GEA includes an obligation of the Board to, where applicable, promote the use of generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities." In light of a relevant Ministerial Directive to the OPA regarding the procurement of renewable generation at the locations being considered, the Board found that its obligation to promote renewable energy sources was a "determinative factor in the establishment of the parameters of the economic analysis it [would] rely on to test the prudency of the applicant's proposals."

[4] See the "Ramp Rate Appeal", April 10, 2007 (EB-2007-0040), p. 9; see also Appendix A, p. 87 (see Schedule F).

purposes of the *EA* and unjustly discriminate against Renewable Energy Supply Generators and in favour of the OPA. Rather, the issue is whether this is the impact or effect of the amendments.

Summary of Applicants' Position

8. In brief, the Applicants submit that the Renewable Access Amendments are inconsistent with two purposes of the *EA*:

> "to promote the use of cleaner energy sources and technologies, including alternative energy sources and *renewable energy sources in a manner consistent with the policies of the Government of Ontario*"[5] (the "Renewable Energy Purpose"); and
>
> "to provide generators, retailers and consumers with non-discriminatory access to transmission and distribution systems in Ontario"[6] (the "Non-Discriminatory Access Purpose").

9. With respect to the Renewable Energy Purpose, the Government of Ontario implemented a procurement mechanism to implement its policy to promote investment in renewable power. A key component of that policy involved making renewable power non-dispatchable so that generators would not be curtailed on an economic basis[7] and thus had the opportunity to recover the costs of their investment on a unit price (per MWH) basis. The Renewable Access Amendments are inconsistent with that policy because they permit the IESO to curtail the Renewable Energy Supply Generators for economic reasons. They do this by imposing a dispatch and mandatory floor price on renewable generators. The combined effect of these requirements is that renewable facilities will be dispatched off when the minimum floor price is met. It is nothing less than a reversal of government policy with respect to encouraging the use of renewable power. The Renewable Energy Supply Generators' position on this issue is detailed in PART I -1 of these submissions (paragraphs 15 to 41).

10. With respect to the Non-Discriminatory Access Purpose, the impact and effect of these amendments is to impair the ability of renewable generators to deliver energy to the IESO controlled grid when it is economic for them to do so. Other market participants, including other generators, are not denied this ability. The Renewable Access Amendments therefore result in discriminatory access to the transmission system. The Renewable Energy Supply Generators' position on this issue is detailed in PART I -2 of these submissions (paragraphs 42 to 44).

11. In addition to the submissions with respect to the Renewable Energy and Non-Discriminatory Access Purposes, the Applicants submit that the Renewable Access

[5] *EA*, ss.1(d). (See Schedule G).
[6] *EA*, ss. 1(e). (See Schedule G).
[7] Like all generators, renewable generators may always be curtailed for system reliability reasons.

Amendments discriminate against Renewable Energy Supply Generators and in favour of the OPA.

12. They discriminate against Renewable Energy Supply Generators because the impact and effect of these amendments is to impair their ability to deliver power to the IESO controlled grid when it is economic for them to do so. Other market participants, including other generators, are not denied this ability. The argument here is thus similar to the argument respecting the Non-Discriminatory Access Purpose summarized above. The Renewable Energy Supply Generators' position on this issue is detailed in PART II - 1 of these submissions (paragraphs 45 to 55).

13. The Renewable Access Amendments discriminate in favour of the OPA because the impact and effect of these amendments is to change the incentives in OPA RES contracts so that these contracts are more favourable to the OPA and less favourable to the Renewable Energy Supply Generators. The Renewable Energy Supply Generators' position on this issue is detailed in PART II -2 of these submissions (paragraphs 56 to 60)

14. All of these grounds are set out in greater detail below.

PART I – INCONSISTENCY WITH THE PURPOSES OF THE *ELECTRICITY ACT*

1. Purpose of the Electricity Act in Relation to the Use of Renewable Energy: Inconsistency with Government Policy

15. The Renewable Energy Purpose is as follows:

> "to promote the use of cleaner energy sources and technologies, including alternative energy sources and *renewable energy sources in a manner consistent with the policies of the Government of Ontario*."

16. Addressing this purpose thus first requires consideration of the policies of the Government of Ontario in relation to renewable energy sources.

17. The RES procurement contracts, and the RFP process that led to those contracts, embody government policy in respect of the use of renewable energy sources: the contracts are government policy instruments used to achieve government policy goals in respect of renewable power. The contracts are specifically included in governmental statutory instruments, including directives to the Ontario Power Authority issued under s. 25.32(4) of the *EA* and identified in Regulation 578/05, passed pursuant to s. 78.3 of the *OEB Act*.

18. The process leading to the development of the contracts was led by the Government of Ontario and, in particular, the Ministry of Energy. In announcing that process, the Government stated the following:[8]

> "A Request for Proposal (RFP) has been initiated seeking an additional 300 megawatts (MW) of new, renewable electricity capacity for Ontario. This will help the government meet its targets of generating 5 per cent (1,350 MW) of Ontario's total energy capacity from renewable sources by 2007, and 10 per cent (2,700 MW) by 2010. Proponents interested in bidding on the RFP will have until July 30th to review and submit their final proposals. It is expected that successful proponents could be announced as early as November 2004. "*The release of this RFP demonstrates that the McGuinty government is serious about meeting the renewable energy targets we have set*," [then Minister of Energy Dwight] Duncan said. "*It is a significant and historic first step in what will be a very important part of our energy future. We are sending a clear signal that we want participants in the market interested in clean, renewable electricity to come to the table to help us meet our supply needs.*" "*We'll be selecting projects in an open and transparent way - one we're sure will foster innovation and creative approaches - in order to deliver the best outcome for electricity consumers in Ontario*," Duncan said."

19. The government therefore clearly launched the Request For Proposal ("RFP") process to both achieve a policy outcome – increased investment in renewable power – and to commit to a procurement process that was designed to achieve that objective.

20. The Ministry of Energy prepared the RFP documents ("Ministry RFP Documents") which were also meant to incorporate those policy goals. The RFP Documents stated:[9]

> "The Government of Ontario is committed to making electricity from renewable sources an important part of Ontario's energy future.
>
> …
>
> This Renewables II RFP *and the structure of the RES II Contract* will further assist the Government of Ontario in achieving these renewable energy capacity targets."

21. One key component of the structure of the contracts is that the generators would be paid on the basis of the energy produced and delivered to the IESO controlled grid subject only to annual energy caps. Their participation in the IESO administered markets as non-dispatchable generators was intended by the Government to achieve that requirement. As

[8] Government Announcement "McGuinty government to increase supply of renewable energy", April 28, 2004, Ministry of Energy. See http://news.ontario.ca/archive/en/2004/04/28/McGuinty-government-to-increase-supply-of-renewable-energy.html. (See Schedule H).
[9] Ministry of Energy Request for Proposals for RES II Contracts, June 17, 2005, p. 3 (See Schedule I). See also Ministry of Energy Request for Proposals for RES I Contracts, June 24, 2004, pp. 2. (See Schedule L).

the Ministry's agent stated in response to a question on the Ministry RFP Documents, the market participation requirements of the contracts "refer to the requirement that the operator of the facility offer into the market in such a way that the energy is accepted."[10]

22. In fact, participation in the RES II RFP process was expressly limited to Intermittent and Self-Scheduling generation facilities as those terms are defined in the IESO Market Rules. According to the Ministry RFP Documents: "Dispatchable generation facilities are not eligible to participate in this Renewables RFP."[11]

23. The consequence of being non-dispatchable is that the facilities would operate in accordance with supplier economics, and would not be curtailed for economic reasons. The IESO explains this point as follows in training manuals:[12]

> "Self-scheduling, intermittent and transitional scheduling generators are not 'dispatchable', and do not submit offers. Instead, they participate in the market by submitting schedules or forecasts to the IESO.
>
> …
>
> **If you are not price-sensitive and wish to generate only according to your schedules or forecasts, we recommend that you enter an offer of -$2000."**

24. The IESO was intimately aware of this contract structure. It was among a number of government agencies that formulated the requirements of the RFP and procurement contracts.[13]

25. The non-curtailment structure was important for two key reasons.

26. First, it required generators to compete in the RFP by bidding a $/MWh unit price. The Government was therefore in a position to rank all qualifying proposals on that basis and to award procurement contracts based on that ranking. According to the RES I RFP Documents:[14]

> "Each Prospective Proponent must also submit, as part of its Proposal, a Proposal Price stated in Canadian Dollars per MWh, exclusive of applicable GST and PST. All Proposals that are complete and meet the minimum technical and financial requirements will be ranked by that price from lowest to highest Proposal Price. The Ministry will select Successful Proponents starting with the lowest Proposal Price, proceeding to the one ranking second lowest, and continuing to select

[10] Renewables' RFP Questions and Answers #B86768, July 9, 2004, p. 3. (See Schedule J).
[11] Ministry of Energy Request for Proposals for RES II Contracts, June 17, 2005 p. 5. (See Schedule I).
[12] IESO Market Participant Interface Training Manual (Revised: July 15, 2009) Pages 5-1 and 5-5 (Bold print in the original). (See Schedule K).
[13] Ministry of Energy Request for Proposals for RES I Contracts, June 24, 2004, pp. 2-3 (see Schedule L) and II Contracts, June 17, 2005 p. 4. (See Schedule I).
[14] Ministry of Energy Request for Proposals for RES I Contracts, June 24, 2004, p. 8 (see Schedule L); see also Ministry of Energy Request for Proposals for RES II Contracts, June 17, 2005 p. 36. (See Schedule I).

according to the ranking of Proposals by Proposal Price until the total RES Contract Capacity of the selected Proposals adds up to as close to 300 MW as possible, provided that this limit may be exceeded under the circumstances set forth in Section III.H. The Ministry's selections shall be subject to the approval of the Management Board of Cabinet of the Government of Ontario."

27. The non-dispatchability structure therefore permitted a simplified and cost effective means by which the Government could procure renewable power through an open and transparent method of choosing low cost renewable supplies. It therefore satisfied the Minister's objective of "selecting projects in an open and transparent way - one we're sure will foster innovation and creative approaches - in order to deliver the best outcome for electricity consumers in Ontario."

28. This structure also proved very effective. The Auditor General noted that the RES procurements, as well as the Renewable Energy Supply Standard Offer Program "were both very successful and achieved renewable generation targets in record time."[15]

29. It also succeeded in achieving renewable energy at low cost. Renewable Energy Supply Generators are the lowest cost wind and solar generators in the Ontario market.

30. The second key consequence of the non-curtailment structure is that it precluded contractual structures other than payment on a per unit of production basis. The following exchange occurred as part of the RES II Procurement Process:[16]

Question	How can the RFP be amended to accommodate capacity and energy payments considering the variable nature of some renewable energy sources.
Answer	The Renewables II RFP is not a capacity RFP. Rather, the RES II Contract that will be entered into by the OPA and Selected Proponents has been structured as a twenty-year power purchase agreement that will provide a Supplier with **payment for the output of their Renewable Energy Facility**. The contract recognizes the variable nature of renewable energy sources in that **payments will only be made on the basis of actual output**.

31. The Government has never expressly or by implication changed the policy goals that were implemented through the RES contract structure.[17] The Government has also continued to benefit from the low cost renewable electricity procured under that structure.

[15] 2011 Annual Report of the Office of the Auditor General of Ontario, p. 90. (See Schedule M).
[16] Renewables' RFP Questions and Answers #2RP60813, June 17, 2005, p. 1. (See Schedule N).
[17] This statement is the assumption of the Renewable Energy Supply Generators. The Renewable Energy Supply Generators have asked the IESO to produce "all communications with Government Agencies (defined as including the OPA and Ontario

32. However, the IESO, on its own initiative, pursued a change in policy as reflected in the Renewable Access Amendments. In short, the Renewable Access Amendments require the Renewable Energy Supply Generators to become dispatchable and empower the IESO Board to establish floor prices, i.e., prices below which selected generators cannot bid their electricity. The result of the minimum floor price requirement is that Renewable Energy Supply Generators will be curtailed if the minimum floor price is below the market clearing price.

33. It is important that both of these features of the Renewable Access Amendments be taken into account. The requirement of dispatchability, on its own, would still permit renewable generators to bid a price that would reflect their economic interest in being dispatched on. Like all other generators and loads, they could bid the negative maximum market clearing price (-$2,000.) to ensure that they were dispatched on. However, the Renewable Access Amendments no longer permit renewable generators to do that. Unlike other generators and loads, renewable generators lose their ability to bid in their economic interest. The IESO floor price requires them to dispatch off even if it is not in their economic interest to do so.

34. The power to set a minimum floor price is virtually unlimited – the IESO Board may impose or change a floor price at any time and, at no time, is there any right of compensation. As a result, even if it is economic for a generator to bid below the price that is selected by the IESO, it cannot do so.

35. In other words, despite the fact the Government's policy was to structure RES contracts to ensure that Renewable Energy Supply Generators are dispatched on, the IESO has purported to impose a combination of dispatchability and mandatory floor prices as a means to reverse those incentives and require these generators to be dispatched off if their bid price is below the IESO minimum bid price.

36. According to the position taken by the IESO[18] in the process that led to the Renewable Access Amendments, the reason for curtailing renewable power is that, under the OPA contract structure described above, renewable generators have an incentive to bid their power so that they are dispatched on, even in times of low prices. [19]

37. The Renewable Access Amendments were meant to overturn those contract incentives. According to the IESO, the non-dispatchable status of the Generators is reflected in

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Electricity Finance Corporation ("OEFC")), the Ministry of Energy and all Market Participants) with respect to how the IESO or any other government agency compensates market participants for curtailing or manoeuvring their facilities…" The IESO has failed to provide any of this requested information.

[18] For the purposes of these submissions, the propositions put forward by the IESO staff are accepted at face value. In fact, many of these propositions are contestable assertions with questionable empirical support. The Renewable Energy Supply Generators have requested information relied upon in support of these assertions, but the IESO has failed to produce any requested information.

[19] IESO staff has also said on various occasions that the current two-schedule dispatch system is a contributing factor to over-curtailment, but the IESO has not provided any reasons why this would be so and the rationale for this conclusion seems unclear. Also, despite studying this issue for a decade, the IESO has not made any proposal on how to remedy it. See: IESO Floor Price Working Group, Minutes of Meeting, January 24, 2012, p. 5 (see Schedule O) and MSP, Congestion Management Settlement Credits in the IMO Administered Markets, February, 2003.

"contract structures that incent non-marginal behaviour."[20] The Renewable Access Amendments were proposed as the solution to this issue. According to the IESO, the "the incentives created by certain types of contracts makes these changes necessary."[21]

38. The IESO expanded upon this point as follows:

> "unlike Ontario, other North American jurisdictions do not have Feed-in-Tariff (FIT) style contracts *where generators are paid only if they generate*. For example, in cases of global over-supply [in other jurisdictions], as prices become negative, generators get paid less than the full contract price. This mechanism does not work well in a two-schedule system where locational *prices may go negative but have no bearing on the contract* -- with a positive uniform price and negative zonal prices, resources have no incentive to move/curtail since *if they generate, they will continue to earn* $135/MWh [i.e., the FIT contract price]; *if they don't produce, they would earn less*."[22]

39. The clear inference from this is that the IESO believes that the Government's policy of seeking out and contracting for non-dispatchable renewable supply through the RFP process was a mistake because it created incentives for what the IESO considers to be "non-marginal" behaviour by renewable generators. The IESO is therefore seeking to change those incentives. It is therefore effectively questioning the appropriateness of government renewable policy as reflected in the RFP process and procurement contracts. However, just as the Board "does not have the power to enquire into the appropriateness of that policy" [23], neither does the IESO.

40. To conclude on this point, the Renewable Access Amendments' forced curtailment is inconsistent with the Renewable Energy Purpose of the *EA* because it seeks to reverse – not facilitate – the policies of the government of Ontario in relation to the promotion and use of renewable power. It is a reversal of the intended impact and effect of government policy as reflected in the structure of the RFP process and the procurement contracts that resulted from that process. The impact and effect of the Renewable Access Amendments are thus inconsistent with the *EA*'s purpose to "to promote the use of cleaner energy sources and technologies, including alternative energy sources and *renewable energy sources in a manner consistent with the policies of the Government of Ontario*."

41. Not only are the Renewable Access Amendments inconsistent with the Renewable Energy Purpose of the *EA*, their impact and effect is to prevent the Renewable Energy

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[20] IESO Q&A Sheet, April 26, 2012, p. 5; (see Schedule P) see also IESO Q&A Sheet, January 17, 2012. (See Schedule Q).
[21] IESO Q&A Sheet, April 26, 2012, p. 6. (See Schedule P).
[22] IESO Floor Price Working Group, Minutes of Meeting, January 24, 2012, p. 5 (see Schedule O).
[23] Hydro One Networks Inc. Application for an Order granting leave to construct to upgrade existing transmission line facilities in London West, Procedural Order No.2, June 15, 2012, pp. 2-3 (EB-2012-0082) (See Schedule C). See also McLean's Mountain Wind LP Application for an Order granting leave to construct a new transmission line and associated facilities, Procedural Order No. 1, January 27, 2012, p. 4 (EB-2011-0394). (See Schedule D).

Supply Generators from having access to the transmission system on a discriminatory basis. This is addressed immediately below.

2. Purpose of the Electricity Act in Relation to Non-Discriminatory Access

42. The purpose of the *EA* in relation to access to transmission is:

> "to provide generators, retailers and consumers with non-discriminatory access to transmission and distribution systems in Ontario."

43. As indicated, the Renewable Access Amendments single out renewable generation facilities and make them subject to forced curtailment during times when it is profitable for them to be dispatched on while other market participants, are permitted to offer power at a price that is economic for them to do so. The Renewable Energy Supply Generators are therefore being barred from access to the transmission system in a manner that is discriminatory.

44. There is considerable overlap between the concept of "non-discriminatory access" in the context of the objects of the *EA* and in the prohibition against a market rule that "unjustly discriminates against a market participant" in s. 33 of the *EA.* To avoid overlap, the submissions with respect to discrimination against Renewable Energy Supply Generators as market participants set out below apply to this section as well.

PART II – 1 DISCRIMINATION AGAINST Renewable Energy Supply GENERATORS AS MARKET PARTICIPANTS

45. For the reasons submitted above, the impact and effect of the Renewable Access Amendments is to reverse the incentives in OPA procurement contracts. As well as being inconsistent with the purposes of the *EA*, this discriminates against Renewable Energy Supply Generators. Specifically, Renewable Energy Supply Generators are expected to bear the cost of the economic and environmental benefits that the IESO asserts will result from the preferred dispatch order, despite the fact that there is no suggestion that Renewable Energy Supply Generators:

- Use generation technology that uniquely causes surplus generation (to the contrary, their technology is proposed as an unpaid solution to the problem of excess generation curtailment by less flexible resources);
- Have acted inappropriately in the market or not complied with Market Rules; or
- Played any role in the market or contract design flaws that the IESO believes are responsible for inefficient dispatch.

Examples of Paid Curtailment to Address Limitations of Market Design

46. Further, the discrimination against renewable generators is "undue" because similarly situated market participants are not being treated in the same way.

47. There are several areas of the Ontario electricity market where market design has led to what the IESO considers to be uneconomic bidding activity. In these other cases, generators and loads have been subject to "out of market" practices that incent them to participate in a manner that leads to dispatch decisions designed to achieve societal benefits. However, in *every other instance* they have done so on a voluntary and compensated basis. In other words, every other time that the IESO has required market participants to change bidding behaviour to sacrifice their economic interests in order to provide societal benefits, the cost of achieving societal benefits has been socialized across the system – an approach which reflects how the benefits are realized. The Renewable Access Amendments provide the *only* occasion where a discrete group of market participants – the renewable generators – has been singled out and required to internalize the cost of societal benefits.

48. Examples of where the cost of achieving societal benefits has been socialized across the system include the following:

- Under the current rules described above, the IESO addresses surplus generation by requesting nuclear operators to curtail their generation. As indicated, the Renewable Energy Supply Generators understand that the nuclear operators are compensated for this curtailment.[24]

- NUGs are currently classified as "self-scheduling" market participants, thus permitting them to operate outside of the dispatch order. The IESO has advised that "the IESO, OEFC and OPA have had many conversations and have a NUG protocol in place, which is a first step in NUG curtailment." IESO staff is not prepared to include NUG generators in the minimum floor price regime of the Renewable Access Amendments.[25] The Renewable Energy Supply Generators understand that NUG generators are only curtailed on a voluntary basis and compensated for their curtailment.

[24] Although "flexible" nuclear facilities are also subject to minimum bid prices in the Renewable Access Amendments, the Renewable Energy Supply Generators assume that they are compensated for this and that such bidding is therefore economic. The facts with respect to the way in which other generators and compensated and the reasons why the IESO has never publicly requested the OPA to compensate generators for SE-91 curtailment are obviously within the control of the IESO and not the Renewable Energy Supply Generators. The Renewable Energy Supply Generators have asked the IESO to produce materials showing how the IESO or any other government agency compensates market participants for curtailing or manoeuvring their facilities to address actual or forecasts instances of surplus energy or for other purposes. The IESO has refused to do so.
[25] IESO Floor Price Working Group, Minutes of Meeting, January 24, 2012, p.6. (See Schedule O).

- The revenues for base-load hydro facilities are set by the Ontario Energy Board, which has established a deferral account to allow the recovery for revenue impacts caused by surplus generation.[26]

49. There are also examples outside of generator curtailments where market price signals are insufficient to achieve societal benefits, in particular:

- For reliability purposes, the IESO requires generators to commit to start up facilities. Because market signals are insufficient to compensate generators for the cost of making this commitment, the IESO pays a generator cost guarantee.[27]

- Also for reliability purposes, the IESO can require generators to produce electricity even when it is uneconomic for them to do so through reliability must run contracts. The Ontario Energy Board has held that a generator under a reliability must run contract is entitled to its costs plus a return.[28]

- For environmental and economic purposes, provincial policy is to achieve both conservation and demand management targets, especially when electricity market price signals are considered to be inadequate to provide sufficient incentives to reduce or manage demand.

50. Again, in all of these examples, generators and loads are compensated for their contributions to societal goals.

51. Further, these examples are only the most directly comparable instances of compensating market participants for contributing to meet societal goals. It is also worth noting that the service being acquired from the Renewable Energy Supply Generators is essentially a form of flexibility to the system. There are a number of potential forms of system flexibility, including:

- Exporting power;

- Electricity storage; and

- Regulation services.

52. All of these types of services are available in the market place. All of these services are purchased from willing suppliers, not ordered on an involuntary and uncompensated basis.

[26] See OEB Decision and Order setting payment amounts for Ontario Power Generation, for 2011-2012, March 10, 2011 (EB-2010-0008), p. 22. (See Schedule R).
[27] See Market Rules, Chapter 7, Section 2.2B1.4. (See Schedule S).
[28] See Ontario Energy Board, Decision and Order regarding Reliability Must-Run Contract for the Lennox Generating Station, March 13, 2006 (EB-2005-0490), pp. 9-10. (See Schedule T).

53. The Renewable Access Amendments are thus a dramatic departure from current practice and discriminatory towards uncompensated generators. To repeat, the Renewable Access Amendments are the *only* occasion where market participants – renewable generators – have been systematically required to internalize the cost of system wide benefits. This is what makes the Renewable Access Amendments discriminatory and inconsistent with the *Electricity Act, 1998*.

54. In the absence of compensation, the cost of economic and environmental benefits of this change will be borne by renewable generators. The IESO has been unwilling or unable to provide any projection or forecast of impact. In the absence of this information, the Renewable Energy Supply Generators estimate the potential cost of this change to them is in the order of $100 million over the next five years.[29] This amount would effectively be transferred from Renewable Energy Supply Generators to the OPA.

55. The transfer of wealth from Renewable Energy Supply Generators to the OPA relates to both the discrimination *against* the Renewable Energy Supply Generators and the discrimination *in favour* of the OPA. This will be addressed immediately below.

PART II – 2 DISCRIMINATION IN FAVOUR OF THE OPA

56. The OPA is the metered market participant under the RES I and II contracts.[30] The Renewable Energy Supply Generators submit that the Renewable Access Amendments discriminate in favour of the OPA and are therefore inconsistent with s. 33 of the *EA.*

57. As indicated earlier, in determining that the Renewable Access Amendments are discriminatory, it is not necessary for the Board to go so far as to find that the IESO's subjective intention was to benefit the OPA at the expense of Renewable Energy Supply Generators. Rather, the OEB has addressed the interpretation of "discrimination" in s. 33 of the *EA* by reference to the market rules "impact or effect".[31] While finding impact or effect may be informed by the IESO's subjective intentions, it is not necessary for an applicant to prove such an intention.[32]

58. Even with that in mind, it is clear that the IESO was fully aware of the impact or effect of its decision on the OPA and Renewable Energy Supply Generators. Indeed, IESO staff has determined that the system wide net economic benefit of the Renewable Access Amendments is approximately $180-225 million.[33]

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[29] Costs beyond this period are difficult to estimate in that they are strongly dependent upon future government policies and decisions.

[30] See: Ministry of Energy Request for Proposals for RES I Contract, June 24, 2004 , p. 4 (See Schedule L), and for II Contract, June 17, 2005, pp. 5-6. (See Schedule I).

[31] See the "Ramp Rate Appeal", April 10, 2007 (EB-2007-0040), p. 9; see also Appendix A, p. 87. (See Schedule F).

[32] The Renewable Energy Supply Generators have requested the IESO to provide them with information respecting the exchange of information between the OPA and the IESO. However, the IESO has refused to provide any information.

[33] IESO Floor Price Focus Group SE-91 Renewables Integration, January 24, 2012, slide 9. (See Schedule U).

59. The IESO emphasized that this was "'worst case' from a ratepayer perspective. This meant that all curtailed energy would be paid at the contract rate."[34] Thus, a 'better case' from a ratepayer perspective, according to the IESO, would be no contract compensation to Renewable Energy Supply Generators.

60. Thus, the Renewable Access Amendments are designed to fundamentally change the bargain between the Renewable Energy Supply Generators and the OPA. This was their purpose. As noted above, according to the IESO, the "the incentives created by certain types of contracts makes these changes necessary."[35]

PART IV – FURTHER DOCUMENTARY PRODUCTION

61. This application is drafted on the basis of public information that is available to Renewable Energy Supply Generators. They have repeatedly requested the IESO to provide documentary production in order to facilitate the orderly resolution of this application. The IESO has failed to produce a single document. It has made it clear that it will not produce any material until ordered to by the Board. And it has also stated that the Board should not order any production until this application is filed.

62. As a result of the IESO's position, the Renewable Energy Supply Generators hereby re-file motion materials that it originally provided on January 11, 2013. A copy of the application (without exhibits) is attached hereto as Schedule W.

63. As a further result, the factual basis for this application may have to be revised and supplemented by any information that the IESO is ordered to produce. The Renewable Energy Supply Generators regret any inconvenience that this may cause the Board.

PART IV – COSTS

64. The Renewable Energy Supply Generators respectfully request that they be eligible for the costs of this appeal.

65. In the Ramp Rate Appeal, the Board held that it was appropriate that the IESO pay the applicant's costs of the appeal under s. 33 of the *EA*. The Board also held that generators should be eligible for recovery of their appeal costs notwithstanding that they are otherwise ineligible under the Board's Practice Direction for Cost Awards. In that decision, the Board emphasized, and the Renewable Energy Supply Generators appreciate, that, "parties are expected to act responsibly and that the Board retains discretion to address irresponsible or inappropriate participation through the cost award process."[36]

[34] IESO Q&A Sheet, April 26, 2012, p. 2. (See Schedule P).
[35] IESO Q&A Sheet, April 26, 2012, p. 6. (See Schedule P).
[36] "Ramp Rate Appeal", Procedural Order No. 2, March 9, 2007, at p. 5 (EB-2007-0040). (See Schedule V).

Conclusion

66. The Renewable Energy Supply Generators submit that the Renewable Access Amendments are inconsistent with the purposes of the *EA* and unjustly discriminate against Renewable Energy Supply Generators and in favour of the OPA.

67. The Renewable Energy Supply Generators therefore respectfully request that this Board revoke the Renewable Access Amendments and refer them back to the IESO for further consideration.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Dated: January 24, 2013

George Vegh
McCarthy Tétrault LLP
Telephone 416-601-7709
Email: gvegh@mccarthy.ca
Counsel for Renewable Energy Supply Generators

SCHEDULE LIST

Tab	Contents
A.	Renewable Access Amendments: MR-00381-R02: Dispatching Variable Generation MR-00381-R03: Floor Prices for Variable and Nuclear Generation MR-00381-R04: Market Schedule and Congestion Management Settlement Credits (CMSC) for Variable Generation MR-00381-R05: Tie Breaking for Variable Generation MR-00381-R06: Publication Requirements: 5-Minute Forecast for Variable Generation.
B.	*Ontario Energy Board Act*, s. 1.
C.	Hydro One Networks Inc. Application for an Order granting leave to construct to upgrade existing transmission line facilities in London West, Procedural Order No. 2, June 15, 2012, pp. 2-3 (EB-2012-0082).
D.	McLean's Mountain Wind LP Application for an Order granting leave to construct a new transmission line and associated facilities, Procedural Order No. 1, January 27, 2012, p. 4 (EB-2011-0394).
E.	Decision with Reasons regarding the review of an application filed by Hydro One Networks Inc. under section 78 of the Ontario Energy Board Act, 1998, seeking changes to the uniform provincial transmission rates, December 16, 2009, pp. 9-10 (EB-2008-0272).
F.	"Ramp Rate Appeal", April 10, 2007 (EB-2007-0040), p. 9; Appendix A, p. 87.
G.	*Electricity Act, 1998 ("EA")*, s. 1.
H.	Government Announcement "McGuinty government to increase supply of renewable energy", April 28, 2004, Ministry of Energy, http://news.ontario.ca/archive/en/2004/04/28/McGuinty-government-to-increase-supply-of-renewable-energy.html.
I.	Ministry of Energy Request for Proposals for RES II Contracts, June 17, 2005, pages 3, 4, 5, 6, 36.
J.	Renewables' RFP Questions and Answers #B86768, July 9, 2004, p. 3.
K.	IESO Market Participant Interface Training Manual (Revised: July 15, 2009) Pages 5-1 and 5-5 (Bold print in the original).
L.	Ministry of Energy Request for Proposals for RES I Contracts, June 24, 2004, pp.

Tab	Contents
	2, 3, 4, 8.
M.	2011 Annual Report of the Office of the Auditor General of Ontario, p. 90.
N.	Renewables' RFP Questions and Answers #2RP60813, June 17, 2005, p. 1.
O.	IESO Floor Price Working Group, Minutes of Meeting, January 24, 2012.
P.	IESO Q&A Sheet, April 26, 2012, pp. 2, 5, 6.
Q.	IESO Q&A Sheet, January 17, 2012.
R.	OEB Decision and Order setting payment amounts for Ontario Power Generation, for 2011-2012, March 10, 2011 (EB-2010-0008), p. 21-23.
S.	Market Rules, Chapter 7, Section 2.2B1.4.
T.	Ontario Energy Board, Decision and Order regarding Reliability Must-Run Contract for the Lennox Generating Station, March 13, 2006 (EB-2005-0490), pp. 9-10.
U.	IESO Floor Price Focus Group SE-91 Renewables Integration, January 24, 2012, slide 9.
V.	"Ramp Rate Appeal", Procedural Order No. 2, March 9, 2007, p. 5 (EB-2007-0040).
W.	Application (without exhibits) filed by Renewable Energy Supply Generators on January 11, 2013

SCHEDULE A

Please see attached

Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00381				
Subject:	Renewable Integration Initiative				
Title:	Dispatching Variable Generation				
Nature of Proposal:	☒ Alteration	☒ Deletion	☒ Addition		
Chapter:	7, 11	Appendix:	7.5		
Sections:	Chapter 7, sections 3.4.1.1.1(new), 3.4.1.4, 3.4.1.4B, Appendix 7.5, section 4.3.2.9, Chapter 11 definitions				
Sub-sections proposed for amending:					

PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Draft for Technical Panel review	July 10, 2012
2.0	Publish for Stakeholder Review and Comment	July 19, 2012
3.0	Submitted for Technical Panel Vote	September 21, 2012
4.0	Recommended by Technical Panel; Submitted for IESO Board Approval	October 16, 2012
5.0	Approved by IESO Board	November 29, 2012

Approved Amendment Publication Date:	January 3, 2013
Approved Amendment Effective Date:	The effective date is anticipated to be in the third/fourth quarter of 2013, and shall be specified by the Chief Executive Officer of the IESO in a notice to all market participants.

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-administered markets* if the amendment is not made.
- Alternative solutions considered.
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IESO-administered markets*.

Summary

The IESO proposes to amend the market rules in order to incorporate the dispatch of all variable generators that are registered market participants on a five-minute, economic basis, and to integrate centralized forecasts into the dispatch process.

This amendment will:

- Integrate centralized forecasting as a limit in the dispatch scheduling and pricing process on offers submitted by variable generators once dispatchable;
- Exclude variable generators from the definition of intermittent generators upon the implementation of five-minute dispatch for variable generators.

This proposal is based on stakeholder consultation as part of SE-91 Renewable Integration which includes the Dispatch Technical Working Group (DTWG) and the Floor Price Focus Group (FPFG). The amendments are based on SE-91 Renewable Integration Final Design Principle 7[1].

Further information on SE-91 can be found on the IESO's website at:

http://www.ieso.ca/imoweb/consult/consult_se91.asp

Background

The rapid influx of renewables in Ontario will fundamentally change the characteristics of the power system, challenging the IESO's ability to maintain reliable and cost-efficient operations. As part of the renewable integration design, the IESO will actively dispatch all variable generation[2] directly connected to the IESO-controlled grid and those embedded variable resources that are registered market participants through the five-minute security constrained economic dispatch.

Discussion

Integrating Centralized Forecasts in the Dispatch Algorithm

Upon the implementation of five-minute dispatch for variable generators, the following changes are

[1] **Principle 7:** All variable resources connected to the IESO-Controlled Grid, and embedded variable resources that are registered market participants, will be actively dispatched on a five-minute economic basis.

[2] Market Rules, Chapter 11 Definition: *variable generation* means all wind and solar photovoltaic resources with an installed capacity of 5MW or greater, or all wind and solar photovoltaic resources that are directly connected to the *IESO-controlled grid.*

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

proposed in order to incorporate the centralized forecasts for variable generators that are registered market participants in the market clearing and pricing process:

- Chapter 7, section 3.4.1.1.1 (new): Obligate variable generators that are registered market participants (and a subset of dispatchable generation facilities) to submit as the quantity component of their offer the generation facility's full capacity available for production (i.e. installed capacity less outages which will be specified in the applicable market manual). Once dispatchable on a five-minute basis, proposed section 3.4.1.4B which is part of MR-00381-R00 Centralized Forecasting Integration (which received IESO Board approval on Sept 7th, 2012 with an effective date of Oct 1st, 2012) will no longer be required and will be deleted.
- Appendix 7.5, section 4.3.2.9: Add forecasts of energy for variable generators that are registered market participants, produced by the forecasting entity. From an IESO systems perspective, the centralized forecast will be considered as a limit to be applied on offers submitted in the dispatch scheduling and pricing process.

Definition of Intermittent Generator

Upon the implementation of five-minute dispatch for variable generators (that are registered market participants) the following changes are proposed to the definition of "intermittent generator" in Chapter 11:

- Exclude variable generators. This will simplify the market rules and eliminate any ambiguity as to whether a variable generator is also an intermittent generator upon the implementation of five-minute dispatch. This change will also clarify that variable generators that are registered market participants who will be subject to five-minute dispatch are separate and distinct from intermittent generators who will not be subject to five-minute dispatch (as is the case today). As a consequence of this change, the existing text in section 3.4.1.4 of Chapter 7 "for an intermittent generator that is a variable generator…" will be deleted.
- Add "unless limited by dispatch" to clarify that intermittent generators today who are not dispatched on a five-minute basis, could respond and operate according to an IESO dispatch instruction sent for reliability related reasons when fuel sources, safety, legal and regulatory restrictions allow the generator to do so.

PART 4 – PROPOSED AMENDMENT

Chapter 7

3.4 The Form of Dispatch Data

3.4.1 *Dispatch data* shall relate to a specified *dispatch hour* of the *dispatch day* and to a specified *registered facility*, shall comply with the applicable provisions of this section and sections 3.5 to 3.9 and shall take one of the following forms:

3.4.1.1 for a *dispatchable generation facility*, an *offer* to provide a *physical service* to the appropriate *real-time market*. *Offers* accepted result in

sales in the *real-time market* only to the extent that, for the *registered market participant* submitting such *offers*, the total value of the *physical services* provided to the *real-time markets* is greater than the total value of the *physical bilateral contract quantities* notified to the *IESO* in respect of that *registered market participant* pursuant to Chapter 8;

3.4.1.1.1 for a *dispatchable generation facility* that is classified as *variable generation*, an offer to provide a *physical service* to the appropriate *real-time market* reflecting its *generation facility's* full capacity available for production, determined in accordance with the applicable *market manual.*

3.4.1.2 for a *dispatchable load facility*, a *bid* to take *energy* from the *energy market*. *Bids* accepted result in purchases in the *real-time market* only to the extent that, for the *registered market participant* submitting such *bids*, the total value of the *physical services* taken from the *real-time markets* is greater than the total value of *physical bilateral contract quantities* notified to the *IESO* in respect of that *registered market participant* pursuant to Chapter 8;

3.4.1.2A [Intentionally left blank – section deleted]

3.4.1.3 for a *self-scheduling generation facility*, a *self-schedule* for the provision of *energy* to the *energy* market. *Energy* actually provided by a *self-scheduling generation facility* results in sales in the *real-time market* only to the extent that, for the *registered market participant* designated for that *self-scheduling generation facility*, the total value of *energy* provided to the *real-time market* is greater than the total value of *physical bilateral contract* quantities notified to the *IESO* in respect of that *registered market participant* pursuant to Chapter 8;

3.4.1.4 for an *intermittent generator*, a forecast of *energy* expected to be provided to the *energy market*. *Energy* actually provided by an *intermittent generator* results in sales in the *real-time market* only to the extent that, for the *registered market participant* designated for such *intermittent generator*, the total value of *energy* provided to the *real-time market* is greater than the total value of *physical bilateral contract quantities* notified to the *IESO* by that *registered market participant* pursuant to Chapter 8~~.~~; ~~For an *intermittent generator* that is a *variable generator*, this section shall cease to have effect on a date to be determined by the *IESO* with such date to be *published* by the *IESO*;~~

3.4.1.4A for a *transitional scheduling generator*, a forecast schedule for the provision of *energy to the energy market*; and

~~3.4.1.4B for a *variable generator* that is a *market participant*, its *generation facility's* full capacity available for production determined in accordance with the applicable *market manual*; and~~[Intentionally left blank – section deleted]

3.4.1.5 if the capacity reserve market has been activated pursuant to section 10.1.3, for all registered facilities providing capacity reserve, an offer to provide capacity reserve.

Appendix 7.5 – The Market Clearing and Pricing Process

4.3 Fundamental Sets and Indices

4.3.2 *Offers*

4.3.2.1 An *offer* is represented by an element of the set OFFERS and is indexed by g.

4.3.2.2 An *offer* has associated with it an area and a node.

4.3.2.3 [Intentionally left blank]

4.3.2.4 [Intentionally left blank]

4.3.2.5 A subset of OFFERS called $OFFERS_{ENERGYLIMITED}$ represents the *offers* which have a daily *energy* limit in force in accordance with section 3.5.7 of this Chapter.

4.3.2.6 Each element of g of OFFERS has a set of offer blocks, $GENERATIONOFFERBLOCKS_{g.}$

4.3.2.7 $SECURITYGENERATIONGROUP_{v}$ is the group of *offers* constrained with security constraint v.

4.3.2.8 Each *energy offer* has associated with it a set of $GENERATIONRAMPUPBLOCKS_{g}$ and a set of $GENERATIONRAMPDOWNBLOCKS_{g}$. Each set may be used to specify not less than 1 and not more than 5 ramp rates associated with the *energy offer.*

4.3.2.9 The set ENERGYOFFERBOUNDS, which is indexed by g, describes the set of *energy offers* to which minimum and maximum output levels may be applied so as to represent transmission loading relief limits, *generation facility outages* as well as limits imposed by *contracted*

ancillary services contracts, and forecasts of *energy* for the *facilities* of *variable generators* that are *registered market participants* produced by the *forecasting entity*. These limits restrict both the *energy* and *operating reserve* output of a *generation facility*.

Chapter 11

1. Definitions

intermittent generator means a *generation facility* located within the *IESO control area* that generates on an intermittent basis as a result of factors beyond the control of the *generator* unless limited by *dispatch*, and excludes a *variable generator*;

PART 5 – IESO BOARD DECISION RATIONALE

As part of the renewable integration design, this amendment is a component of the IESO's ability to actively dispatch all variable generators that are registered market participants through the five-minute security constrained economic dispatch, which is an essential tool for the IESO to maintain system reliability and market efficiency.

Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00381			
Subject:	Renewable Integration Initiative			
Title:	Floor Prices for Variable and Nuclear Generation			
Nature of Proposal:	☐ Alteration	☐ Deletion	☒ Addition	
Chapter:	7, 11	Appendix:		
Sections:	Chapter 7, section 3.5.4A (new), Chapter 11 definitions			
Sub-sections proposed for amending:				

PART 2 – PROPOSAL HISTORY

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2.0	Publish for Stakeholder Review and Comment	July 19, 2012
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4.0	Recommended by Technical Panel; Submitted for IESO Board Approval	October 16, 2012
5.0	Approved by IESO Board	November 29, 2012

Approved Amendment Publication Date:	January 3, 2013
Approved Amendment Effective Date:	February 1, 2013

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-administered markets* if the amendment is not made.
- Alternative solutions considered.
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IESO-administered markets*.

Summary

The IESO proposes to establish floor prices for variable generators (i.e. wind and solar) that are registered market participants, and flexible nuclear generation.

This proposal is based on stakeholder consultation as part of SE-91 Renewable Integration - the Floor Price Focus Group (FPFG). The amendment is based on SE-91 Renewable Integration Final Design Principle 10[1], and is the first set of rule amendments related to variable generation dispatch.

Further information on SE-91 can be found on the IESO's website at:

http://www.ieso.ca/imoweb/consult/consult_se91.asp

Background

The rapid influx of renewables in Ontario will fundamentally change the characteristics of the power system, challenging the IESO's ability to maintain reliable and cost-efficient operations. As part of the renewable integration design, the IESO will actively dispatch all variable generation[2] directly connected to the IESO-controlled grid and those embedded variable resources that are registered market participants through the five-minute security constrained economic dispatch.

In order to better ensure efficient dispatches during periods of local and/or global surplus baseload generation (SBG) events, the IESO will establish floor prices for variable generators as well as for flexible nuclear generators. A dispatch order for baseload generation will produce real-time outcomes that:

- Better promote market efficiency and cost-effectiveness;
- Minimize environmental impacts.

Discussion

Subject to IESO Board approval, the IESO will establish floor prices for variable generators (wind and solar) and flexible nuclear generation. With a coordinated approach using nuclear and variable

[1] **Principle 10:** The IESO may establish various floor prices for offers from baseload generators (e.g. wind, must-run hydro, nuclear, etc.) to ensure efficient dispatches during periods of local and/or global surplus baseload generation (SBG) events.

[2] Market Rules, Chapter 11 Definition: *variable generation* means all wind and solar photovoltaic resources with an installed capacity of 5MW or greater, or all wind and solar photovoltaic resources that are directly connected to the *IESO-controlled grid.*

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

resources, once a real-time dispatch is received, the IESO will make an assessment of surplus conditions and commit flexible nuclear based on technical requirements and forecasted needs. Other resources, including wind and solar, will fill in the remaining differences between the intervals through the five-minute economic dispatch.

Periodically, (for example, every 6 months – frequency to be determined) the IESO will assess the impact of the floor prices on system operations and the IESO-administered markets. Such assessment will include seeking input from all stakeholders, and the IESO will provide a recommendation to the IESO Board which will unilaterally determine whether any changes to the floor prices are warranted. The prices will be published in the applicable market manual (MM 4.2: Submission of Dispatch Data in the Real-Time Energy and Operating Reserve Markets) rather than being hardcoded into the market rules to allow for a more expedited change process.

The following changes are proposed in Chapter 7, section 3.5.4A (new) to specify that:

- The IESO Board will establish floor prices for energy offers from variable generators that are registered market participants, and flexible nuclear generators for flexible nuclear generation in accordance with the applicable market manual. This approach is consistent with section 4.4.6 of Chapter 7 where the IESO Board specifies the maximum market clearing price (MMCP) and negative MMCP.
- The prices in each energy offer submitted by the variable generator or by a flexible nuclear generator in respect of flexible nuclear generation for each dispatch hour shall not be less than the floor prices specified in the applicable market manual.

In addition, it is proposed to add defined terms in Chapter 11 for:

- "Flexible nuclear generation," meaning the component of a nuclear generation facility that has flexibility for reductions due to the operation of condenser steam discharge valves, and is made available at the sole discretion of the flexible nuclear generator to manoeuvre without requiring a unit to shutdown under normal operations, while respecting safety, technical, equipment, environmental and regulatory restrictions.
- "Flexible nuclear generator," meaning a generator whose generation facility has a component classified as flexible nuclear generation.

PART 4 – PROPOSED AMENDMENT

Chapter 7

3.5 Energy Offers and Energy Bids

3.5.1 A *registered market participant* may submit no more than one *energy offer* or one *energy bid* with respect to a given *registered facility* for any *dispatch hour*.

3.5.2 All *energy offers* and *energy bids* shall be submitted using such forms as may be specified by the *IESO*, which forms shall require, at a minimum, provision of all of the information specified in Appendices 7.1 and 7.2, respectively, except where

the *IESO* specifies an alternative means and/or an alternative simplified form pursuant to section 3.2.2.3.

3.5.3 Each *energy offer* or *energy bid* must contain at least 2 and, may contain up to 20 *price-quantity pairs* for each *dispatch hour*. The price in each such *price-quantity pair* shall be not more than the *Maximum Market Clearing Price* or *MMCP* and not less than the negative *Maximum Market Clearing Price* or negative *MMCP* and shall be expressed in dollars and whole cents per MWh. The quantity in each such *price-quantity pair* shall:

3.5.3.1 in the case of a *registered facility* other than a *boundary entity*, be expressed in MW (or MWh/hour) to one decimal place and shall not be less than 0.0 MW (or 0.0 MWh/hour); or

3.5.3.2 in the case of a *registered facility* that is a *boundary entity*, be expressed in whole MW (or MWh/hour) and shall not be less than 0 MW (or 0 MWh/hour).

The quantity in the first *price-quantity pair* shall be 0.0 MW (or 0.0 MWh/hour) or 0 MW (or 0 MWh/hour) as applicable. The price in the second *price-quantity pair* shall be the same as the price in the first *price-quantity pair*.

3.5.4 Prices in *energy offers* and *energy bids* may be negative and such negative price shall imply:

3.5.4.1 when in an *energy offer*, that the *registered market participant* is willing to pay up to that price for each MWh of *energy* it injects rather than reduce its output; and

3.5.4.2 when in an *energy bid*, that the *registered market participant* is willing to take or dispose of excess *energy*, but only if paid at least that price for each excess MWh taken or disposed of.

3.5.4A The *IESO Board* shall establish floor prices for *energy offers* from *variable generators* that are *registered market participants* and for *energy offers* from *flexible nuclear generators* for *flexible nuclear generation*, in accordance with the applicable *market manual*. The prices in each *energy offer* submitted by the *variable generator* or by a *flexible nuclear generator* in respect of *flexible nuclear generation* for each *dispatch hour* shall not be less than the floor prices specified in the applicable *market manual*.

Chapter 11

1. Definitions

flexible nuclear generation means the component of a nuclear *generation facility* that has flexibility for reductions due to the operation of condenser steam discharge valves, and is made available at the sole discretion of the *flexible nuclear generator* to manoeuvre without requiring a unit to shutdown under normal operations, while respecting safety, technical, equipment, environmental and regulatory restrictions;

flexible nuclear generator means a *generator* whose *generation facility* has a component classified as *flexible nuclear generation;*

PART 5 – IESO BOARD DECISION RATIONALE

As part of the renewable integration design, this amendment is a component of the IESO's ability to actively dispatch all variable generators that are registered market participants through the five-minute security constrained economic dispatch, which is an essential tool for the IESO to maintain system reliability and market efficiency.

Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00381			
Subject:	Renewable Integration Initiative			
Title:	Market Schedule and Congestion Management Settlement Credits for Variable Generation			
Nature of Proposal:	☒ Alteration	☐ Deletion	☒ Addition	
Chapter:	7, 9, 11	Appendix:		
Sections:	Chapter 7, sections 6.4.2.9A (new), 7.1.1B1 (new), 7.1.2A1(new), Chapter 9, section 3.5.1E (new), 3.5.2, Chapter 11 definitions (new)			
Sub-sections proposed for amending:				

PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Draft for Technical Panel review	August 14, 2012
2.0	Publish for Stakeholder Review and Comment	August 23, 2012
3.0	Submitted for Technical Panel Vote	September 21, 2012
4.0	Recommended by Technical Panel; Submitted for IESO Board Approval	October 16, 2012
5.0	Approved by IESO Board	November 29, 2012

Approved Amendment Publication Date:	January 3, 2013
Approved Amendment Effective Date:	The effective date is anticipated to be in the third/fourth quarter of 2013, and shall be specified by the Chief Executive Officer of the IESO in a notice to all market participants.

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-administered markets* if the amendment is not made.
- Alternative solutions considered.
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IESO-administered markets*.

Summary

This amendment submission proposes to specify the use of a 5-minute forecast produced by the forecasting entity in the IESO's determination of the market schedule and price, and subsequently the market schedule quantity for each facility to be used for all settlement purposes, including congestion management settlement credits (CMSC) for variable generators that are registered market participants.

This proposal is based on stakeholder consultation as part of SE-91 Renewable Integration which includes the Dispatch Technical Working Group (DTWG) and the Floor Price Focus Group (FPFG).

Further information on SE-91 can be found on the IESO's website at:

http://www.ieso.ca/imoweb/consult/consult_se91.asp

Background

As part of the renewable integration design, the IESO will actively dispatch all variable generation[1] directly connected to the IESO-controlled grid and those embedded variable resources that are registered market participants through the five-minute security constrained economic dispatch.

This proposal specifies how the market schedule and corresponding CMSC for applicable variable generators will be determined. Variable generators are different from existing generators in that their ability to economically produce energy is a function of their available fuel, over which they have no control. As a result, the following changes are required:

- The IESO's dispatch algorithm must take into account a 5-minute forecast for each dispatch interval indicating available fuel when determining the market schedule for variable generators and the market clearing price for a given interval. The market schedule quantities determined by the dispatch algorithm will be inputs into the calculation of CMSC for variable generators.
- A new defined term, "release notification," which allows a variable generator to supply energy according to ambient fuel conditions once "released" by the IESO from a previously issued dispatch instruction.

[1] Market Rules, Chapter 11 Definition: *variable generation* means all wind and solar photovoltaic resources with an installed capacity of 5MW or greater, or all wind and solar photovoltaic resources that are directly connected to the *IESO-controlled grid.*

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Discussion

Market Schedule for Variable Generation

The following change is proposed in Chapter 7, section 6.4.2.9A (new):

- Specify that for variable generators that are registered market participants, if the registered facility is issued a dispatch instruction by the IESO in accordance with section 7.1 ("IESO Dispatch Instructions"), the market schedule quantity for that dispatch interval shall:

    i. Be limited to reflect the least of offers, outage information, and 5-minute forecast for the generation facility for that dispatch interval. Similar to the mechanism used to integrate centralized forecasting into the pre-dispatch and Day-Ahead Commitment Process (DACP) via MR-00381-R00: Centralized Forecasting Integration, IESO systems will incorporate the 5-minute forecast produced by the forecasting entity for a dispatch interval as a limit to be applied on offers submitted by variable generators. The 5-minute forecasted quantity will be used in the pricing process.

    Section 7.1.1A of Chapter 7 specifies the current practice where the IESO only issues dispatch instructions for a given dispatch interval when there is a change in the quantity relative to the last dispatch instruction issued to the registered facility. For clarity, the mechanism limiting the quantity in the market scheduled (to reflect offers, outages, and the 5-minute forecast) will be used in all intervals during which a dispatch instruction is applicable (for example, if a dispatch instruction is received for 50MW and is applicable for five consecutive intervals, all five intervals will have the limiting mechanism apply).

In the absence of the requirement for a variable generator to follow a dispatch instruction sent by the IESO in a dispatch interval, the market schedule will be determined using a telemetry snapshot at the end of the dispatch interval, and this quantity will be used in the pricing process as is the case today for intermittent generators.

Release Notifications

The following change is proposed in Chapter 7, section 7.1.1B1 (new):

- Specify that for variable generators that are registered market participants, existing section 7.1.1B will apply until the registered facility is issued a release notification. Variable generators are the only subset of dispatchable generation facilities that will receive a release notification, and the last "instruction" from the IESO will be the last dispatch instruction or release notification.

In addition, the following changes are proposed in Chapter 7, section 7.1.2A1 (new):

- Specify that the IESO shall issue a release notification to a variable generator that is a registered market participant if the registered facility is not required to be at or below forecasted output. In other words, when issued a release notification, the registered facility may generate at any level which ambient fuel conditions allow until the next dispatch

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

instruction is sent by the IESO.

- Obligate each variable generator to acknowledge the receipt of a release notification using the systems and protocols defined in the applicable market manual (MM 4.3: Real-Time Scheduling of the Physical Markets). Similar to responding to a (mandatory) dispatch instruction, the market manual will specify that variable generators must acknowledge receipt of a release notification for each dispatch interval (when issued) within 60 seconds of receipt of the notification via an "ACCEPT" action through the IESO's Web-Based Message Exchange.

It is also proposed to add a defined term in Chapter 11:

- "release notification," meaning in respect of a variable generator that is a registered market participant, a notification issued by the IESO providing that energy may be supplied from the variable generation facility to the IESO-controlled grid as ambient fuel conditions allow until a dispatch instruction is sent.

When the security or economic constraints of a previous (mandatory) dispatch instruction no longer exist, and once the generator can ramp to the full level allowed by ambient fuel conditions, the variable generator will be issued a release notification whereby the generation facility may operate according to available wind/irradiance (note: any ramp-up limitations will generate a mandatory dispatch instruction). A release notification will only be issued in one interval following a (mandatory) dispatch instruction (i.e. there will be no instances of a release notification being issued in consecutive intervals).

<u>CMSC for Variable Generation</u>

The following change is proposed in Chapter 9, section 3.5.1E (new):

- Specify that for the purpose of calculating CMSC for variable generators that are registered market participants:
  i. If the registered facility is required to follow dispatch instructions issued by the IESO for any given dispatch intervals, the corresponding CMSC for those dispatch intervals will be calculated using the market schedule quantity determined in accordance with section 6.4.2.9A of Chapter 7 (i.e. represent the estimated amount of energy the generation facility could have produced considering offers, outages, and the 5-minute forecast for the interval).
  ii. In cases where the registered facility is not required to follow dispatch instructions issued by the IESO, the market participant will not be eligible for CMSC in that interval.

PART 4 – PROPOSED AMENDMENT

Chapter 7

6. The Real-Time Scheduling Process

6.4 Market Schedules and Market Prices

6.4.1 Subject to section 8.4A the *IESO* shall, within five minutes after the end of each *dispatch interval*, use the *dispatch algorithm* to determine a *market schedule* and *market prices* for that *dispatch interval* based on the most recent *real-time schedule* for such *dispatch interval.*

6.4.2 Subject to section 8.4A for the purpose of determining the *market schedule* and *market prices* for any *dispatch interval*, the *IESO* shall use the same information and data used for determining the *real-time schedule* for that *dispatch interval*, except that:

6.4.2.1 the unconstrained *IESO-controlled grid* model shall be used;

6.4.2.2 subject to section 3.1.2 of Appendix 7.5, the initial conditions to be used for any *dispatch interval* in the *market schedule* shall be the final conditions of the *market schedule* for the preceding *dispatch interval*;

6.4.2.3 the total demand (including losses) to be satisfied within a *dispatch interval* in the *market schedule* shall be set at the *IESO's* best estimate of its actual value, as determined from real-time system data;

6.4.2.4 total system *energy* losses determined in the *real-time schedule* shall be represented as an increase in *non-dispatchable load* within the *IESO control area*;

6.4.2.5 any *registered facility* in respect of which a *forced outage* has been detected during a *dispatch interval* shall be recognized by an adjustment to the input data;

6.4.2.6 subject to section 6.4.2A, the estimated deviations between scheduled quantities and actual quantities shall be represented as a change in *non-dispatchable load* in the *IESO control area*;

6.4.2.7 subject to section 6.4.2A, the *market schedule* shall reflect dispatch adjustments computed using scheduled injections from the *constrained schedule*, outlined in Appendix 7.5;

6.4.2.8 in accordance with section 4.13.1 of Appendix 7.5, the *market schedule* may use different trading period length to that of the *real-time schedule*; ~~and~~

6.4.2.9 in accordance with section 2.11.2 of Appendix 7.5, the *market schedule* may use a different ramp rate for *operating reserve* to that of the *real-time schedule*; and.

6.4.2.9A for a *variable generator* that is a *registered market participant*, if the *registered facility* is issued a *dispatch instruction* by the *IESO* in accordance with section 7.1, the quantity of *energy* scheduled for injection in the *market schedule* for the applicable *dispatch intervals* shall be limited to reflect the least of *energy offers, outages, and the* forecast of *energy* produced by the *forecasting entity* for the *registered facility*.

6.4.2A Until such time that locational pricing is implemented in the *IESO-administered markets*, in determining the *market schedule* and *market prices* for any *dispatch interval*, the *IESO* shall not have regard to the estimated deviations referred to in section 6.4.2.6 or to the dispatch adjustments referred to in section 6.4.2.7.

6.4.3 The *IESO* shall determine for *registered facilities* that are *boundary entities* a *market schedule* for each *dispatch hour* using the outcome of the projected *market schedule* determined as at the preceding *dispatch ho*ur and modified as required by the *IESO.*

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7. IESO Dispatch Instructions

7.1 Purpose and Timing of Dispatch Instructions

7.1.1 The *IESO* shall determine *dispatch instructions* for each *registered facility* as described in this section 7, as the primary means of co-ordinating the *real-time operation* of the *electricity system*.

7.1.1A The *IESO* shall only issue *dispatch instructions* for a *physical service* to a *registered facility* other than a *boundary entity* for a given *dispatch interval* when there is a change in the quantity of a *physical service* to be scheduled from that *registered facility* during that *dispatch interval* relative to the last *dispatch instruction* issued to the *registered facility* and with which the *registered market participant* has confirmed compliance in accordance with section 7.1.2 and 7.1.2A.

7.1.1B Where the *IESO*:

7.1.1B.1 is not required to issue a *dispatch instruction* at a *registered facility* other than a *boundary entity* for a given *dispatch interval* by virtue of section 7.1.1A; or

7.1.1B.2 for any reason fails to issue a dispatch instruction to a *registered facility* other than a *boundary entity* for a given *dispatch interval*,

subject to section 7.1.1B1, the last *dispatch instruction* issued to the *registered facility* and with which the *registered market participant* has confirmed compliance in accordance with sections 7.1.2 and 7.1.2A shall, for all purposes under these *market rules* but subject to section 7.1.4 and 7.4.3, be deemed to be the *dispatch instruction* issued for that *dispatch interval* for that *registered facility*.

7.1.1B1 For a *variable generator* that is a *registered market participant*, section 7.1.1B shall apply until the *registered facility* is issued a *release notification*.

7.1.1C Notwithstanding the identification of a portion of the consumption at a *registered facility* under section 3.3.18 as *non-dispatchable load*, the *IESO* shall issue *dispatch instructions* in accordance with the applicable *market manual* to that *registered facility* including that portion that has been identified pursuant to section 3.3.18 as *non-dispatchable load*.

7.1.2 Subject to section 7.1.1A, the *IESO* shall issue *dispatch instructions* for each *registered facility*, other than a *boundary entity*, for which a *dispatch instruction* is required no later than the start of each *dispatch interval* or, where section 7.1.4 or 7.4.3 applies, within a *dispatch interval*. The *IESO* shall:

7.1.2.1 [Intentionally left blank]

7.1.2.2 issue such *dispatch instructions* using the systems and protocols defined in the applicable *market manual*; and

7.1.2.3 record and time-stamp all such *dispatch instructions*, store such records for at least seven years and make such records available for purposes of audit and dispute resolution in accordance with these *market rules*.

7.1.2A Each *registered market participant* shall:

7.1.2A.1 acknowledge receipt of; and

7.1.2A.2 confirm its intention to comply or not to comply with,

each *dispatch instruction* issued to it in accordance with section 7.1.2 in respect of each of its *registered facilities*, other than a *boundary entity*, using the systems and protocols defined in the applicable *market manual* and within the time

required by such *market manual*.

7.1.2A1 The *IESO* shall issue a *release notification* to a *variable generator* that is a *registered market participant* if the *registered facility* is not required to be at or below forecasted output. Each *variable generator* shall acknowledge receipt of each *release notification* using the systems and protocols defined in the applicable *market manual* and within the time required by such *market manual*.

Chapter 9

3.5 Hourly Settlement Amounts for Congestion Management

3.5.1 The *dispatch instructions* provided by the *IESO* to *market participant* 'k' will sometimes instruct k to deviate from its *market schedule* in ways that, based on *market participant* 'k's *offers* and *bids*, imply a change to *market participant* 'k's net operating profits relative to the operating profits implied by *market participant* 'k's *market schedule*. When this occurs and *market participant* 'k' responds to the *IESO*'s *dispatch instructions*, *market participant* 'k' shall, subject to Appendix 7.6 of Chapter 7, receive as compensation a *settlement* credit equal to the change in implied operating profits resulting from such response, calculated in accordance with section 3.5.2. If *market participant* 'k' does not fully or accurately respond to its *dispatch instructions* from the *IESO*, the compensation paid to *market participant* 'k' shall be altered as set forth in this section 3.5, or as otherwise specified by the *IESO*.

3.5.1A A *registered market participant* for a *registered facility* that is a *dispatchable load* is not entitled to a congestion management settlement credit determined in accordance with section 3.5.2 where that *registered facility's* DQSW is less than the corresponding MQSW at that location for the same *metering interval* as the result of that *registered facility's* own equipment or operational limitations, if:

3.5.1A.1 that *registered facility* does not fully or accurately respond to its *dispatch instructions*; or

3.5.1A.2 the ramping capability of that *registered facility*, as represented by the ramp rate set out in the *offers* or *bids*, is below the threshold for the *IESO* to modify *dispatch instructions* and thereby prevents changes to the *dispatch*;

and then the *IESO* may withhold or recover such congestion management settlement credits and shall redistribute any recovered payments in accordance with section 4.8.2 of Chapter 9.

3.5.1B A *market participant* shall not be *invoiced* congestion management settlement credits for an export transaction if that transaction attracted the congestion management settlement credits under the following conditions:

3.5.1B.1 the net *interchange schedule* limit is binding in the *market schedule* on an economic export transaction in pre-dispatch, and subsequently, in accordance with section 6.1.3 of Chapter 7, the *IESO* increases the quantity of that transaction in the *real-time schedule*; or

3.5.1B.2 the net *interchange schedule* limit is binding in the *market schedule* on an uneconomic export transaction in pre-dispatch, and subsequently, in accordance with section 6.1.3 of Chapter 7, the *IESO* decreases the quantity of that transaction in the *real-time schedule*.

The amount of congestion management settlement credits referred to in this section is limited to the portion of the transaction that is modified by the *IESO*.

3.5.1C [Intentionally left blank – section deleted]

3.5.1D A *registered market participant* for a *registered facility* that is a *dispatchable load* shall not be entitled to a congestion management *settlement* credit determined in accordance with section 3.5.2 for *settlement hour* 'h' where:

3.5.1D.1 the *price-quantity pairs* contained in the *energy bid* associated with that *registered facililty* for *settlement hour* 'h' are not identical to the *price-quantity pairs* in the *energy bid* associated with the same *registered facility* for the applicable preceding *settlement hour* or following *settlement hour*;

3.5.1D.2 the change in *energy bid* as referred to in section 3.5.1D.1 results in a change in the quantity scheduled in the *market schedule* for that *registered facility* as described in the applicable *market manual*;

3.5.1D.3 the change in *energy bid* as referred to in section 3.5.1D.1 results in the ramping of the that *registered facility* as described in the applicable *market manual*; and

3.5.1D.4 that *registered facility's* DQSW is less than the corresponding MQSW at that locaton for any *metering interval* falling within *settlement hour* 'h'.

3.5.1E For the purpose of calculating congestion management *settlement* credits for *variable generators* that are *registered market participants*:

3.5.1E.1 if the *registered facility* is required to follow *dispatch instructions* issued by the *IESO* for any given *dispatch intervals*, the corresponding congestion management *settlement* credits for those *dispatch intervals* shall be calculated using the *market schedule* quantity determined in accordance with section 6.4.2.9A of Chapter 7; and

3.5.1E.2 the *market participant* shall not be eligible for congestion management *settlement* credits in *dispatch intervals* where the *registered facility* is not required to follow *dispatch instructions* issued by the *IESO*.

3.5.2 Subject to sections 3.5.1A, 3.5.1D, 3.5.1E, 3.5.6, 3.5.6A, 3.5.6B, 3.5.6C, 3.5.6D and 3.5.9 and subject to Appendix 7.6 of Chapter 7, the hourly congestion *management settlement credit* for *market participant* 'k' for *settlement hour* 'h' ("$CMSC_{k,h}$") shall be determined by the following equation:

Chapter 11

1. Definitions

release notification means in respect of a *variable generator* that is a *registered market participant*, a notification issued by the *IESO* providing that *energy* may be supplied from the *variable generation facility* to the *IESO-controlled grid* as ambient fuel conditions allow until a *dispatch instruction* is sent;

PART 5 – IESO BOARD DECISION RATIONALE

As part of the renewable integration design, this amendment is a component of the IESO's ability to actively dispatch all variable generators that are registered market participants through the five-minute security constrained economic dispatch, which is an essential tool for the IESO to maintain system reliability and market efficiency.

Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00381			
Subject:	Renewable Integration Initiative			
Title:	Tie Breaking for Variable Generation			
Nature of Proposal:	☒ Alteration	☐ Deletion	☒ Addition	
Chapter:		Appendix:	7.5	
Sections:	Appendix 7.5, sections 2.4.5, 2.4.6 (new), 2.8.1, 2.8.4 (new), 2.8.5 (new)			
Sub-sections proposed for amending:				

PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Draft for Technical Panel review	August 14, 2012
2.0	Publish for Stakeholder Review and Comment	August 23, 2012
3.0	Submitted for Technical Panel Vote	September 21, 2012
4.0	Recommended by Technical Panel; Submitted for IESO Board Approval	October 16, 2012
5.0	Approved by IESO Board	November 29, 2012

Approved Amendment Publication Date:	January 3, 2013
Approved Amendment Effective Date:	The effective date is anticipated to be in the third/fourth quarter of 2013, and shall be specified by the Chief Executive Officer of the IESO in a notice to all market participants.

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-administered markets* if the amendment is not made.
- Alternative solutions considered.
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IESO-administered markets*.

Summary

This amendment submission proposes to obligate the IESO to apply a uniform penalty factor and to randomly determine a daily dispatch order for variable generators that are registered market participants. In addition, the IESO will be required to regularly update and publish this daily dispatch order report.

This proposal is based on stakeholder consultation as part of SE-91 Renewable Integration which includes the Dispatch Technical Working Group (DTWG) and the Floor Price Focus Group (FPFG).

Further information on SE-91 can be found on the IESO's website at:

http://www.ieso.ca/imoweb/consult/consult_se91.asp

Background

As part of the renewable integration design, the IESO will actively dispatch all variable generation[1] directly connected to the IESO-controlled grid and those embedded variable resources that are registered market participants through the five-minute security constrained economic dispatch.

As part of MR-00381-R03: Floor Prices for Variable and Nuclear Generation, the IESO is proposing to establish floor prices for variable generators that are registered market participants. In the absence of transmission constraints, given the proposal to implement a uniform floor price for all variable generators, if all variable generators were to offer at the floor price the existing tie breaking methodology would dispatch them in the same order every time based on their loss penalty factors[2].

In consultation with stakeholders through the DTWG/SE-91, the IESO's intent is to achieve a more equitable solution regarding the dispatch order for variable generators over the long-term via the following mechanism:

- Set all variable generator loss penalty factors at a uniform number (e.g. 1.00 for all variable generators);
- In order to address operational concerns caused by setting a uniform loss penalty factor (for example if a large number of generators each receive a dispatch within their compliance

[1] Market Rules, Chapter 11 Definition: *variable generation* means all wind and solar photovoltaic resources with an installed capacity of 5MW or greater, or all wind and solar photovoltaic resources that are directly connected to the *IESO-controlled grid.*

[2] Loss penalty factors are the determining factor in tie breaking, and are assigned to each generator and published on the IESO website. Effective Cost = Offer Price x Loss Penalty Factor

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

deadbands), it is proposed to:

- Obligate the IESO to randomly generate a daily dispatch order for a specified period (e.g. the daily report will detail the dispatch order for the upcoming 3 calendar months);
- This 3-month dispatch order will be updated regularly (e.g. on a monthly basis);
- The randomly generated dispatch order report will be published on the IESO website.

Discussion

Uniform Penalty Factor for Variable Generation

The following changes are proposed in Appendix 7.5, sections 2.4.5 and 2.4.6 (new) to specify that:

- 2.4.6 (new): The IESO shall apply a uniform penalty factor to variable generators that are registered market participants. As a result, in the absence of any transmission constraints, all variable generators will proportionately share the dispatch requirement. Operational concerns related to this result are addressed by the randomly determined dispatch order below.
- 2.4.5: A cross reference to section 2.4.6 (new) is proposed in this section as a consequence of the addition above.

Tie Breaking

The following change is proposed in Appendix 7.5 to specify that:

- 2.8.4 (new): The IESO shall randomly determine a daily dispatch order for variable generators that are registered market participants, and shall regularly update and publish such daily dispatch order in accordance with the applicable market manual (Market Manual 4.3: Real-Time Scheduling of the Physical Markets). The market manual will detail the process, time horizon of the report (e.g. a 3 month time horizon), and the frequency that the report will be updated (e.g. every network model build which typically occurs monthly). New months will be appended to the existing list, and new generators will be placed at the bottom of the order until a new month is published. The new daily order will take effect for HE16 (to coincide with the first run of pre-dispatch), and will apply to the Day-Ahead Commitment Process (DACP), pre-dispatch and real-time schedules.

- 2.8.1: A cross reference to section 2.8.4 (new) is proposed in this section to specify that the tie-breaking mechanism for variable generators will be modified from that of other generators.
- 2.8.5 (new): For variable generators that are registered market participants, if two or more energy offers have the same offer price resulting in no differences in the cost to the IESO-administered market of utilizing any of the offers, the IESO will break the tie by using the daily dispatch order determined in accordance with section 2.8.4.

PART 4 – PROPOSED AMENDMENT

Appendix 7.5 – The Market Clearing and Pricing Process

2.4 The IESO-Controlled Grid

2.4.1 The *dispatch* scheduling and pricing process shall represent power flow relationships between locations on the *IESO-controlled grid* and between the *IESO control area* and adjoining *control areas*.

2.4.2 The *dispatch* scheduling and pricing process shall utilise a security-constrained optimal power flow with explicit representation of electrical flows on each transmission element.

2.4.3 Limits on transmission flows in either direction of flow shall be explicitly represented.

2.4.4 Security constraints may limit *generation facility* output and *dispatchable load* or any other variable so as to represent the *security limits* applicable to the *IESO-controlled grid*.

2.4.5 Subject to section 2.4.6, t~~T~~he *IESO* shall estimate static transmission losses and model transmission losses using penalty factors. The *IESO* shall adjust *bid* and *offer* prices using the applicable penalty factor. The *IESO* shall notify *market participants* in a timely manner of any changes to the applicable penalty factors.

2.4.6 The *IESO* shall apply a uniform penalty factor to *variable generators* that are *registered market participants*.

2.8 Tie-Breaking

2.8.1 Except as otherwise noted in section 2.8.5, i~~I~~f two or more *energy offers* have the same *offer* price and interactions with the *operating reserve market* do not create differences in the cost to the market of utilising each *offer*, the schedules from these *offers* shall be prorated based on an adjusted amount of *energy offered* at that *offer price*. The adjustment shall reflect the current capability of the *facility* by including any current limitations on the *facility* e.g. ramping, deratings.

2.8.2 If two or more *energy bids* have the same *bid* price and interactions with the *operating reserve market* do not create differences in the cost to the market as a whole of utilising each *bid*, the schedules from these *bids* shall be prorated based on an adjusted amount of *energy bid* at that *bid* price. The adjustment shall reflect

the current capability of the *facility* by including any current limitations on the *facility* e.g. ramping, deratings.

2.8.3 If two or more *offers* for a given class of *operating reserve* have the same *offer* price and provided that interactions with the *energy* market and markets for other classes of *operating reserve* do not create differences in the cost to the market as a whole of utilising each *offer*, then the schedules from these *offers* shall be prorated based on an adjusted amount of *operating reserve offered* at that *offer* price. The adjustment shall reflect the current capability of the *facility* by including any current limitations on the *facility* e.g. ramping, deratings.

2.8.4 The *IESO* shall randomly determine a daily *dispatch* order for *variable generators* that are *registered market participants*, and shall regularly update and publish such daily *dispatch* order in accordance with the applicable *market manual*.

2.8.5 For *variable generators* that are *registered market participants*, if two or more *energy offers* have the same *offer* price resulting in no differences in the cost to the *IESO-administered market* of utilising any of the *offers*, the schedules for these *offers* shall be determined utilising the daily dispatch order determined in accordance with section 2.8.4.

PART 5 – IESO BOARD DECISION RATIONALE

As part of the renewable integration design, this amendment is a component of the IESO's ability to actively dispatch all variable generators that are registered market participants through the five-minute security constrained economic dispatch, which is an essential tool for the IESO to maintain system reliability and market efficiency.

Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00381			
Subject:	Renewable Integration Initiative			
Title:	Publication Requirements: 5-Minute Forecast for Variable Generation			
Nature of Proposal:	☐ Alteration	☐ Deletion	☒ Addition	
Chapter:	4	Appendix:		
Sections:	7.3.6 (new)			
Sub-sections proposed for amending:				

PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Draft for Technical Panel review	August 14, 2012
2.0	Publish for Stakeholder Review and Comment	August 23, 2012
3.0	Submitted for Technical Panel Vote	September 21, 2012
4.0	Recommended by Technical Panel; Submitted for IESO Board Approval	October 16, 2012
5.0	Approved by IESO Board	November 29, 2012

Approved Amendment Publication Date:	January 3, 2013
Approved Amendment Effective Date:	The effective date is anticipated to be in the third/fourth quarter of 2013, and shall be specified by the Chief Executive Officer of the IESO in a notice to all market participants.

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-administered markets* if the amendment is not made.
- Alternative solutions considered.
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IESO-administered markets*.

Summary

This amendment submission proposes to obligate the IESO to provide a confidential, 5-minute forecast for all intervals of the previous dispatch hour to each registered market participant operating variable generation facilities directly connected to the IESO-controlled grid and those embedded variable resources that are registered market participants, following each dispatch hour.

This proposal is based on stakeholder consultation as part of SE-91 Renewable Integration which includes the Dispatch Technical Working Group (DTWG) and the Floor Price Focus Group (FPFG).

Further information on SE-91 can be found on the IESO's website at:

http://www.ieso.ca/imoweb/consult/consult_se91.asp

Background

As part of the renewable integration design, the IESO will actively dispatch all variable generation[1] directly connected to the IESO-controlled grid and those embedded variable resources that are registered market participants through the five-minute security constrained economic dispatch.

The IESO's forecasting vendor will provide the IESO with a 5-minute energy forecast for all variable generators that are registered market participants. This forecast will be updated on a 5-minute basis and will contain forecasts for the end of each 5-minute interval. The 5-minute forecast will be used as an input to real-time dispatch, the market schedule and to calculate congestion management settlement credits (CMSC) for variable generators.

The IESO proposes to make the new 5-minute forecast report privately available for all variable generators that are registered market participants.

Each report will:

- Contain the forecast for all 12 intervals of the previous dispatch hour;
- Be published at the end of the hour.

Forecasts will be:

- Confidential to the market participant;

[1] Market Rules, Chapter 11 Definition: *variable generation* means all wind and solar photovoltaic resources with an installed capacity of 5MW or greater, or all wind and solar photovoltaic resources that are directly connected to the *IESO-controlled grid.*

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

- Made available with the other private reports;
- Provided for informational purposes only.

Discussion

The IESO proposes to amend Chapter 4, section 7.3.6 (new) to obligate the IESO to provide a confidential, 5-minute forecast to each registered market participant operating variable generation facilities subject to 5-minute dispatch. The forecast relates to the production capability level at the end of the interval to align with our current market scheduling process. The report will be available after the dispatch hour and will contain all 12 intervals of the previous dispatch hour. Details on the report will be outlined in the applicable market manual (Market Manual 4.3: Real-Time Scheduling of the Physical Markets).

PART 4 – PROPOSED AMENDMENT

Chapter 4

7.3 Monitoring Information Provided by Generators to the IESO

7.3.1 Subject to section 7.3.2, in order to permit the *IESO* to direct the operations of the *IESO-controlled grid*, each:

7.3.1.1 *generator* (i) whose *generation facility* is *connected* to the *IESO-controlled grid*, or (ii) that is participating in the *IESO-administered markets*; and

7.3.1.2 *embedded generator* (i) that is not a *market participant* or whose *embedded generation facility* is not a *registered facility*; (ii) whose *embedded generation facility* includes a *generation unit* rated at greater than 20 MVA or that comprises *generation units* the ratings of which in the aggregate exceeds 20 MVA; and (iii) that is designated by the *IESO* for the purposes of this section 7.3.1 as being required to provide such data in order to enable the *IESO* to maintain the *reliability* of the *IESO-controlled grid*,

shall provide the *IESO* with the data listed in Appendix 4.15 on a continual basis. Such data shall not be modified by the *generator* and shall be provided:

7.3.1.3 with equipment that meets the requirements set forth in Appendix 2.2 of Chapter 2; and

7.3.1.4 subject to section 7.6A, in accordance with the performance standards set forth in Appendix 4.19.

7.3.2 Section 7.3.1 does not apply to:

7.3.2.1 a *small generation facility*;

7.3.2.2 a *self-scheduling generation facility* that has a name-plate rating of less than 10 MW; or

7.3.2.3 an *intermittent generator* or *a transitional scheduling generator* that is comprised solely of a *generation unit* rated at less than 20 MW or of *generation units* the ratings of which in the aggregate is less than 20 MW unless designated by the *IESO* at the time of registration as affecting the *reliability* of the *IESO-controlled grid*.

7.3.2A Each *variable generator* not otherwise subject to any communication requirements specified in this chapter shall at a minimum, meet the medium performance standards set forth in Appendix 4.19 for the purposes of providing data in accordance with section 7.1.6.

7.3.3 [Intentionally left blank – section deleted]

7.3.4 The *IESO* shall *publish*, as soon as practicable following each *dispatch hour*, the actual *generation capacity* (in MW) and hourly *energy* production (in MWh) for each *generation unit* based on information provided to it by *market participants*. *Generation capacity* and *energy* production for *generation units* with rating less than 20 MVA can be aggregated by station.

NOTE: Proposed section 7.3.5 is part of MR-00381-R01 Centralized Forecasting Publication, and was approved by the IESO Board on September 7, 2012.

7.3.6 The *IESO* shall, as soon as practicable following each *dispatch hour*, provide the confidential forecast produced by the *forecasting entity* for each *dispatch interval* in the preceding *dispatch hour*, to each *registered market participant* for each of their *variable generation facilities* as specified in the applicable *market manual*.

PART 5 – IESO BOARD DECISION RATIONALE

As part of the renewable integration design, this amendment is a component of the IESO's ability to actively dispatch all variable generators that are registered market participants through the five-minute security constrained economic dispatch, which is an essential tool for the IESO to maintain system reliability and market efficiency.

SCHEDULE B

Please see attached

Français

Ontario Energy Board Act, 1998

S.O. 1998, CHAPTER 15
Schedule B

Consolidation Period: From December 31, 2012 to the e-Laws currency date.

Last amendment: See Table of Public Statute Provisions Repealed Under Section 10.1 of the *Legislation Act, 2006* – December 31, 2011.

PART I
GENERAL

Board objectives, electricity

1. (1) The Board, in carrying out its responsibilities under this or any other Act in relation to electricity, shall be guided by the following objectives:

1. To protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service.
2. To promote economic efficiency and cost effectiveness in the generation, transmission, distribution, sale and demand management of electricity and to facilitate the maintenance of a financially viable electricity industry.
3. To promote electricity conservation and demand management in a manner consistent with the policies of the Government of Ontario, including having regard to the consumer's economic circumstances.
4. To facilitate the implementation of a smart grid in Ontario.
5. To promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities. 2004, c. 23, Sched. B, s. 1; 2009, c. 12, Sched. D, s. 1.

Facilitation of integrated power system plans

(2) In exercising its powers and performing its duties under this or any other Act in relation to electricity, the Board shall facilitate the implementation of all integrated power system plans approved under the *Electricity Act, 1998*. 2004, c. 23, Sched. B, s. 1.

Board objectives, gas

2. The Board, in carrying out its responsibilities under this or any other Act in relation to gas, shall be guided by the following objectives:

1. To facilitate competition in the sale of gas to users.
2. To protect the interests of consumers with respect to prices and the reliability and quality of gas service.
3. To facilitate rational expansion of transmission and distribution systems.
4. To facilitate rational development and safe operation of gas storage.
5. To promote energy conservation and energy efficiency in accordance with the policies of the Government of Ontario, including having regard to the consumer's economic circumstances.

5.1 To facilitate the maintenance of a financially viable gas industry for the transmission, distribution and storage of gas.

6. To promote communication within the gas industry and the education of consumers. 1998, c. 15, Sched. B, s. 2; 2002, c. 23, s. 4 (2); 2003, c. 3, s. 3; 2004, c. 23, Sched. B, s. 2; 2009, c. 12, Sched. D, s. 2.

Definitions

3. In this Act,

SCHEDULE C

Please see attached

Ontario Energy Board

Commission de l'énergie de l'Ontario

Ontario

EB-2012-0082

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

AND IN THE MATTER OF an application by Hydro One Networks Inc. for an Order granting leave to construct to upgrade existing transmission line facilities.

PROCEDURAL ORDER NO. 2
June 15, 2012

Hydro One Networks Inc. ("Hydro One") filed an application with the Ontario Energy Board dated March 28, 2012 under section 92 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B. Hydro One applied for an order of the Board granting leave to construct to upgrade 70 km of transmission line facilities between Lambton TS and Longwood TS (the "Project") in the west of London area.

Background

The Board issued a Notice of Application and Written Hearing on April 19, 2012.

In Procedural Order No. 1 intervenor status was granted to the Independent Electricity System Operator and to the Ontario Power Authority. The Power Workers' Union ("PWU"), Chippewas of the Thames First Nation ("COTTFN") and Dan Boyington and Amanda Hoof were granted observer status. The Board also established dates for submission of interrogatories and responses and argument.

By way of letter dated June 13, 2012 COTTFN formally requested intervenor status and cost eligibility and proposed a revised schedule for the proceeding. COTTFN indicates that it has an interest in all aspects of this proceeding. It seeks to intervene on two issues: (1) whether the proposed upgrades to the 70 km of transmission line facilities between the Lambton and Longwood Transformer Stations are in the public interest;

and (2) whether the Ontario Crown has discharged its duty to consult and, where required, accommodate COTTFN in respect of the proposed Project.

The Board has determined that COTTFN will be granted intervenor status subject to Hydro One's right of reply within 5 days of the date of this procedural order. Cost eligibility will also be granted to COTTFN but will be restricted to matters directly within the scope of this proceeding. As discussed below, the Board's jurisdiction with respect to the second issue raised by COTTFN is very limited.

Further information on activities that are eligible for an award of costs is outlined in the Board's *Practice Direction on Cost Awards* on the Board's website. Please note that cost claims are to be filed at the end of this proceeding unless the Board specifies otherwise. Cost claims will be subject to the Hydro One's right to object.

A revised list of intervenors is attached as Appendix A to this Procedural Order.

The Board's Jurisdiction in a Section 92 Leave to Construct Application

The Board's jurisdiction to consider issues in a section 92 leave to construct case is limited by section 96(2) of the OEB Act which states:

> (2) In an application under section 92, the Board shall only consider the following when, under subsection (1), it considers whether the construction, expansion or reinforcement of the electricity transmission line or electricity distribution line, or the making of the interconnection, is in the public interest:
>
> 1. The interests of consumers with respect to prices and the reliability and quality of electricity service.
> 2. Where applicable and in a manner consistent with the policies of the Government of Ontario, the promotion of the use of renewable energy sources. 2009, c. 12, Sched. D, s. 16.

The Board does not have the jurisdiction to consider any issues other than those identified in section 96(2). The Board notes that as a general matter, the following issues are not within the scope of a section 92 leave to construct application: environmental issues, any issues relating to the sources of renewable energy, the Ontario Power Authority's feed in tariff program, nor social policy issues. While the Government's policies in respect of renewable energy form part of the criteria in section

96(2), the Board does not have the power to enquire into the appropriateness of that policy.

The Board has in prior decisions addressed the extent of the Board's jurisdiction to consider the issue of the adequacy of Aboriginal consultation. For example, in a case involving Yellow Falls Power Limited Partnership, the Board found:

> It is a well-established principle of administrative law that administrative tribunals have only the powers bestowed upon them explicitly by their enabling statutes, or those which arise by necessary implication. This principle has been applied by supervising courts in numerous cases so as to prevent creeping, unintended jurisdiction in such tribunals. An exception to that principle has been introduced by the Supreme Court with respect to constitutional and constitution-like issues. Specifically, the Supreme Court of Canada has decided that tribunals that have been endowed with the express power to determine questions of law, have a residual or presumed jurisdiction to resolve constitutional issues that come before them in the normal course of their work.
>
> The issue here is the extent to which the Legislature has endowed the Board with the power to determine questions of law with respect to leave to construct applications. Because the Board's power to determine questions of law is specifically limited in section 19 to areas within its jurisdiction, the Board finds that it has no authority to determine constitutional issues, such as the adequacy of consultation with Aboriginals, in relation to any matters beyond the criteria in section 96(2). This is consistent with case law referenced above[1].

In that decision, the Board went on to describe the relevant scope for issues related to Aboriginal consultation and accommodation:

> Finally, in the Board's view, if it does have any jurisdiction at all to consider matters relating to the adequacy of consultation with Aboriginal peoples, section 96(2) operates to expressly constrain the Board's discretion, and limits its jurisdiction to the determination of matters of law arising exclusively in connection with the prescribed criteria, namely price, quality, reliability, and the government's

[1] Yellow Falls Power Limited Partnership, *Decision on Questions of Jurisdiction and Procedural Order 4*, EB-2009-0210, November 18, 2009. See also, Northgate Minerals, *Procedural Order 2*, EB-2010-0150, July 29, 2010.

...

SCHEDULE D

Please see attached

Ontario Energy Board

Commission de l'énergie de l'Ontario

Ontario

EB-2011-0394

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

AND IN THE MATTER OF an application by McLean's Mountain Wind LP for an Order granting leave to construct a new transmission line and associated facilities.

PROCEDURAL ORDER NO. 1

McLean's Mountain Wind LP ("the "Applicant" or "McLean") has filed an application with the Ontario Energy Board (the "Board") dated November 22, 2011 under section 92 of the *Ontario Energy Board Act*, *1998*, S.O. 1998, c.15, Schedule B ("the Act"). McLean is seeking an order of the Board granting leave to construct a transmission line and associated facilities (the "Project") to connect the McLean Mountain Wind Farm to the IESO-controlled Grid. McLean also seeks an order approving the form of easement agreement provided in the application. The Board has assigned File No. EB-2011-0394 to the application.

Notice of Application.

The Board issued a Notice of Application and Hearing on December 9, 2011. McLean has served and published the Notice as directed by the Board.

By way of a letter received January 17, 2012 (Attachment 1), Hydro One Networks Inc. ("Hydro One") advised the Board of an error in the Notice. The Notice identified that the switchyard (connecting the proponent's transmission facilities to the Hydro One transmission line) will be owned and operated by Hydro One whereas it will in fact be owned and operated by the Applicant.

...

Scope of the Board's Jurisdiction in a Section 92 Leave to Construct Application

The Board's jurisdiction to consider issues in a section 92 leave to construct case is limited by subsection 96(2) of the OEB Act which states:

> (2) In an application under section 92, the Board shall only consider the following when, under subsection (1), it considers whether the construction, expansion or reinforcement of the electricity transmission line or electricity distribution line, or the making of the interconnection, is in the public interest:
>
> 1. The interests of consumers with respect to prices and the reliability and quality of electricity service.
> 2. Where applicable and in a manner consistent with the policies of the Government of Ontario, the promotion of the use of renewable energy sources. 2009, c. 12, Sched. D, s. 16.

The Board does not have the power to consider any issues other than those identified in subsection 96(2). Parties requesting intervenor status have indicated a broad range of interests in this proceeding. The Board notes that as a general matter, the following issues are not within the scope of a section 92 leave to construct application: environmental issues, any issues relating to the wind farm itself, the Ontario Power Authority's feed in tariff program, and social policy issues. And while the Government's policies in respect of renewable energy form part of the criteria in section 96(2), the Board does not have the power to enquire into the appropriateness of that policy. The Board has further held in previous proceedings that it is not empowered to consider issues relating to the Crown's duty to consult with Aboriginal peoples in a section 92 leave to construct application.[1] Parties are reminded that any interrogatories and submissions to the Board must relate to the issues identified in subsection 96(2). Furthermore, the Board will not award costs in this proceeding for time spent on matters which are outside the scope of this proceeding.

The Board does not have the jurisdiction to determine issues related to environmental and social concerns outside of the scope of section 96(2), and it is important to note that the Project is subject to a separate Renewable Energy Approval ("REA") process. Generally speaking, environmental issues are considered in that process, and parties with an interest in these issues are encouraged to participate in the REA process if they

---

[1] Yellow Falls Power Limited Partnership, *Decision on Questions of Jurisdiction and Procedural Order 4*, EB-2009-0210, November 18, 2009. See also, Northgate Minerals, *Procedural Order 2*, EB-2010-0150, July 29, 2010.

SCHEDULE E

Please see attached

Ontario Energy Board

Commission de l'énergie de l'Ontario

Ontario

EB-2008-0272

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. under section 78 of the *Ontario Energy Board Act, 1998*, seeking changes to the uniform provincial transmission rates.

BEFORE: Cynthia Chaplin
Presiding Member

Paul Vlahos
Member

Ken Quesnelle
Member

DECISION WITH REASONS

DECEMBER 16, 2009.

...

1. Whether Hydro One has provided adequate economic analysis in support of the projects and;
2. Whether the projects are required in the test year.

The Board's decision to allow for supplemental evidence on certain Network capital projects has provided Hydro One with an opportunity to file evidence framed within the regulatory construct created by the GEA. The filing of supplemental evidence also afforded Hydro One the opportunity to provide a more focused and comprehensive evidentiary basis for the specific projects. The compiling of supporting information that was originally filed as either pre-filed evidence, responses to interrogatories or in undertakings filed by Hydro One in the main hearing, has resulted in a more cogent rationale for the projects.

The new regulatory construct created by the GEA includes an obligation of the Board to, where applicable, promote the use of generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities.

Hydro One argues that the Board's new objective pertaining to the promotion of renewable energy has not been acknowledged by Board Staff and those intervenors who submit that the Board's Minimum Filing Requirements have not been met. It further argues that the proposed projects are required in the time frame stipulated to ensure that they are in place and available to enable the cited generation facilities and also potential FIT program projects being contracted for by the OPA in the area.

Board Staff, AMPCO, VECC and SEC claim that, according to the Minimum Filing Guidelines, the projects are not connection facilities and therefore, by definition, are discretionary projects requiring full supporting economic analysis. Board staff provided examples of the evaluations done for other projects, including a financial analysis of the congestion relief associated with the project D5, and alleviation of bottled energy for the Bruce-Milton project. These claims are disputed by Hydro One on the grounds that the projects are necessitated by Ministerial Directives and therefore they are non-discretionary. Hydro One claims that the type of analysis suggested by Board Staff and VECC would be of little value if any to the Board in making the determinations that are required in this case.

In the Board's view, the claims and counter claims of the parties regarding the characterisation of the projects as discretionary or non-discretionary are not determinative of the matter in this particular case. Irrespective of the manner in which the filing guidelines shape the application, the Board must decide whether or not the economic analysis provided in support of the projects demonstrates that the spending that is subject to Board review and approval is prudent.

On December 20, 2007 the Minister of Energy exercised the statutory power of Ministerial direction pursuant to section 25.32 of the Electricity Act, 1998. The Directive entailed the OPA making reasonable efforts to complete negotiations and execute financial energy supply agreements with OPG for the projects known as Lac Seul, Upper Mattagami, Healy Falls, Lower Mattagami and Hound Chute.

The evidence is clear that the Ministerial Directive to the OPA to procure renewable generation at these specific locations gave rise to the transmission system enhancements proposed by Hydro One. It is clear to the Board that the Ministerial Directive is intended to facilitate a policy initiative of the Government of Ontario and therefore these projects are to be considered in the context of the Board's new objective regarding the promotion of renewable energy sources.

The Board's obligation to promote renewable energy sources is a determinative factor in the establishment of the parameters of the economic analysis it will rely on to test the prudency of the applicant's proposals. The generation facilities will exist at prescribed locations as a result of Minister's Directive. Due to the site specificity of the renewable energy generation facilities in this application, analysis of congestion relief would essentially be an examination of the economics of the generation facility location. The Board does not intend to examine the economics of the project sites contained in the Minister's Directive. The Board does not require economic analysis of the generation locations to test the applicant's proposal to enable the generation against other alternatives that could also enable the generation.

In this application the Minister's Directives drive site specific generation projects and in turn affects discrete elements of the transmission system. Hydro One claims that the generation facilities necessitate a transmission system enhancement to render them fully operable and that the projects put forward are the most suitable of the project alternatives from both an economic and timeliness perspective.

SCHEDULE F

Please see attached

Ontario Energy Board

Commission de l'énergie de l'Ontario

Ontario

EB-2007-0040

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

AND IN THE MATTER OF an Application by the Association of Major Power Consumers in Ontario under section 33 of the *Electricity Act, 1998* for an Order revoking an amendment to the market rules and referring the amendment back to the Independent Electricity System Operator for further consideration, and for an Order staying the operation of the amendment to the market rules pending completion of the Board's review.

DECISION AND ORDER

BEFORE: Gordon Kaiser
Presiding Member and Vice Chair

Pamela Nowina
Member and Vice Chair

Bill Rupert
Member

The Application

On February 9, 2007, the Association of Major Power Consumers in Ontario ("AMPCO") filed with the Ontario Energy Board (the "Board") an Application under section 33(4) of the *Electricity Act, 1998* (the "Act") seeking the review of an amendment to the market rules approved by the Independent Electricity System Operator (the "IESO") on January 17, 2007. The Board has assigned file number EB-2007-0040 to the Application.

...

The Board's Mandate

The "relevance issue", as it has been referred to in this proceeding, arose initially in relation to the DAM/DACP Materials. As stated in Procedural Order No. 4, the issue is relevance of materials – and hence of the position or argument that the materials support – relative to the criteria set out in section 33(9) of the Act. This issue, of necessity, requires consideration of the scope of the Board's mandate on applications to review amendments to the market rules under section 33 of the Act.

As the proceeding progressed, it became clearer that AMPCO's views as to the scope of the Board's mandate differs markedly from the views of other parties. A number of the concerns raised by AMPCO regarding the Amendment relate not to the impact or effect of the Amendment, but rather to the process by which the Amendment was made by the IESO. Many of the materials filed by the IESO in response to the Board's Procedural Orders are relevant to those concerns, but have little or no relevance to the issue of the impact or effect of the Amendment.

The position of the parties in relation to the scope of the Board's mandate, as expressed in the written submissions filed in response to Procedural Order No. 4 and/or in oral submissions made at the commencement of the oral hearing, may be summarized as follows.

AMPCO's position is that the Board's mandate is not limited to the grounds set out in section 33(9) of the Act. Rather, the Board has a "plenary review jurisdiction" that would allow the Board to address what AMPCO alleges as significant failures of procedural fairness by the IESO. In support of its position, AMPCO referred to and relied on sections 33(4), 33(5) and 33(6) of the Act, on section 19(4) of the *Ontario Energy Board Act, 1998*, on the Board's authority to determine all questions of law and fact in all matters within the Board's jurisdiction, and on the Board's public interest role. On that basis, in AMPCO's view the criteria expressed in section 33(9) of the Act are better understood as the two instances in which the legislature has directed the Board on how it must exercise its review discretion, leaving the Board otherwise able to exercise its review discretion as the Board sees fit.

By contrast, the position of the IESO, APPrO, Coral, OPG and TransCanada is that the Board's mandate is limited by section 33(9) of the Act to a determination of whether (a) the amendment is inconsistent with the purposes of the Act; or (b) the amendment unjustly discriminates against or in favour of a market participant or a class of market

...

market review amendment should be aimed at economic efficiency and not natural justice.

They say that the OEB should be reviewing an amendment to the IESO rules and not the IESO stakeholdering process; that the scope of the Board's review should be aimed at the rule itself, and the impact of that rule, not the process by which the amendment was made.

In other words, it's argued before us that the issue is whether the rule is unjustly discriminatory. The Board agrees with that position.

Sections 19(1) and 20 of the *OEB Act*, read together, provide that the Board has general authority to determine any question of law or fact arising in any matter before it except where that authority is limited by statutory provision to the contrary.

In the case of a market rule amendment, another statutory provision does limit the Board's jurisdiction. Section 33(9) of the *Electricity Act* specifically sets out certain grounds on which the Board may make an order.

Accordingly, we find that section 33(9) of the *Electricity Act* is a jurisdiction-limiting provision, not another jurisdiction-granting provision. That is, with respect to a market rule amendment, the Board's jurisdiction is not as broad as suggested by section 20 of the *OEB Act*, but limited by section 33(9) of the *Electricity Act*.

In this regard, the Board has also considered the submissions of various parties, and agrees, that the 60-day

SCHEDULE G

Please see attached

Français

Electricity Act, 1998

S.O. 1998, CHAPTER 15
Schedule A

Consolidation Period: From December 31, 2012 to the e-Laws currency date.

Last amendment: See Table of Public Statute Provisions Repealed Under Section 10.1 of the *Legislation Act, 2006* – December 31, 2012.

PART I
GENERAL

Purposes

1. The purposes of this Act are,

(a) to ensure the adequacy, safety, sustainability and reliability of electricity supply in Ontario through responsible planning and management of electricity resources, supply and demand;

(b) to encourage electricity conservation and the efficient use of electricity in a manner consistent with the policies of the Government of Ontario;

(c) to facilitate load management in a manner consistent with the policies of the Government of Ontario;

(d) to promote the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources, in a manner consistent with the policies of the Government of Ontario;

(e) to provide generators, retailers and consumers with non-discriminatory access to transmission and distribution systems in Ontario;

(f) to protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service;

(g) to promote economic efficiency and sustainability in the generation, transmission, distribution and sale of electricity;

(h) to ensure that Ontario Hydro's debt is repaid in a prudent manner and that the burden of debt repayment is fairly distributed;

(i) to facilitate the maintenance of a financially viable electricity industry; and

(j) to protect corridor land so that it remains available for uses that benefit the public, while recognizing the primacy of transmission uses. 2004, c. 23, Sched. A, s. 1.

Interpretation

2. (1) In this Act,

"affiliate", with respect to a corporation, has the same meaning as in the *Business Corporations Act*; ("membre du même groupe")

"alternative energy source" means a source of energy,

(a) that is prescribed by the regulations or that satisfies criteria prescribed by the regulations, and

(b) that can be used to generate electricity through a process that is cleaner than certain other generation technologies in use in Ontario before June 1, 2004; ("source d'énergie de remplacement")

"ancillary services" means services necessary to maintain the reliability of the IESO-controlled grid, including frequency control, voltage control, reactive power and operating reserve services; ("services accessoires")

"Board" means the Ontario Energy Board; ("Commission")

SCHEDULE H

Please see attached

Archived Release

McGuinty government to increase supply of renewable energy

April 28, 2004 12:00 am | Ministry of Energy

Initiative Seeks Additional 300 Megawatts Of Clean Power Sources QUEEN'S PARK, April 28 - The McGuinty government is taking another step towards meeting its renewable energy targets by opening the door to a significant increase in the amount of clean power sources in Ontario - such as wind, solar, water, biomass and landfill gas, Energy Minister Dwight Duncan announced today. "A sustainable and diverse electricity sector is key to building a strong and prosperous economy and providing a quality of life that is second to none," Duncan said. "Renewable sources of generation, together with the emergence of a strong conservation culture, will help us clean up our air and replace coal-fired generation in Ontario." A Request for Proposal (RFP) has been initiated seeking an additional 300 megawatts (MW) of new, renewable electricity capacity for Ontario. This will help the government meet its targets of generating 5 per cent (1,350 MW) of Ontario's total energy capacity from renewable sources by 2007, and 10 per cent (2,700 MW) by 2010. Proponents interested in bidding on the RFP will have until July 30th to review and submit their final proposals. It is expected that successful proponents could be announced as early as November 2004. "The release of this RFP demonstrates that the McGuinty government is serious about meeting the renewable energy targets we have set," Duncan said. "It is a significant and historic first step in what will be a very important part of our energy future. We are sending a clear signal that we want participants in the market interested in clean, renewable electricity to come to the table to help us meet our supply needs." "We'll be selecting projects in an open and transparent way - one we're sure will foster innovation and creative approaches - in order to deliver the best outcome for electricity consumers in Ontario," Duncan said. More information on the RFP can be found by visiting

www.ontarioelectricityrfp.ca. Disponible en français.
www.energy.gov.on.caFor further information: Contacts: Angie Robson, Minister's Office, (416) 327-6747; Ted Gruetzner, Communications Branch, (416) 327-4334

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SCHEDULE I

Please see attached

Ontario

MINISTRY OF ENERGY

by its agent Ontario Shared Services

REQUEST FOR PROPOSALS

FOR UP TO 1,000 MW OF RENEWABLE ENERGY SUPPLY FROM RENEWABLE GENERATING FACILITIES WITH A CONTRACT CAPACITY OF BETWEEN 20.0 MW AND 200.0 MW, INCLUSIVE

Request for Proposal No.: SSB-071540

Issued: June 17, 2005

Proposal Submission Deadline: August 31, 2005 at 3:00:00 p.m. (EDT)

2.0 DESCRIPTION OF DELIVERABLES

2.1 BACKGROUND

The Government of Ontario is committed to making electricity from renewable sources an important part of Ontario's energy future. The Government of Ontario has set targets of having 1,350 MW of renewable generating capacity to be in service by the year 2007, and 2,700 MW to be in service by the year 2010. As a first step towards achieving these targets, the Government of Ontario issued the 300 MW Renewables RFP, and on November 24, 2004, the Government of Ontario announced the suppliers that had been awarded RES Contracts pursuant to the 300 MW Renewables RFP. Together, these suppliers represent facilities with an aggregate capacity of approximately 395 MW.

This Renewables II RFP solicits proposals for additional renewable energy supply from up to 1,000 MW of Renewable Generating Facilities to be in service prior to October 31, 2008; however, in order to encourage Proponents to supply the electricity and Related Products as soon as practicable, the RES II Contract contains incentives for Renewable Generating Facilities to generate and deliver electricity prior to December 31, 2007. This Renewables II RFP and the structure of the RES II Contract will further assist the Government of Ontario in achieving these renewable energy capacity targets.

2.2 ONTARIO POWER AUTHORITY

The Ontario Power Authority (the "OPA") is a statutory corporation without share capital established under the Electricity Act, 1998. (Ontario). The relevant provisions of the Electricity Act, 1998 creating and establishing the OPA were proclaimed in force on December 20, 2004. The statutory objects of the OPA include, engaging in: (i) activities in support of the goal of ensuring adequate, reliable and secure electricity supply and resources in Ontario; and (ii) activities to facilitate the diversification of sources of electricity supply by promoting the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources. In order to be able to pursue these as well as its other statutory objects, the OPA is empowered under the Electricity Act, 1998, to enter into contracts relating to the procurement of electricity supply and capacity using alternative energy sources or renewable energy sources, either pursuant to a direction of the Minister of Energy, or pursuant to a procurement process that has been formulated in accordance with its approved integrated power system plans. However, as the OPA may not have an approved integrated power system plan and an approved procurement process in place by the time the RES II Contracts are entered into, the Minister of Energy will, in that case, direct the OPA, as Buyer, to enter into the RES II Contracts pursuant to this Renewables II RFP. Pursuant to the terms of the Electricity Act, 1998,

the costs of the OPA, including the costs of the RES II Contracts, will be recovered from all electricity consumers through appropriate settlement mechanisms.

Interested parties are advised that credit ratings for the OPA have been issued by Moody's and DBRS and have been posted on the "General Information and Documents" section of the website: www.ontarioelectricityrfp.ca.

2.3 PRESENT ACTION

This Renewables II RFP furthers the Government of Ontario's commitment to meet its renewable energy targets. The requirements set out in this Renewables II RFP have been formulated in consultation with the Ministry of Natural Resources, the Ministry of the Environment, the Ministry of Finance, the Ministry of Municipal Affairs and Housing, Hydro One and the IESO.

Following the evaluation of all of the Proposals received in response to and in accordance with this Renewables II RFP, the Ministry will select Proposals for up to 1,000 MW of RES II Contract Capacity as further described in Section 2.4 of this Renewables II RFP – Description of Deliverables.

This Renewables II RFP is a further opportunity for the private sector to contribute to building new generating capacity in Ontario. Additional initiatives relating to renewable electricity generation are expected to follow in the near future, including a request for proposals for up to 200 MW of renewable energy supply from renewable generating facilities which have a contract capacity of under 20.0 MW, which was announced at the same time as this Renewables II RFP. This additional request for proposals is expected to be issued in draft form within several weeks of the release of the final Renewables II RFP and the RES II Contract.

The fact that a prospective Proponent does not submit a Proposal in response to this Renewables II RFP, or the failure by a Proponent to become one of the Selected Proponents, does not in any way imply that the renewable energy project proposed by that party would not be eligible for future requests for proposals, or other procurements of renewable energy supply or generating capacity. Moreover, prospective Proponents are advised that neither this Renewables II RFP, nor any of the other procurement initiatives described above, are intended to preclude or restrict an interested party in any way from proceeding with the development of projects for new generating facilities outside of these procurement initiatives.

2.4 DESCRIPTION OF DELIVERABLES

All Selected Proponents will sign a RES II Contract, pursuant to which the Selected Proponent shall be the "Supplier" and the OPA shall be the "Buyer". The RES II Contract shall take effect from the date it is signed by both parties and shall expire twenty (20) years after the Term

Commencement Date. However, where the Term Commencement Date is on or before December 31, 2007, the Term shall expire on October 31, 2028 unless the Supplier elects to have the Term expire twenty (20) years after the Term Commencement Date, instead.

This Renewables II RFP is restricted to Intermittent Generation Facilities and Self-Scheduling Generation Facilities. Dispatchable generation facilities are not eligible to participate in this Renewables II RFP.

The RES II Contract requires the Supplier to design, build, operate and maintain the Renewable Generating Facility as outlined in its Proposal using good engineering and operating practices and in compliance with the Market Rules and applicable laws and regulations. In particular, expansions or upgrades to Renewable Generating Facilities are eligible to participate in this Renewables II RFP, as are Renewable Generating Facilities that are aggregated in accordance with the requirements of Section 3.4(a)(iii).

The RES II Contract is for the provision of the electricity output of the Renewable Generating Facility and for the provision of the Related Products, which will be comprised of Ancillary Services, Capacity Products, transmission rights, and Environmental Attributes, regardless of whether or not there is presently a market for any of such Related Products. The annual electricity output for which a Supplier will be entitled to receive the Proposal Price is subject to a cap to be set forth in the executed RES II Contract and which is calculated as 125% of the expected annual electricity output of the Renewable Generating Facility (in MWh) to be delivered to the Delivery Point. The RES II Contract does not specifically prescribe a minimum quantity of electricity or Related Products to be generated and delivered at any time, although the Supplier will be required to operate the Renewable Generating Facility in accordance with the RES II Contract.

The Renewable Generating Facility, which will have a RES II Contract Capacity between 20.0 MW and 200.0 MW, inclusive, must attain Commercial Operation by no later than October 31, 2008; however, in order to encourage Proponents to supply electricity and Related Products to the Buyer as soon as practicable on or before December 31, 2007, the RES II Contract allows a Supplier that achieves Commercial Operation on or before December 31, 2007 to sell, and obligates the Buyer to purchase, the electricity and Related Products produced by the Renewable Generating Facility at the prices set out in the RES II Contract for a Term that commences on the Term Commencement Date and expires on October 31, 2028 unless the Supplier elects to have the Term expire twenty (20) years after the Term Commencement Date.

A Supplier will be required to supply all electricity and Related Products to the Delivery Point, which will align with the defined point of sale as prescribed by the Market Rules. The Buyer will be the "metered market participant" under the Market Rules for the electricity and Related

Products purchased from the Renewable Generating Facility. If the metering point for the Renewable Generating Facility is not located at the Delivery Point, as is the case for embedded generating facilities (i.e. facilities that are connected to a Local Distribution System), for example, the metered output will be adjusted by the IESO using loss adjustment factors to account for any distribution or transmission losses incurred in reaching the Delivery Point. The loss adjustment factors are approved by the OEB for each LDC or Transmitter, and are provided to the IESO by the metering service provider at the time of registration with the IESO of the meters for the Renewable Generating Facility.

A Supplier will be entitled to the payments set out in the RES II Contract as outlined in Section 5.3. It is recognized that the value of the electricity supplied by Suppliers to the marketplace is partly a function of the price of market electricity displaced. Electricity consumers benefit to the extent that electricity can be supplied by Suppliers during periods of higher market prices, effectively reducing the market clearing price for all electricity consumers. While the intent is to simplify the RES II Contracts and payment mechanisms, the importance of supplying electricity at times of higher price must be recognized. To this end, the RES II Contracts provide for certain incentives and revenue sharing, in addition to payment for electricity supplied.

A more detailed summary of select terms of the RES II Contract is set out in Section 5.0 of this Renewables II RFP.

2.5 NO GUARANTEE OF VALUE OF CONTRACT OR EXCLUSIVITY OF CONTRACT

The Ministry makes no guarantee of the value of the RES II Contract to be awarded to a Selected Proponent. The RES II Contract executed with a Selected Proponent, as a Supplier, will not be an exclusive contract for the provision of the described Deliverables. The Ministry and the OPA may contract with others for the same or similar Deliverables to those described in this Renewables II RFP or may otherwise obtain the same or similar Deliverables by other means.

2.6 AGREEMENT ON INTERNAL TRADE

Proponents should note that procurements falling within the scope of Chapter 5 of the Agreement on Internal Trade are subject to that chapter, but that the rights and obligations of parties shall be governed by the specific terms of each particular procurement process. For further reference, please see the Internal Trade Secretariat website at www.intrasec.mb.ca.

(b) The Stack

In this step, all of the Proposals that were required to pass an initial Sub-Zone Screen will be ranked in a Stack together with Proposals that were not subject to the Sub-Zone Screen. Proposals will be selected from the Stack in ascending order of Proposal Price starting with the Proposal with the lowest Proposal Price and up to and including the marginal Proposal (or marginal Proposals, where there are marginal Proposals that have two or more an identical Proposal Price) that cause(s) the total RES II Contract Capacity of the selected Proposals to exceed 450 MW. No other criteria will be applied to the ranking.

Subject to the approval of the Management Board of Cabinet of the Government of Ontario, the Ministry reserves the right to select Proposals that together offer significantly less than 450 MW of RES II Contract Capacity if there are an insufficient number of Proposals that meet the minimum mandatory technical and financial requirements of this Renewables II RFP.

Subject to the approval of the Management Board of Cabinet of the Government of Ontario, in the event that selecting all of the marginal Proposals having an identical Proposal Price would cause the total RES II Contract Capacity of all selected Proposals to exceed 1,000 MW, the Ministry reserves the right to select all or to reject all such identically priced marginal Proposals.

Once the initial Proposals have been selected in accordance with this step, the Weighted Average Price of all such selected Proposals will be calculated to establish the Price Ceiling, which is expressed in $/MWh and equal to 110% of such Weighted Average Price. Subject to the reserved rights of the Ministry described below in Section 3.7(c), the Price Ceiling shall govern the selection of all additional Proposals for balance of the Proposal Price Evaluation.

(c) Selection of Additional Proposals

(i) Once the Price Ceiling has been established, the Ministry will continue to select in ascending order of Proposal Price, all additional Proposals that have a Proposal Price less than or equal to the Price Ceiling up to, but not including, the marginal Proposal (or marginal Proposals, where there are two or more marginal Proposals that have the identical Proposal Price) that cause(s) the total RES II Contract Capacity of all of the selected Proposals to exceed 1,000 MW.

(ii) Subject to the approval of the Management Board of Cabinet of the Government of Ontario, in the event that selecting all of the marginal Proposals having an

SCHEDULE J

Please see attached

RENEWABLES I RFP 2004 QUESTIONS AND ANSWERS

Renewables' RFP Questions and Answers

Tracking Number B86768

Category Contract

Subject

Question Questions for Green RFP:

1. PROPOSAL PRICE (RFP DOCUMENT)

It is stated that only 15% of the price is indexed. (and that at the rate of CPI). A Biomass Project requires in general significant labour, extensive maintenance over a 20 year period, transportation for Biomass, etc ..

Is it reasonable to limit the indexation? If so, as a consequence, the price quoted will have to reflect a significant premium to account for the "expected" inflation over the 20 year period.

2. STRUCTURE (RES - CONTRACT) - Pg 42 (RFP – DOCUMENT)

What is meant by: "the supplier will be required to bid energy and related products into the IMO-Administered markets as a Price-Taker, bidding between (-1) per Mwhr and its variable cost?"

3. STRUCTURE (RES) - Pg 43 (RFP – DOCUMENT)

Nameplate capacity greater and not metered separately.

Could the mechanism for determining the green energy with respect to a large steam turbine (back pressure) fed by two sources of steam be the ratio of the green produced steam fed to the turbine divided by the total steam fed multiplied by the energy output of the turbine?

4. If one is producing green energy presently but this energy is self-consumed, is this energy eligible for sale under this RES Contract?

Questions for RES Contract

1. Is there a minimum energy delivered at which point there would be a penalty or that it would be considered a material covenant constituting a default under 10.1 b?

2. Can the RES Contract be held by the bidder for the specified 3 year period but the

plant be sold to a third party during that 3 year period such that the third party delivers the energy to the original selected bidder who delivers the energy as contracted to the OPA?

3. OPERATION COVENANTS

Article 2.3 c) stipulates that no fuel can be used which is not provided for under the RFP. It is assumed that if significant fossil fuel is used at times; considering that the plant is a cogeneration plant, that it is allowed but not eligible as green energy for the Contract.

4. SALE/PURCHASE OF ELECTRICITY

Article 3.1 a) prior to commercial operation date, can the Supplier deliver and consume the energy itself rather than delivering to the market?

5. Please clarify article 3.1 (b) (iii) as there appears to be a portion missing.

6. Is article 3.2 only for a dispatchable plant?

7. Certain green projects do not lend themselves to near certainty of fuel supply such as biomass projects and which are capital intensive.

Is it required to put an early termination penalty based on the market conditions at that time? Furthermore what if the calculation of A-B is negative? Does the OPA share in the amount?

8. Article 10.5.b refers to "Relevant" market price. To what does the "Relevant" refer?

9. Article 10.5.b refers to " plus ii) the Costs of the Supplier."

· To what costs is this referring?

Answer Part One: Answers to Questions for the RFP

1. The indexing approach for the Renewables RFP and RES Contract has been clarified in Addenda Nos. 2 and 3 to the RFP and Addenda Nos. 2 and 3 to the RES Contract, with the effect that Section 3.5 of the RES Contract now states:

A portion equal to fifteen percent (15%) of the Initial Contract Price shall be indexed (with such portion, as adjusted for indexation as set out below, being the "Indexed Portion") to the percentage increase or decrease (if any) between the Consumer Price Index effective as of January 1 of each year during the Term and the Consumer Price Index effective as of January 1 of the prior year, with the exception of the first year of the Term, where the percentage increase or decrease (if any) as calculated above shall then be prorated by the ratio of the number of days from the Term Commencement Date to and including December 31 of that year in which the Term Commencement Date falls divided by 365. The remaining eighty-five (85%) of the Initial Contract Price (the "Unindexed Portion") shall not be subject to any indexation whatsoever. The Contract Price in a given calendar year during the Term is the sum of the Unindexed Portion and the Indexed Portion, and is calculated as follows:

CPy = UIP + IPy
where:
CPy: is the Contract Price applicable in calendar year "y" during the Term, expressed in $/MWh.
UIP is the Unindexed Portion, expressed in $/MWh.
IPy is the Indexed Portion applicable in calendar year "y" during the Term, expressed in $/MWh.

This indexing approach will apply to all eligible renewable energy sources. There will not be a separate approach for biomass sources.

2. A Contract Facility under the RES Contract will participate in the IMO administered

markets as a dispatchable, self-scheduling or intermittent generating facility as described in the market rules. The RES Contract provision you identify refers to the requirement that the operator of the facility offer into the market in such a way that the energy is accepted. For self-scheduling or intermittent facilities the dispatch data will be as per Chapter 7 of the market Rules;

Every submission of dispatch data with respect to a self-scheduling generation facility or an intermittent generator shall specify a price, in $/MWh, at and below which the applicable registered market participant reasonably expects to reduce the energy output of such self-scheduling generation facility or intermittent generator to zero. Such price may be zero or negative but may not be less than negative MMCP.

3. In order to be considered as an Eligible Project under the Renewables RFP, the facility must be a Renewable Generating Facility, which, pursuant to the definition set out in Appendix B to the Renewables RFP, is a facility that generates electricity from one or more of the following sources: wind, solar, Biomass, Bio-gas, Bio-fuel, landfill gas, or water.

4. No, the project would not be considered eligible as stated in Minimum Mandatory Technical Requirements on page 8 of the RFP

Part 2: Answers for Questions for RES Contract

1. There is no minimum energy delivery requirement below which point there would be a Supplier Event of Default. However, the Supplier must comply with all the terms and conditions of the Agreement, including the operation covenants in Article 2 of the RES Contract.

2. No: Also see revisions to Sections 2.3(a) and 10.1(f) of the RES Contract, made in Addendum No. 1 to the RES Contract.

3. That assumption is not correct. In order to be considered as an Eligible Project under the Renewables RFP, the facility must be a Renewable Generating Facility, which, pursuant to the definition set out in Appendix B to the Renewables RFP, is a facility that generates electricity from one or more of the following sources: wind, solar, Biomass, Bio-gas, Bio-fuel, landfill gas, or water.

4. Prior to the Commercial Operation Date, the Supplier can consume the energy itself rather than delivering to the market. If the Supplier chooses to deliver to the market, as per RES Contract section 3.1 (a), "Prior to the Commercial Operation Date, the Supplier agrees to sell and to deliver to the Delivery Point, and the Buyer agrees to purchase, any Energy from Nameplate Capacity delivered by the Supplier to the Delivery Point for the Market Price for such Electricity."

5. We have reviewed Section 3.1(b)(iii) of the RES Contract (since there is no Article 3.1 (b)(iii) in the Renewables RFP), and have found no text missing; rather, Section 3.1(b) (iii) must be read in conjunction with the opening sentence in Section 3.1(b). Section 3.1 (b)(iii) essentially states that where the Nameplate Capacity is greater than the Contract Capacity and the Total Contract Energy is not separately metered from the Facility Energy, the Supplier agrees to deliver the Supplier's Energy to the Delivery Point and to sell such Supplier's Energy to the Buyer for the Market Price, and the Buyer agrees to purchase such Supplier's Energy for that Market Price.

6. Article 3.2 applies to all facilities whether dispatchable, self-scheduling or intermittent.

7. Under Sections 10.5(b) and (c) of the RES Contract, the Early Termination Payment is, in part, based on "the Contract Energy at the relevant market prices (discounted to the Early Termination Date at the Present Value Discount Rate) for the remaining Term from and after the Early Termination Date either quoted by a bona fide third party offer or which are reasonably expected to be available in the market under a replacement contract for this Agreement". Therefore, market conditions for the remainder of the Term from and after the Early Termination Date will be considered in the calculation of the Early Termination Payment.

Section 10.5(b) and (c) of the RES Contract includes within the Early Termination Payment "the positive excess if any" of (A) over (B), so the net result cannot be a negative number. The Early Termination Payments are due to the Terminating Party

according to the provisions of Article 10.5.

8. The phrase "relevant market prices", as utilized in the calculation of the Early Termination Payment in Sections 10.5(b) and (c) of the RES Contract, means the applicable market prices for the Contract Energy throughout the remaining Term from and after the Early Termination Date. Moreover, given that the Contract Energy is energy generated by a Renewable Generating Facility (as that term is defined in the Renewables RFP), the "relevant market prices" must also relate to energy from a Renewable Generating Facility. Accordingly, market prices of energy from a facility that is not a Renewable Generating Facility would not qualify.

9. Please refer to the definition of "Costs" contained in Article 1.1 of the RES Contract for clarification

Renewables RFP Technical Advisor

SCHEDULE K

Please see attached

Market Participant Interface (MPI) Training Manual

Marketplace Training

Revised: July 15, 2009

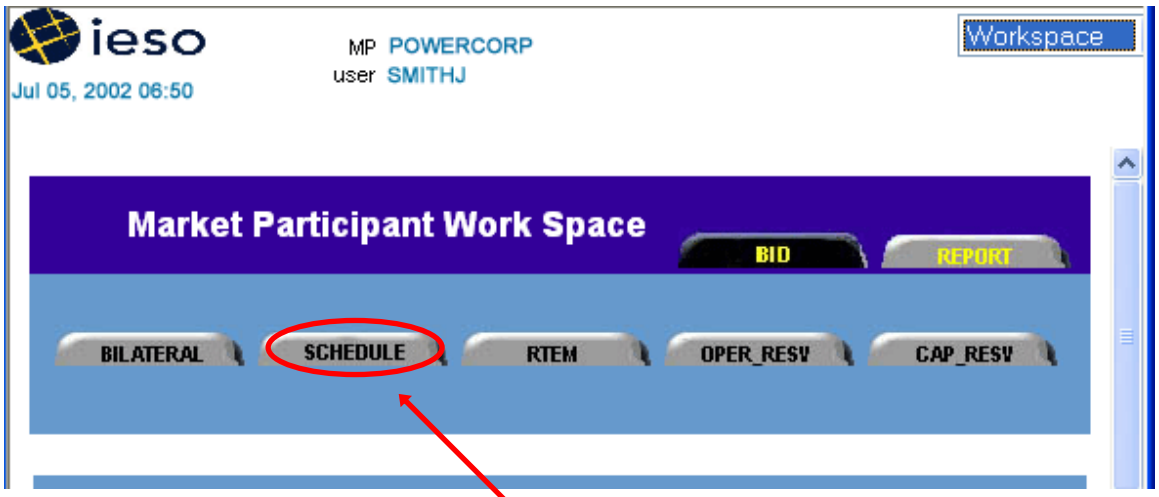
5. Submitting Schedules and Forecasts for Self-Scheduling, Intermittent, and Transitional Scheduling Generators

Self-scheduling, intermittent and transitional scheduling generators are not "dispatchable", and do not submit offers. Instead, they participate in the market by submitting schedules or forecasts to the IESO.

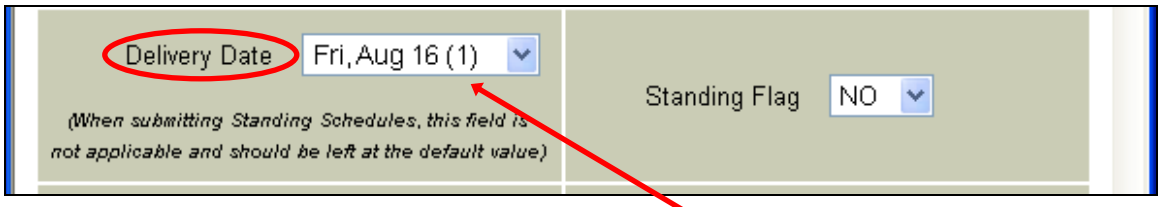
5.1 SUBMITTING SCHEDULES AND FORECASTS

Self-scheduling and transitional scheduling generators submit schedules, and intermittent generators submit forecasts. *(Transitional scheduling generators submit schedules using the "self-scheduling" category.)*

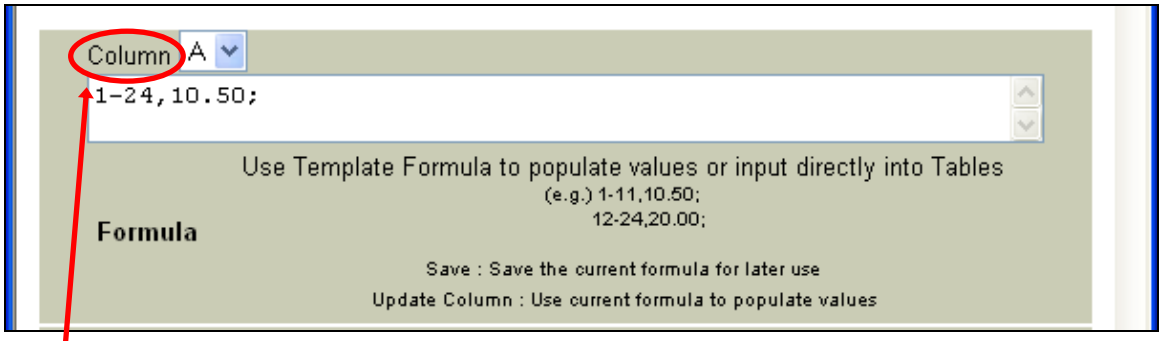
Keep in mind that, under DACP, you must submit your forecasts and schedules by 11:00 a.m. on the pre-dispatch day (i.e., the day before the trade day).



Select **Schedule** on the **Workspace** screen.



The delivery date defaults to the next trading date. (The delivery date has no impact on standing schedules or forecasts, but the software requires a value in the delivery date field – it cannot be left blank. For standing schedules or forecasts, simply leave the delivery date set to the default date.)



Column

Details of your schedule or forecast are entered in Columns A and B:

Column A: **Zero Price** – the price in $/MW, at and below which you reasonably expect to reduce the energy output to zero. The price you enter may be positive, zero or negative, but may not be lower than negative Maximum Market Clearing Price (negative MMCP).

If you are not price-sensitive and wish to generate only according to your schedules or forecasts, we recommend that you enter an offer of -$2000.

Column B: **Quantity** – the amount of energy you reasonably expect to provide for each dispatch hour

Entering the Zero Price (Column A)

Follow the format in the example on the screen to enter your zero price:

- **HOURS**
  - Enter the hour(s) of your schedule or forecast, with the hours separated by a dash, followed by a comma, with no spaces
    e.g., enter **1-24,** for hours 1 through 24, inclusive; enter **5,** for hour 5; enter **10-11,** for hours 10 and 11
  - ***NOTE:*** The market software tools use the "hour ending" convention, i.e., hour 1 is the first hour of the day – it is the hour that starts at midnight and ends at 1 a.m. Hours 10-11 are the hours from 9 a.m. to 11 a.m. Hours 1-24 are the hours from midnight one day through midnight the next day.
  - Eastern Standard Time is used year round

- **PRICE**
  - Enter the price in dollars and cents, up to two decimal places. For example, negative two thousand dollars may be entered as **-2000.00** or **-2000.0** or **-2000**
  - Type a semi-colon after the price

SCHEDULE L

Please see attached

Ontario

MINISTRY OF ENERGY

by its agent the Shared Services Bureau

REQUEST FOR PROPOSALS

FOR 300 MW OF RENEWABLE ENERGY SUPPLY

Request for Proposal No.: SSB-065230

Issued: June 24 , 2004, as amended by Addenda 1, 2 and 3

Proposal Submission Deadline: August 25, 2004

project meets the minimum mandatory technical and financial requirements. Proposals that pass the technical and financial evaluations will be ranked by price from lowest to highest Proposal Price (as defined in Appendix B – Glossary of Terms) so as to allow the Ministry to select the Proposals that have the lowest Proposal Prices.

More detailed descriptions of the deliverables to be procured through this Renewables RFP, the Proposal submission and evaluation process, general information and instructions to Prospective Proponents, and a description of selected terms of the RES Contract, are provided in Sections II, III, IV, and V of this Renewables RFP, respectively.

Capitalized terms used in this Renewables RFP shall have the respective meanings ascribed to them in the Glossary of Terms set out in Appendix B. Unless otherwise indicated, references to Sections and Appendices are references to Sections and Appendices in this Renewables RFP.

II. DESCRIPTION OF DELIVERABLES

A. BACKGROUND

The Government of Ontario is committed to making electricity from renewable sources an important part of Ontario's energy future. The Government of Ontario has set targets of having 1,350 MW of renewable generating capacity to be in service by the year 2007 and 2,700 MW to be in service by the year 2010.

B. ONTARIO POWER AUTHORITY

On June 15, 2004, the Government of Ontario introduced Bill 100 in the Legislative Assembly of Ontario entitled the *Electricity Restructuring Act, 2004*, which, among other things, would create the Ontario Power Authority (the "OPA") as a new statutory corporation which is not a Crown Agent. One of the responsibilities of the OPA would include securing new electricity supply for Ontario. Under the proposed *Electricity Restructuring Act, 2004*, the costs of the OPA, including the costs of the RES Contracts, would be recovered from all electricity consumers through appropriate settlement mechanisms.

C. PRESENT ACTION

In advance of the establishment of the proposed OPA, the Government of Ontario is taking immediate action to meet its renewables targets. Procurement requirements have been formulated carefully, in consultation with the Ministry of Natural Resources, the Ministry of the Environment, the Ministry of Finance, the Ministry of Municipal Affairs and

Housing, Hydro One and the IMO. Moreover, Ontario Power Generation Inc. has been instructed by its shareholder not to participate in this Renewables RFP process, whether on its own or jointly with another interested party. Following the evaluation of the Proposals received in response to this Renewables RFP, the Ministry reserves the right to purchase less or, under limited conditions described later in this document, more than 300 MW of RES Contract Capacity.

This Renewables RFP is expected to be just the first of many opportunities for the private sector to contribute to building new generating capacity in Ontario. Additional requests for proposals for renewable and other new electricity generation will likely follow in the near future, including a request for proposals for up to 2,500 MW of new clean electrical generating capacity and/or demand-side projects, which has also been announced and is expected to follow shortly.

Failure by a Prospective Proponent to submit a Proposal in response to this Renewables RFP or failure by a Proponent to become a Successful Proponent does not in any way imply that the renewable energy project proposed by that party would not be eligible for future requests for proposals, or other procurements of new generating capacity. Moreover, Prospective Proponents are advised that neither this Renewables RFP, nor any of the other procurement initiatives described above, are intended to preclude or restrict an interested party in any way from proceeding with the development of projects for new generating capacity and/or demand-side projects in the normal course, outside of these procurement initatives.

D. THE RENEWABLE GENERATING FACILITY

A Successful Proponent will sign a RES Contract, pursuant to which the Successful Proponent shall be the "Supplier" and OEFC, or the OPA if appropriate legislation has been enacted, shall be the "Buyer". If OEFC is the Buyer, it is expected that OEFC will transfer the RES Contract to the OPA, if appropriate legislation has been enacted. The RES Contract shall take effect from the date it is signed by both parties and shall expire twenty (20) years after the Term Commencement Date.

The RES Contract requires the Supplier to design, build, operate and maintain the Renewable Generating Facility as outlined in its Proposal using good engineering and operating practices and in compliance with the Market Rules and applicable laws and regulations. The Renewable Generating Facility, which will have a RES Contract Capacity from 0.5 MW to 100.0 MW, inclusive, is to attain Commercial Operation no later than December 31, 2007.

The RES Contract is for the provision of the electricity output of the Successful Proponent's Renewable Generating Facility and for the provision of the Related Products, which will be comprised of Ancillary Services, capacity products, transmission rights, and Environmental Attributes, regardless of whether or not there is presently a market for any of such Related Products. The annual energy output is subject to a cap to be set forth in the RES Contract and which is calculated as 125% of the expected annual energy output of the Renewable Generating Facility (in MWh) to be delivered to the Delivery Point. For greater certainty, the RES Contract does not specifically prescribe a minimum quantity of energy or Related Products to be generated and delivered at any time, although the Supplier will be required to operate the facility in accordance with the RES Contract.

The Supplier will be required to supply all energy and Related Products to the Delivery Point, which will align with the defined point of sale as prescribed by the Market Rules. The Buyer will be the "metered market participant" under the Market Rules for the energy and Related Products purchased from the facility. If the metering point for the facility is not located at the Delivery Point, as is the case for embedded generating facilities, for example, the metered output will be adjusted by the IMO using loss adjustment factors to account for any distribution or transmission losses incurred in reaching the Delivery Point. The loss adjustment factors are approved by the OEB for each distributor or transmitter, and are provided to the IMO by the metering service provider at the time of registration with the IMO of the meters for the facility.

The Supplier will be entitled to the payments set out in the RES Contract, as outlined in Section V.C. It is recognized that the value of the energy supplied by Successful Proponents to the marketplace is partly a function of the price of market energy displaced. Electricity consumers benefit to the extent that energy can be supplied by Successful Proponents during periods of higher market price, effectively reducing the market clearing price for all electricity consumers. Similarly, in addition to energy supplied by Successful Proponents, it is also acknowledged that the provision of Operating Reserves has value to the marketplace. While the intent is to simplify the RES Contracts and settlement mechanisms, the importance of supplying energy at times of higher price and the provision of Operating Reserves must be recognized. To this end, the RES Contracts provide for incentives and revenue sharing, in addition to payment for energy supplied.

A more detailed summary of select terms of the RES Contract is set out in Section V.

III. SUBMISSION AND EVALUATION OF PROPOSALS

Only Prospective Proponents, namely those entities or persons who submitted Statements of Qualifications in accordance with the RFQ, are entitled to submit Proposals in response

For any disqualified Proposal, only the Proposal Security and the unopened envelope containing the Proposal Price Statement shall be returned to the Proponent. After the announcement by the Ministry of the Successful Proponents, the remaining documents comprising the original copy of the Proposal shall be returned to the Proponent upon written request by the Proponent.

3. Proposal Price Evaluation (Stage 3)

Each Prospective Proponent must also submit, as part of its Proposal, a Proposal Price stated in Canadian Dollars per MWh, exclusive of applicable GST and PST. All Proposals that are complete and meet the minimum technical and financial requirements will be ranked by price from lowest to highest Proposal Price. The Ministry will select Successful Proponents starting with the lowest Proposal Price, proceeding to the one ranking second lowest, and continuing to select according to the ranking of Proposals by Proposal Price until the total RES Contract Capacity of the selected Proposals adds up to as close to 300 MW as possible, provided that this limit may be exceeded under the circumstances set forth in Section III.H. The Ministry's selections shall be subject to the approval of the Management Board of Cabinet of the Government of Ontario.

D. MINIMUM MANDATORY TECHNICAL REQUIREMENTS

The objective of the Evaluation Team in its technical evaluation is to assess whether the proposed project is technically sound and the proposed facility has a reasonable degree of assurance of attaining Commercial Operation by no later than December 31, 2007. This will be considered to be the case if the proposed project satisfies all of the minimum mandatory technical requirements set out below, which will be evaluated based on the information requested in Section III.E. The ten (10) minimum mandatory requirements are:

1. The proposed facility must have the specifications of an "Eligible Project", which means a facility which:

    a. is a new Renewable Generating Facility, or an expansion or upgrade to a Renewable Generating Facility which provides incremental energy and additional capacity above and beyond that which would otherwise have been provided by the existing Renewable Generating Facility;

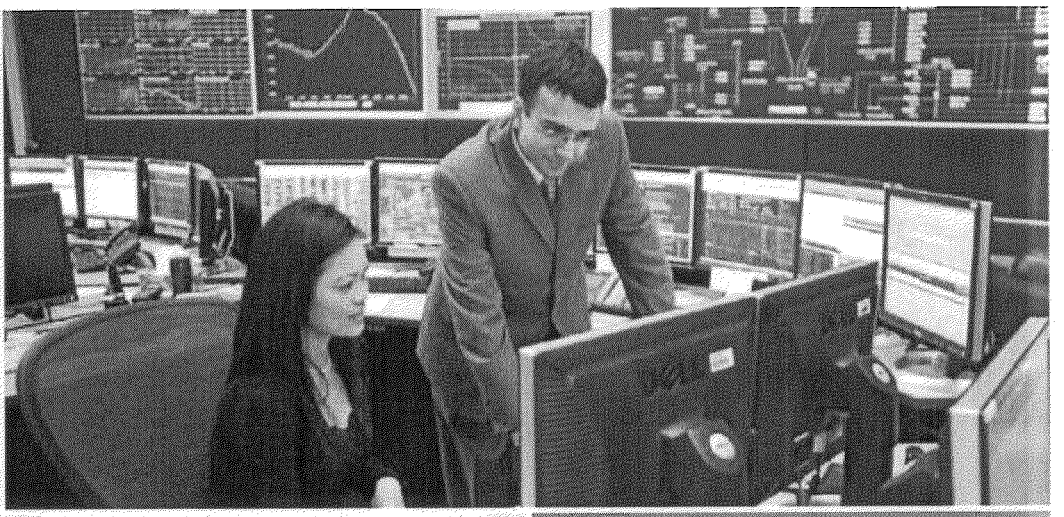
    b. is located within the province of Ontario;

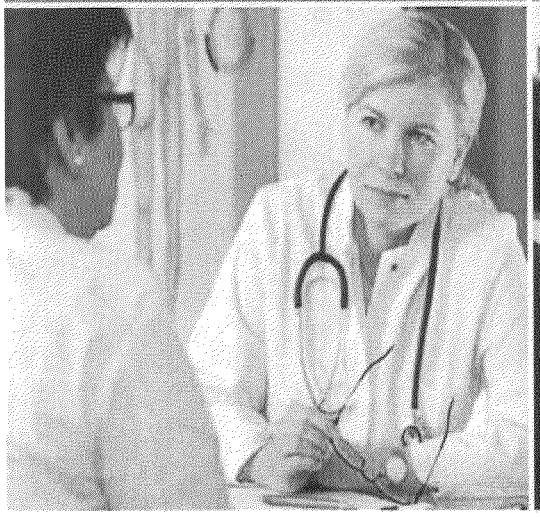
    c. has a RES Contract Capacity from 0.5 MW to 100.0 MW, inclusive;

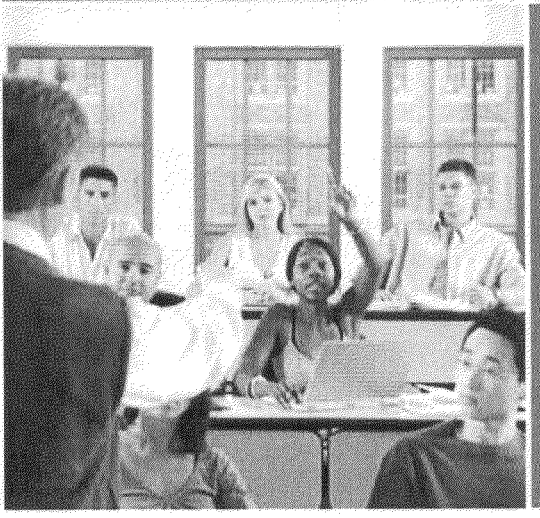
SCHEDULE M

Please see attached

2011 Annual Report







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the Ministry released its own Long-Term Energy Plan to provide the OPA with sufficient context on the government's policy priorities and targets to guide it in its planning. From the public's perspective, this could lead to some ambiguity as to which entity is responsible for electricity planning in Ontario.

- Earlier procurement programs for renewable energy included competitive bidding and the Renewable Energy Standard Offer Program (RESOP), which were both very successful and achieved renewable generation targets in record time. In particular, RESOP received overwhelming responses. It was expected to develop 1,000 MW over 10 years, but it exceeded this target in a little more than one year. Although continuing the successful RESOP initiative was one option, the Minister directed the OPA to replace RESOP with a new Feed-in Tariff (FIT) program that was wider in scope, required made-in-Ontario components, and provided renewable energy generators with significantly more attractive contract prices than RESOP. These higher prices added about $4.4 billion in costs over the 20-year contract terms as compared to what would have been incurred had RESOP prices for wind and solar power been maintained. The Ministry indicated that replacing RESOP with FIT successfully expedited its renewable energy program and promoted Ontario's domestic industry.
- Many other jurisdictions set lower FIT prices than Ontario and have mechanisms to limit the total costs arising from FIT programs. The OPA made a number of recommendations to lower Ontario's pricing structure. We were advised that the government opted for price stability to maintain the investor confidence required to attract capital investment to Ontario until the planned two-year review of the FIT program could be undertaken. Examples of proposed changes included the following:
  - In March 2009, before the passage of the *Green Energy and Green Economy Act,* the OPA proposed a reduction of 9% to FIT prices for electricity generated from ground-mounted solar projects, in line with similar practices in some other jurisdictions. This could have reduced the cost of the program by about $2.6 billion over the 20-year contract terms. The government did not apply this reduction. The Ministry informed us that such a predetermined price reduction ran counter to the government's goals of maintaining policy and price stability for the initial two-year period.
  - In February 2010, the OPA recommended cutting the FIT price paid for power from microFIT ground-mounted solar projects after the unexpected popularity of these projects at the price of 80.2¢ per kilowatt hour (kWh), the same price as was being paid for rooftop solar projects, became apparent. This price would provide these ground-mounted solar project developers with a 23% to 24% after-tax return on equity instead of the 11% intended by the OPA. The recommended price cut was not implemented until August 2010. In the five months from the time the OPA recommended the price cut in February 2010 to the actual announcement in July 2010, the OPA received more than 11,000 applications from developers. Because the government decided to grandfather the price in order to maintain investor confidence, all of these applications, if approved, would qualify for the higher price rather than the reduced one. We estimated that, had the revised price been implemented when first recommended by the OPA, the cost of the program could have been reduced by about $950 million over the 20-year contract terms.
- The Ministry negotiated a contract with a consortium of Korean companies to build renewable energy projects. The consortium

SCHEDULE N

Please see attached

RENEWABLES II RFP 2005 QUESTIONS AND ANSWERS

Renewables II RFP Questions and Answers

Tracking Number 2RP60813

Category Other

Subject Capacity and energy

Question How can the RFP be amended to accommodate capacity and energy payments considering the variable nature of some renewable energy sources?

Answer The Renewables II RFP is not a capacity RFP. Rather, the RES II Contract that will be entered into by the OPA and Selected Proponents has been structured as a twenty-year power purchase agreement that will provide a Supplier with payments for the output of their Renewable Generating Facility. The contract recognizes the variable nature of renewable energy sources in that payments will only be made on the basis of actual output. Appendix A to the Renewables II RFP provides an example of how payments are calculated under the RES II Contract.

SCHEDULE O

Please see attached

Minutes of Meeting

Date held: January 24, 2012	**Time held:** 9:00 am – 11:30 am	**Location held:** Crowne Plaza, Toronto
Attended	**Company Name**	**Attendance Status** (A)ttended; (R)egrets; (S)ubstitute
Acchione, Paul	OSPE Energy Task Force	A
Adarsh, Mehta	Acciona Energy North America	A
Applebaum, David	NextEra Energy Resources	A
Banack, Adam	Torys LLP	Teleconference
Bell, Brian	Ontario Power Generation	A
Brown, George	Acciona Energy North America	Teleconference
Bursaw, Chris	Capital Power Corporation	A
Butters, David	APPRO	A
Cary, Rob	Rob Cary & Associates c/o RES Group	A
Chayka, Darin	Hydro One Networks	Teleconference
Chee-Aloy, Jason	Power Advisory LLC	A
Chintapalli, Raj	Customized Energy Solutions	Teleconference
Cookson, Michael	Kruger Energy	Teleconference
Cormier, Pascal	Brookfield Power	A
Cumming, Alison	Ontario Power Authority	A
Davis, JJ	Kruger Energy Chatham	Teleconference
Dorey, Steve	Charles River Associates	A
Elahi, Raubia	Ontario Power Authority	Teleconference
Gibson, Al	IPR-GDF SUEZ North America	Teleconference
Gray, Stan	Pattern Energy	A
Hassan, Fred	Elenchus c/o Power Worker's Union	A
Hayden, Dan	Capital Power Corporation	Teleconference
Heaton, Randy	TransCanada	Teleconference
Hiscock, Jennifer	Natural Resources Canada	A
Jayaraman, Jay	Enbridge	A
Keller, Casey	IPR-GDF SUEZ North America	Teleconference
Kerr, Paul	Shell Energy	Teleconference
Long, Christine	Borden Ladner Gervais LLP	Teleconference
MacRobbie, Ian	Enbridge	A
Maddix, Melanie	Goreway Station Partnership	A
McMillan, Brian	Greater Sudbury Hydro Plus Inc.	Teleconference

Date held: January 24, 2012	**Time held:** 9:00 am – 11:30 am	**Location held:** Crowne Plaza, Toronto
Attended	**Company Name**	**Attendance Status** (A)ttended; (R)egrets; (S)ubstitute
Metcalf, Kellie	Pattern Energy	A
Mozzon, Garrett	Ministry of Energy	Teleconference
Nollert, Beverly	Ontario Power Authority	Teleconference
Norris, Paul	Ontario Waterpower Association	Teleconference
Pakela, Gregory	DTE Energy Trading	Teleconference
Peterson, David	Ontario Power Generation	A
Plante, Matthieu	HQ Energy Marketing	A
Reed, Mike	Leader Resources Services Corp.	Teleconference
Roberti, Rob	Capstone Infrastructure Corporation	A
Samant, Sushil	Northland Power	A
Simmons, Sarah	SunEdison	Teleconference
Simoes, Miguel	LDH Energy	Teleconference
Sorensen, Kevin	Gilead Power	A
St-Onge, Daniel	Brookfield Power	Teleconference
Timm, David	IPR-GDF SUEZ North America	A
Tuck, Jennifer	NextEra Energy Canada, ULC	A
Urukov, Vlad	Ontario Power Generation	Teleconference
Venkatesh, Bala	Ryerson University	A
Viswanathan, Samira	Bruce Power	A
Whitehead, Paul	Bruce Power	Teleconference
Zacher, Glenn	Stikeman Elliott LLP	A
Zadeh, Saba	Borden Ladner Gervais LLP	Teleconference
Scribe: Jo Chung, Market Development Please report any corrections, additions or deletions to: stakeholder.engagement@ieso.ca		

All meeting material is available on the IESO web site at:
http://www.ieso.ca/imoweb/consult/consult_se91.asp

Meeting Objectives:
The Floor Price Focus Group (FPFG) will review and discuss stakeholder submissions on the IESO's Dispatch Order for Baseload Generation discussion paper. The IESO will present responses to stakeholder feedback, provide supporting analysis, options, and discuss next steps.

Item 1 Welcome, Review of Meeting Agenda
Candice Trickey of the IESO welcomed the FPFG. Introductory remarks were made including a review of meeting objectives and overview of the agenda.

Item 2 Review of Stakeholder Submissions and IESO Reponses

Darren Finkbeiner of the IESO provided a summary of stakeholder submissions received on the "Dispatch Order for Baseload Generation" discussion paper and IESO responses.

Member Questions, Comments and Discussion, with the IESO's response in italics:

A member asked if there was any feedback from the Ontario Power Authority (OPA) regarding their engagement in FPFG discussions.

The IESO responded there were no further developments from what was discussed at previous sessions. The IESO added they are keeping the OPA abreast of what is going on and that the OPA is aware of the comments/feedback from stakeholders on contract issues. However, the discussion of OPA contract terms and potential amendments are out of scope for the FPFG sessions.

A member asked what the process would be regarding the IESO's response to stakeholder comments of "further detail required."

The IESO responded that the stakeholder will be contacted by the IESO to discuss and better understand their comments. After the clarification, the IESO will provide a response in the spreadsheet and re-post all responses.

A member asked if nuclear dispatch was out of scope of the FPFG and if nuclear was part of baseload generation.

The IESO responded that dispatch mechanics, or the style or type of dispatch (e.g. a single large maneuvers versus small maneuvers) was outside the scope of the FPFG, but the concept and impacts of whether nuclear units would be subject to floor prices was within scope.

A member asked whether nuclear units would be subject to 5-minute dispatch.

The IESO confirmed nuclear units are currently dispatchable on a 5-minute basis, subject to technical limitations. The IESO added that nuclear dispatch is a coarse solution to energy balancing. Nuclear units are incapable of following frequent up and down dispatch instructions every 5-minutes and must sit for a period of time before they can change their output – technical limitations are an overriding principle as with any resource type.

A member commented that if the IESO respects technical limitations, how this differs from dispatch mechanics.

The IESO responded that dispatch timeframes other than the existing 5-minute methodology is out of scope when discussing floor prices – the IESO is not looking at whether nuclear should be dispatched hourly or how dispatches are sent. The FPFG is looking at dispatch order for baseload generation based on economic merit.

The member asked if there would be a forum to discuss alternatives to 5-minute dispatch.

The IESO responded no forum is planned but would consider one if required.

A member noted concern over limiting dispatch discussions to a 5-minute basis without looking for opportunities to dispatch day-ahead or in pre-dispatch, noting this decision may influence outcomes for wind generators and require wind to switch off (more onerous) versus ramping down to a minimum level.

The IESO responded that under the EDAC process there is no obligation on a generator to follow their day-ahead schedule, except for those non-quick start generators who receive a commitment and may be eligible for production cost guarantees. The optimization performed day-ahead and in pre-dispatch is based on imperfect information such

as demand forecasts, and actions taken in these timeframes may prove to be less desirable when real-time conditions differ from those expected day-ahead. It is not within the scope of renewables integration to look at mandatory dispatch instructions coming out day-ahead (i.e. the IESO is not looking at making a 50MW day-ahead dispatch for a wind farm mandatory – the IESO will wait until real-time).

The member responded the concern is that the IESO is not looking at all opportunities to take advantage of longer foresight and is locking itself into 5-minute dispatch, and precluding certain things that may be more efficient if the IESO looks day-ahead or several hours ahead.

The IESO responded that although there may be opportunities associated with different time frames, there do not appear to be significant benefits with respect to nuclear dispatch – nuclear units can respond to real-time dispatches as they do today, while day-ahead commitments are based on imperfect knowledge (i.e. forecast errors). It's better to have flexibility in real-time to better ensure economic outcomes.

The member added that in the pre-dispatch timeframe, significant nuclear maneuvers are not based on 5-minute signals, and that opportunities for improvements in pre-dispatch are also being disregarded. The member noted examples where nuclear units appear to respond with steam diversion based on a 5-minute dispatch signal.

The IESO responded that nuclear units cannot respond on a continuous up down basis, and they may respond with steam by-pass as a means of following IESO dispatch instructions.

The member thought steam by-pass was through a constraint mechanism, not a price based driver.

The IESO responded that offers dictate the next resource to be dispatched in real-time on an economic basis, noting the IESO does have conversations with nuclear operators for example, prior to an Easter weekend as well as with many other resource types (hydro-electric and interconnected partners/exports). Dispatch is based on economic merit order subject to technical limitations.

A member asked, in a surplus baseload generation (SBG) scenario, whether the IESO would give advanced notice to a nuclear unit if the IESO forecasted the need to have the unit shutdown for an entire weekend.

The IESO responded that in scenarios where SBG could be solved by either a nuclear shutdown or wind curtailments, there are likely more economic/environmental factors resulting in the dispatch of wind. In a weekend where zero wind is forecasted and significant forecasted SBG, and the IESO felt a nuclear maneuver/shutdown was appropriate to manage the situation, yes, the IESO would have those conversations with the nuclear unit – they may choose to take the unit off-line for their own reasons or to avoid the potential for more frequent dispatches.

The member asked whether that means the IESO won't commit to outages in advance.

The IESO responded it will allow a nuclear outage in advance, but will not force curtailment/shut-down in advance since nuclear units can respond in real-time.

On page 2 of the responses, a member made reference to the OPG comment on hydro-electric resources (i.e. "floor prices should not be imposed on hydro-electric resources as they have economic, regulatory/safety drivers to ensure rational offers") and the observation that certain hydroelectric facilities have increased production significantly during hours of negative prices. The member noted his agreement that there are many instances where regulatory, environmental and safety must over-ride the ability of hydro-electric resources responding to dispatch instructions. The member asked if there are other circumstances where those regulatory, environment and safety issues would not be a factor, where it would be appropriate for hydro-electric resources to be excluded from floor prices and respond to dispatch-down instructions.

The IESO responded that hydro-electric units have public safety and regulatory requirements which limit the capability to spill water, and that the IESO is not aware of any economic incentives which would lead to production during negative prices.
Another member noted that hydro-electric resources have sufficient economic drivers and that instances where water is spilled are explainable and rationale.
Another member commented that he is trying to understand the reason for generating during negative pricing.
The IESO responded that production during negative pricing for hydo-electric resources will continue as water management requirements dictate, and that the frequency of these events will increase as water management plans become more restrictive.

A member reiterated his point over dispatch timeframes – if the IESO looks only at 5-minute dispatch, hydro-electric resources may be very constrained on what they can do – in the day-ahead/pre-dispatch timeframe, they may have more flexibility.
The IESO responded that coarse solutions such as nuclear maneuvers or hydroelectric spill are more expensive and more impactful to the environment. For example, day-ahead timeframes may forecast SBG – if you spill/shutdown hydro-electric or nuclear resources, there will be periods where you curtail more than is needed due to imperfect information. For this reason, responding in the day- ahead timeframe does not result in the best economic/environmental outcome.

A member representing the Ontario Waterpower Association (OWA) commented regulatory requirements for hydro-electric resources will only become more complex, noting two additional requirements (endangered species and ongoing dam safety requirements). The member added that on certain days, although there may appear to be no economic basis for producing electricity, it may be required in order to maintain compliance with water management plans and other regulatory restrictions.

A member asked why solutions in other jurisdictions (to address SBG, congestion, ramping needs through the dispatch of baseload generators) do not work in Ontario, and if Ontario's two-schedule (i.e. constrained and unconstrained) system was the issue.
The IESO responded that unlike Ontario, other North American jurisdictions do not have Feed-In-Tariff (FIT) style contracts where generators are paid only if they generate. For example, in cases of global over-supply, as prices become negative, generators get paid less than the full contract price. This mechanism does not work well in a two-schedule system where locational prices may go negative but have no bearing on the contract – with a positive uniform price and negative zonal prices, resources have no incentive to move/curtail since if they generate, they will continue to earn $135/MWh; if they don't produce, they would earn less. Other jurisdictions have locational marginal pricing (LMP) – if Ontario had LMP settlement, there likely would be no need for floor prices. Implementing LMP (or a comparable mechanism) in Ontario in a timely fashion is not possible – the combination of contract and market design does not drive the right economic behaviors and is the reason why solutions in other jurisdictions won't work in Ontario.

A member commented that the IESO had not properly assessed the merits of other options to floor prices (other market solutions, different ways to look at technical limitations, longer dispatch timeframes

versus 5-minutes) before making the recommendations in the discussion paper. The member noted that the IESO has not moved at all from the original recommendations of the discussion paper.
The IESO responded they have not seen anything to suggest that we are on the wrong track, noting that any solution that looks at course/chunky responses for a fine problem is costly and environmentally unfriendly. A better potential solution to floor prices that would work in Ontario has not been identified.
The member noted that it is clear that if the group keeps going down the current path, that there will be continual disagreements. The member asked whether it was out of scope for the FPFG to revisit the Ontario market design/hybrid market and contract impediments which fundamentally create the issue, suggesting for example, a move to LMP.
The IESO confirmed changing market design/LMP was out of scope, noting it is not feasible in terms of cost, time and resource requirements (LMP would take years to implement) relative to the forecast and timing of expected renewables.

A member representing the Ontario Society of Professional Engineers (OSPE) stated the proposed IESO changes must be implemented, noting OSPE had approached the Ministry of Energy a year ago to highlight the challenges of integrating wind and concerns related to SBG. OSPE produced an independent analysis of Ontario's grid and a draft report entitled "Wind and the Electrical Grid" has been published which discusses the technical challenges of integrating wind onto the grid.

A member asked which agency was responsible for amending NUG (non-utility generator) contracts. The member noticed that during SBG, 500MW of NUGs are still on-line.
The IESO responded that the IESO, OEFC and OPA have had many conversations and have a NUG protocol in place, which is a first step in NUG curtailment. The process requires a forecast in advance of SBG and allows a certain number of curtailments a year. The protocol requires OEFC to negotiate curtailments over and above certain SBG levels where decisions must be made by the Wednesday of a given week. The problem is that it can be difficult to accurately forecast the extent of SBG. The trigger for executing the protocol is the expectation of a nuclear shutdown (not maneuvering). The IESO is still trying to coordinate with OEFC to improve upon the process. Long term, the OPA has received the directive to renegotiate NUG contracts with an aim to increase flexibility.

A member asked if any analysis was done which contemplates a substantially lower amount of wind than forecasted by the OPA.
The IESO responded analysis is based on the best forecasts from the OPA (currently 10,700 MW forecasted), and that any updates to the forecast will result in updates to the analysis. The IESO added the FIT 2.0 review still forecasts 10,700MW of renewables and noted that even with 5,000MW of renewables forecasted for 2014, there are still significant savings as well as environmental/economic benefits to what the IESO is proposing.

A member asked for FIT/RES 1, 2, and 3 contracts, if dispatch was only applicable to those directly connected to the transmission system.
The IESO responded that FIT contracts are indifferent regarding connection point (i.e. whether directly connected to the transmission system or embedded/distribution connected). Based on the original forecast of 2,600MW of distribution connected generation, the IESO finalized a principle (SE-91 Design Principle 7) where only renewables connected to the grid and embedded resources that are market participants would be subject to 5-minute dispatch. However, pending the outcome of the FIT 2.0 review, there may be the requirement to dispatch embedded

resources as well. The IESO has had joint sessions with the OPA/Ministry of Energy/EDA regarding the issue of dispatching distribution-connected generation with subsequent meetings planned.
The member asked what level of transmission connected resources was used in the analysis.
The IESO responded 10,700MW in total, with 8,100 transmission connected and the remaining 2,600 distribution connected.

Item 3 Review Options and IESO Analysis
Darren Finkbeiner of the IESO reviewed the options to floor prices and IESO analysis performed. He noted the addition of a third bullet on slide 9 ("Why Floor Prices") quantifying the estimated savings of dispatching wind and solar of $180-$225M in 2014, with 1.6-2.0 megatonnes of avoided CO2 emissions. The assumptions used in the analysis include:

(i) wind/solar dispatched on a 5-minute basis;
(ii) replacement of curtailed wind/solar with gas @ 0.4 tonnes/MWh;
(iii) all resources paid contracted prices for any curtailment;
(iv) gas price of $40/MWh.

Darren stressed that the assumption where all resources are paid contracted prices does not reflect the IESO's or OPA's position on contract issues – the assumption was used in order to not overstate potential savings to Ontario ratepayers, noting that savings would be greater if generators are not compensated for dispatch through their contracts.

A member asked if $135/MWh was used for all wind resources.
The IESO confirmed this.

A member commented that the analysis appears to indicate 5 TWh of curtailment. He requested a realistic estimate of impacts, and that physical impacts behind the study would be useful and should be made available.
The IESO responded that it did not have the TW of curtailment numbers at the presentation, and committed to investigate if further information behind the study could be made available.

The member representing OSPE noted that in order to get an accurate estimate of potential savings, a simulation with actual data must be run.
The IESO agreed, noting averages won't be as accurate.

A member asked if the savings were based only on incorporating 5-minute dispatch, or if it also included a quantification of environmental benefits.
The IESO responded the numbers do not include quantification of environmental benefits.

For the "Nuclear vs Renewable Dispatch," slide 10, a member asked what resources were included as baseload generation.
The IESO responded wind, nuclear, hydro-electric, and some NUGs.

For slides 10 and 11 ("Nuclear vs Renewable Dispatch), a member commented the analysis is showing a certain demand period with peaks on subsequent days. He asked whether different periods/seasons within a year were also analyzed, noting lower peaks during the spring.

The IESO responded the analysis took a look at the annual load profile which takes into account seasonal differences, noting the analysis cannot be based on averages. Certain assumptions were made such as the wind profile over a period of time.
A member noted it would be helpful to make the IESO's assumptions, such as net export information, and findings public, including how much dispatch/curtailment is expected on a gross, aggregated basis.
The IESO committed to investigate if further information could be made public, noting some information may be confidential.

A member commented that in an example where 2,000MW of SBG is forecasted, you could curtail nuclear production and continue to use wind as a flexible resource without introducing gas later in the day. This could be accomplished by replacing nuclear curtailments and wind curtailments in the same timeframe. The member agreed that if nuclear is curtailed beyond SBG conditions, that there is a problem. The member stated this is why the IESO may wish to consider a longer dispatch timeframe (vs 5-minutes).
The IESO responded that if you could perfectly fit a nuclear maneuver during SBG without using gas, that it would be a simple solution. However, the IESO added that it doesn't see how curtailing nuclear in advance would work since SBG forecasting is not precise. Extreme cases of SBG may warrant nuclear curtailment, but nuclear curtailment is chunky compared to wind curtailment – tradeoffs need to be considered regarding the likelihood of breakage and wear and tear of large nuclear facilities versus many individual wind turbines.
The member added he was thinking of the case where even when all wind is curtailed, in the situation where nuclear units must also be curtailed, that it may be better to curtail nuclear ahead of time for longer durations versus getting rid of wind and then dispatching nuclear on a 5-minute basis.
Another member added that during certain situations where SBG is expected for prolonged periods, the IESO might want to consider a longer dispatch timeframe instead of 5-minutes all the time.
The IESO responded that even if you could fit a nuclear curtailment perfectly with SBG, from a marginal cost perspective, wind should be dispatched first. The IESO noted that no comments were received from wind resources regarding any serious regulatory/safety reasons to suggest wind should not be dispatched.
The member responded that in the context of the Dispatch Technical Working Group (DTWG) discussions, wind members still don't know what limitations will be imposed on them, no clear idea of the realities of 5-minute dispatch, or what type/frequency of dispatch instructions wind will receive.
The IESO reiterated that they have not heard wind owners/manufacturers say 5-minute dispatch is something they cannot respond to. Comments were made regarding contract issues, and some wear and tear concerns, however all resource types will have wear and tear concerns. The IESO requested that any additional concerns that have not been submitted by wind resources be sent in writing.

A member commented wind needs to be viewed as a scarce resource, as it is less flexible and cannot be stored.
The IESO responded that scarce resources include, for example stored/ponded water, noting the inability to store wind/solar. The IESO agreed that when dispatched, wind/solar is like a resource that cannot be stored with an opportunity cost to resource owners.

A member elaborated on the concept of dispatching down based on marginal cost - nuclear units have negative marginal costs (i.e. they will pay to stay on) since if they shutdown, they run the risk of losing 3 or 4 days of production.

A member asked how accurate centralized forecasting will be for wind in the future, and how accurate centralized forecasting will be in predicting ramp events (slide 12 – Operational Need – Compound Ramp).
The IESO responded that the forecaster will produce a 48 hour rolling forecast which becomes more accurate as you approach real-time, noting forecasts provided by wind generators today are not that accurate. There are two types of forecasts – hourly and ramp. Ramp will predict the magnitude and timing of ramp events based on wind contingencies and is outside the 48 hour rolling forecast. When closer to real-time, the forecast will move towards persistence.
A member asked whether the centralized forecast will predict output at the top of every hour, or the average output of the hour.
The IESO responded it will be the average output of the hour, but that this would be assessed as we move forward.

For slide 12 (Operational Need – Compound Ramp), a member asked whether the geographic diversity of wind farms was taken into account, noting this diversity would soften the slope of ramp events.
The IESO responded that the trend line on slide 12 is representative of actual wind farms in service today given their current geographic diversity.

A member asked if the IESO had any experience of situations where very high wind forced wind turbines to cut-out in order to protect machinery, and whether this was part of the forecast or based on direct communication with wind operators.
The IESO confirmed yes, it has experienced high wind events based on owner communication with the IESO. As part of the static/dynamic data requirements for variable generation, wind farms will be required to provide cut-out and wind speeds from all sites. Similarly, solar resources too will have specific requirements. This information, coupled with supplemental information, will be used in the forecaster's models to forecast for expected wind events, and the IESO will take preparatory action if necessary.
The member asked if the IESO anticipates a requirement for increased operating reserve (OR) requirements.
The IESO responded that this question is being investigated internally, and the IESO is looking to NERC's Integration of Variable Generation Task Force (IVGTF) which may suggest different contingency reserve requirements. With wind, you are looking at quasi-contingency events which tend to occur over longer timescales than the loss of a single generating unit – for example, you could lose 1,000MW over 30 minutes.

For slide 13 (Merit Order Options), a member asked if there were cost details available for each of the three options (multi-tech floor prices, floor prices for renewable generators, dispatch down service).
The IESO responded it is looking to get the desired result at the lowest cost. If an option is chosen which results in some nuclear over-curtailment while another option results in no nuclear over-curtailment, the result with no over-curtailment would be selected. The IESO is looking for the option that yields the most efficient and environmentally friendly outcome.

A member asked when comparing options based on cost effectiveness and the environment, whether there is the possibility that the modeling look at different benefits between cost effectiveness and environmental sensitivity.
The IESO responded this will be considered.

A member suggested that another consideration in determining an option should be the impact of floor prices on the Hourly Ontario Energy Price (HOEP) and exports.
The IESO responded there is a subtle distinction between the two – when you look at mechanics, you are not looking at floor prices per se as the two can be separated. The floor price methodology will be the same.

A member commented that when looking at options, operational costs on generators to support dispatchability must be considered, such as 24/7 desks to respond to dispatch instructions, etc.
The IESO stressed that currently every resource connected to the ICG must have 24/7 response capability and must be able to promptly respond to dispatch from the IESO. When generators are dispatchable, operating systems are required to respond to 5-minute dispatch, with or without floor prices. All Generators must be able to respond to dispatch for reasons which may not be identified or anticipated in advance.
A member commented the current obligations are being fulfilled, but that the obligation is changing, noting the IESO should not burden generators with unnecessary costs.

A member commented there is a lot of attention on seeking the lowest cost option with different views of what that might mean. The member noted the lowest cost to consumers may not be the most efficient outcome from a market standpoint – frequently, the best market solution and most efficient process results in higher costs to consumers. The ultimate costs to consumers should be considered after the best market solution/operational issues and efficiency.

A member requested a forward looking assessment of floor prices on the impact on HOEP, as well as cost information for the February FPFG session.
The IESO responded it could not commit to this, since the IESO does not forecast HOEP, but will try to provide additional information to the extent the information is readily available.

Item 4 Next Steps
Darren Finkbeiner of the IESO thanked the group for their participation. He asked members to submit any additional comments related to technical limitations, other factors to consider regarding the proposed dispatch order, alternative options, etc, to IESO Stakeholder Engagement (stakeholder.engagement@ieso.ca) along with contact information. Next steps will include the finalization of a preferred floor price option and development of the model to be presented to the FPFG as early as the late February meeting.

A member commented that when selecting floor prices, the IESO must take into account the potential of making electricity prices higher, which may create the need to incent the injection of power into Ontario (from jurisdictions such as MISO).
The IESO agreed that holistic market impacts must be considered (import policies, etc).

Action Item Summary				
#	Date	Action	Status	Comments
1	Nov 21, 2011	IESO to add to the terms of reference the issue of loss penalty factors and ensuring intra-technology equity issues will be addressed by the FPFG	Closed	Updated Terms of Reference posted on the SE-91 website.
2	Nov 21, 2011	IESO to add the link to the latest 18-month outlook in the minutes.	Closed	
3	Nov 21, 2011	IESO to add links to the SE-94 Export Service Tariff Study in the minutes.	Closed	
4	Nov 21, 2011	IESO to reflect in the Discussion Paper potential safety concerns related to dispatch for wind farm technicians who may be inside the turbine.	Closed	The IESO always considers safety concerns when dispatching resources.
5	Jan 24, 2012	IESO to provide link to report from Ontario Society of Professional Engineers (OSPE) website: Click on: "Wind and the Electrical Grid"	Closed	
6	Jan 24, 2012	IESO to include Enbridge's comments and IESO responses in the next version of the spreadsheet summarizing stakeholder comments	Open	
7	Jan 24, 2012	IESO to investigate making public further information on analysis that quantifies the estimated savings of dispatching wind/solar, SBG and Ramp analysis to the extent possible (cost information on options, TWh of curtailment, physical impacts behind the study, net export information, how much curtailment is expected on a gross aggregated basis).	Open	

SCHEDULE P

Please see attached

Respondent Name	Q1. Do you agree with the limitations outlined in the Dispatch Order for Baseload Generation discussion paper?	Response Type	IESO Response
Brookfield renewable Power Inc	It is our understanding that the IESO did take into account environmental and regulatory constraints to determine the proposed dispatch order. Being a hydro-electric producer, Brookfield fully appreciates the importance of such constraints and commends the IESO on that front.	Other	Thank you. The IESO has conducted an economic, regulatory, and environmental analysis which has be provided in an accompanying presentation.
Enbridge Inc.	There is an assumption made in the Discussion Paper that hydroelectric facilities can neither spill nor store it, which leads the authors of the Discussion paper to conclude that wind and solar generators should be dispatched first. While there may be restrictions on how hydro electric facilities, the Discussion Paper does not provide any background or references for such assumptions. This is problematic, given that these assumptions appear to serve as the basis for the IESO's conclusions with respect to wind and solar facilities.	Clarification	Thank you. The IESO has conducted an economic, regulatory, and environmental analysis which was provided at the January 24 presentation. Using coarse hydro electric spill and/or nuclear manoeuvres results in an over curtailment and thus requires replacement energy that results in higher cost and carbon emissions.
Enbridge Inc.	Overall, the Discussion Paper does not provide sufficient data or context for wind, solar, hydroelectric and nuclear generators to assess the effect of the proposed dispatch regime on their respective types of generation and inefficiencies this might place on market operations.	Other	Thank you.
Ontario Power Generation	In general this paper provides a fair and accurate reflection of the limitations to the dispatch capabilities of hydroelectric and nuclear generating facilities.	Other	Thank-you
Ontario Water Power Association	The paper provides a good overview of the practical limitations on the dispatch capabilities of waterpower facilities in Ontario and takes a reasoned and reasonable approach to the establishment of floor prices for wind and/or solar generation.	Other	Thank-you
Power Advisory LLC	Overall, the Discussion Paper requires additional analysis prior to reaching the conclusion of a relative dispatch order that dispatches nuclear generation and must-run hydroelectric generation ahead of variable generation therefore resulting in a framework that will economically curtail variable generation ahead of must-run hydroelectric generation and nuclear generation. Based on the limited analysis conveyed in the Discussion Paper, the proposed relative dispatch order appears to be arrived at prematurely.	Analysis	Thank you. The IESO has conducted an economic, regulatory, and environmental analysis which has be provided in an accompanying presentation. Using coarse hydro electric spill and/or nuclear manoeuvres results in an over curtailment and thus requires replacement energy that results in higher cost and carbon emissions.
Power Workers Union	The PWU generally agrees with the limitations that the IESO has identified.	Other	Thank-you
Power Workers Union	The IESO should also consider opportunities related to various types of generation. The IESO has indicated that under the proposed changes wind and solar will have new opportunities to earn incremental revenue. These factors should be considered in the assessment of Floor Prices.	Clarification	Consistent with Renewable Integration Design Principle 11, the IESO will look to include renewable resources into other aspects of the IESO administered markets. As an ongoing expectation, the IESO will consider the established floor prices as market conditions change.
Power Workers Union	The PWU notes that manoeuvring nuclear for SBG can have significant cost impacts, and maintenance and operational impacts. For nuclear a single large manoeuvre is preferred to multiple smaller manoeuvres.	Clarification	Thank-you for the additional clarity relating to nuclear operational impact. Although nuclear dispatch is out of scope of the Renewables Integration Initiative it should be noted that the IESO works with generation owners and will respect the technical limitations these resources owners identify.

Respondent Name	Q2. Are there limitations that were not identified in the Dispatch Order for Baseload Generation Discussion Paper?	Response Type	IESO Response
Brookfield renewable Power Inc	The contractual issues were intentionally put out of scope of the dispatch order determination. Since most of the generation in IESO is contracted, we are of the opinion that contractual constraints are an essential part of the analysis to determine the dispatch order and should therefore be part of the solution.	Contract	The IESO did consider contract implications and, specifically for the purpose of cost and environmental impact, assumed the "worst case" from a ratepayer perspective. This meant that all curtailed energy would be paid at the contract rate. Any other assumption would show that renewable curtailment with its current no pay contract structure (RES or FiT) would be less expensive. The IESO appreciates the challenges you have raised and will work with the OPA to coordinate rule and contract changes, provided it does not jeopardize the needs of the system operation. However, the negotiation and future contract design is out of scope for SE-91.
Bruce Power Marketing	Derating by condenser steam discharge valves are dependent on the length of time. The time limits depend upon reactor power and the amount of steam discharged through the valves.	Technical detail	Thank-you
Enbridge Inc.	The Discussion Paper places considerable emphasis on the dispatchability, equipment restrictions and regulatory issues facing hydroelectric and nuclear, and only briefly discussed a very small segment of the numerous issues identified by wind and solar generators in the stakeholder process. Enbridge does not deny that, with some exceptions, wind farms are able to reduce their output within 5-minute dispatch intervals. However, the flexibility of such generation should be rewarded rather than penalized, while being compensated for increased maintenance requirements and reduction in the operating life of components.	Technical detail	Thank-you. The IESO assumed that all curtailed energy would be paid at the current contract rate, and has not seen the need to pay more for the flexibility that is already built in to wind facilities.
Ontario Power Generation	The IESO proposes that the relative dispatch order for baseload generation should be wind and solar, hydroelectric, then nuclear. The ordering cannot be stated quite so simplistically. Hydroelectric resources can span a wide range of flexibilities and the operators of these facilities must maintain the ability to offer these resources in a merit order that will ensure efficient and safe operation. Imposing a floor price on hydroelectric resources would not be practical. Hydroelectric generators have sufficient economic drivers to ensure that their offers for these resources are economically rational.	Technical detail	Thank-you. The IESO acknowledges these characteristics and expects to develop an approach that will continue to ensure all resource types can offer in a manner that results in efficient and safe operation.
Ontario Water Power Association	The IESO is also accurate in referencing the restrictions imposed by water management plans pursuant to the LRIA and the multiplicity of social, economic and environmental values that can constitute the basis for such restrictions. It should be noted that non-compliance with a plan (e.g. water levels and flows) is subject to unique penalty provisions of the legislation. Section 28(2) (b) prescribes that a person is guilty of an offence if the person fails to comply with the approved water management plan. In addition to the standard fines and/or imprisonment penalty provisions, the Act provides that the fine may be increased by an amount equal to the monetary benefit that was acquired by non-compliance, removing any financial incentive to operate in a manner other than is prescribed in the plan.	Technical detail	Thank-you
Power Advisory LLC	In addition to the points regarding further analysis of forecast oversupply, transmission congestion, and generation curtailment, additional analysis is needed regarding the technical limitations of baseload generation identified in the Discussion Paper.	Clarification	The IESO believes that Ontario will experience periods of oversupply for the foreseeable future. The IESO expects to share additional information that was used to develop the discussion paper.
Power Workers Union	The Discussion Paper should note that solar and wind units are smaller increments of capacity per unit such that the IESO can more easily manage many SBG events using these smaller increments compared to the larger increments of capacity associated with nuclear facilities.	Technical detail	Thank-you
Robert Cary & Associates Inc	We note that even as recently as 3rd Dec, hydroelectric facilities on the Niagara and St Lawrence rivers have ramped up significantly in hours of negative prices. We find this puzzling, as we cannot see spillway management as a problem at those facilities. It is not clear from the IESO's discussion paper why floor prices for such generation should be below floor prices for wind or solar generation.	Clarification	As discussed at the Nov 21 Floor Price Focus Group session by both the IESO and a member of the stakeholder group, hydro electric facilities are required to meet various safety and regulatory obligations by operating and/or spilling as their obligations dictate. Where spill is unavailable, facilities are required to generate in order to meet these obligations. These obligations may present themselves at any time of day just as the wind may blow at anytime of the day. Safety and regulatory obligations will take precedence.

Respondent Name	Q3. Are there other factors that should be considered when determining a dispatch order for baseload generation?	Response Type	IESO Response
Ontario Water Power Association	In addition, the provisions of regulation with respect to waterpower resource royalties and rentals bears mention. Under this framework (Gross Revenue Charge), waterpower facilities are taxed at a rate linked to the generation produced, even when prices fall below zero (0). In this regard, we agree with OPG's recommendation that any hydroelectric generator whose only alternative is to spill water should it be dispatched below its economic offers should be considered as baseload generation. Given the existence of water rentals, it is economically efficient for generators to offer available hydroelectric energy as a positive incremental cost and be prepared to spill water rather than operate at a loss.	Other	Thank-you
Power Advisory LLC	Other than IESO references made to their present 18-Month Outlook document provided at the November 21, 2011 Floor Price Focus Group, stakeholders require additional analysis regarding the following information: a. Forecast oversupply beyond the timeframe projected in the 18-Month Outlook b. Forecast of transmission constraints and congested generation on a zonal basis within and beyond the timeframe projected in the 18-Month Outlook c. Forecast curtailment of generation within zones where transmission constraints prevent energy from congested generation to be successfully injected onto the IESO-Controlled Grid (ICG) d. Overall power system costs associated with scheduling and dispatching all generation units under different oversupply scenarios, as stakeholders and market participants need to understand these estimated cost and applicable scenarios is in order to facilitate proper discussion around potential solutions	Out of Scope	Thank you. The IESO has conducted an economic and environmental analysis which will be provided in an accompanying presentation. Beyond the accompanying presentation, and specifically for the items identified within parts (a), (b) & (c), the IESO does not intend to forecast beyond its current publicly available products.
Power Advisory LLC	Even though the paper states that the IESO is "seeking to develop a dispatch order for baseload generation", the primary question should be whether distinct offer price floors for various baseload generators should be established at all, or why wind and solar generation (as opposed to nuclear generation or must-run hydroelectric generation) are in all cases the preferred alternative for priority economic curtailment.	Clarification	Thank you. This will be discussed during the development of mechanisms as part of the Floor Price Focus Group activities.
Power Advisory LLC	Generators should not be restricted by rules that restrict their offer prices by different and distinct price levels. No other North American jurisdiction with a similar wholesale electricity spot market provides for distinct offer price floors based on generator type differentiated by fuel.	Clarification	Ontario is the only jurisdiction with a two schedule system and the contract structures that incent non-marginal behaviour. As such, there has been no valid precedent to consider for adoption.
Power Advisory LLC	It is essential that the IESO first consider broader market design implications in terms of inadvertently creating inefficiencies in other areas (e.g., 'seams' issues regarding intertie transactions, etc.) if distinct offer price floors for baseload generation type are to be established. For example, consideration needs to be given to the design integration and dispatch coordination of supply resources that are 'locked-in' to produce and inject energy onto the ICG for an applicable real-time dispatch hour (e.g., self-scheduling generation facilities and import transactions) and whether the application of offer price floors and applicable dispatch instructions (both hourly and intra-hour) result in efficient scheduling and dispatch solutions for all generators and dispatchable loads to meet power system needs.	Clarification	Thank you. The IESO agrees and will ensure that all solutions will be measured against their impact to the market and its efficient and reliable operation.

Respondent Name	Q3. Are there other factors that should be considered when determining a dispatch order for baseload generation?	Response Type	IESO Response
Power Advisory LLC	The application of distinct offer price floors for baseload generation types should consider: a. When offer price floors will apply (e.g., always, during specific timeframes, etc.), therefore requiring clear definition of an SBG event and when Ontario's power system is experiencing an SBG event b. Dynamic application of SBG events in so far as different SBG events exist (e.g., short-term events lasting a few hours versus longer-term events lasting several weeks) potentially requiring specific solutions matched to different SBG events (e.g., matching outage coordination and maintenance schedules for sufficiently large baseload generation facilities and the feasibility of having scheduled shutdowns for these facilities in those periods where SBG events are projected to occur for prolonged periods of time) c. Any differences between global SBG events versus local SBG events and whether different offer price floors are needed for different areas of the ICG (even for the same baseload generation type)	Clarification	The IESO has conducted an economic and environmental analysis which is provided in an accompanying presentation. The Floor Price Focus Group effort is targeting the efficient operation of the ICG under all conditions, and it is not apparent how any variation in the application of floor prices for the various scenarios put forth would yield a more efficient result. The IESO also expects to provide further clarifications to what is defined as SBG (inline with OPA contracts). We believe this would benefit stakeholders as we begin to develop the frame work for floor prices.
Power Workers Union	Prior to finalizing its recommendations for floor prices the IESO should consider and assess the potential impacts of the recommendations from the Market Forum currently underway. The Market Forum's draft recommendations include proposals to encourage dispatchable load. Should these proposed changes for dispatchable loads be approved, the IESO should plan to use this additional flexibility to mitigate the impacts of variable generation on SBG.	Out of Scope	The activities of the Market Forum and other market development initiatives will be monitored to ensure policy consistency. However, it is unlikely that the changes proposed for consumers would obviate the need for floor prices and renewable dispatch.
Power Workers Union	The IESO will need to deal effectively with local congestion in southern Ontario and flows into Michigan or Toronto. Loop flows could also be impacted.	Other	Thank-you
Power Workers Union	Market rules for exports and imports should be reassessed in the context of the dramatically increased variable generation capacity.	Out of Scope	Although out of scope for SE-91, the IESO is considering changes to intertie processes through SE- 94. The IESO will study the effect of an export tariff during various conditions, including times of SBG. The IESO will continue to monitor the discussions of both stakeholder engagement processes and ensure consistency. For more information on SE-94, please visit http://www.ieso.ca/imoweb/consult/consult_se94.asp
Power Workers Union	Floor prices should be reviewed and updated annually to reflect the most current marginal costs and changed circumstances. Stakeholders should be advised of revisions one month prior to implementation.	Other	Thank you. Over time, the IESO will continue to monitor and re-examine the impact of mechanisms established through SE-91 and the Floor Price Focus Group. The IESO will endeavour to do so in an open and transparent process.
Power Workers Union	The IESO should consider export tariff solutions to global oversupply. The IESO defines global oversupply as "when demand in Ontario is lower than the amount of baseload generation that is online and which wants to continue to run". Under global oversupply the Market Clearing Price is typically negative, meaning that all online generators are willing to pay in order to stay online for economic, equipment, regulatory or safety reasons. The IESO should continue to work to minimize the detrimental economic and operational impacts of SBG.	Out of Scope	Although out of scope for SE-91, the IESO is considering changes to intertie processes through SE- 94. The IESO will study the effect of an export tariff during various conditions, including times of SBG. The IESO will continue to monitor the discussions of both stakeholder engagement processes and ensure consistency. For more information on SE-94, please visit http://www.ieso.ca/imoweb/consult/consult_se94.asp
Robert Cary & Associates Inc	The floor price framework now being proposed is a complete departure from this fundamental principle of incentive framework rather than compulsion. The proposal introduces a level of restriction whereby market participants would be compelled to offer production in a way that (absent full OPA contract compensation for foregone energy revenues) would conflict with their proper economic interests. We do not consider that the fundamental nature of this change has been fully or properly considered to this point. We also believe that this fundamental change of principle can be avoided.	Contract	It should be noted that the IESO's preferred option is to have natural market incentives drive the behaviour of the participant when determining offer prices, and agrees with this fundamental point. However, Ontario operates a hybrid market which, given the incentives created by certain types of contracts, makes these changes necessary. The IESO will forward your contract concern to the OPA

SCHEDULE Q

Please see attached

Respondent Name	Q1. Do you agree with the limitations outlined in the Dispatch Order for Baseload Generation discussion paper?	Response Type	IESO Response
Brookfield renewable Power Inc	It is our understanding that the IESO did take into account environmental and regulatory constraints to determine the proposed dispatch order. Being a hydro-electric producer, Brookfield fully appreciates the importance of such constraints and commends the IESO on that front.	Other	Thank you. The IESO has conducted an economic, regulatory, and environmental analysis which has be provided in an accompanying presentation.
Ontario Power Generation	In general this paper provides a fair and accurate reflection of the limitations to the dispatch capabilities of hydroelectric and nuclear generating facilities.	Other	Thank-you
Ontario Water Power Association	The paper provides a good overview of the practical limitations on the dispatch capabilities of waterpower facilities in Ontario and takes a reasoned and reasonable approach to the establishment of floor prices for wind and/or solar generation.	Other	Thank-you
Power Advisory LLC	Overall, the Discussion Paper requires additional analysis prior to reaching the conclusion of a relative dispatch order that dispatches nuclear generation and must-run hydroelectric generation ahead of variable generation therefore resulting in a framework that will economically curtail variable generation ahead of must-run hydroelectric generation and nuclear generation. Based on the limited analysis conveyed in the Discussion Paper, the proposed relative dispatch order appears to be arrived at prematurely.	Analysis	Thank you. The IESO has conducted an economic, regulatory, and environmental analysis which has be provided in an accompanying presentation. Using coarse hydro electric spill and/or nuclear maneouvers results in an over curtailment and thus requires replacement energy that results in higher cost and carbon emissions.
Power Workers Union	The PWU generally agrees with the limitations that the IESO has identified.	Other	Thank-you
Power Workers Union	The IESO should also consider opportunities related to various types of generation. The IESO has indicated that under the proposed changes wind and solar will have new opportunities to earn incremental revenue. These factors should be considered in the assessment of Floor Prices.	Clarification	Consistent with Renewable Integration Design Principle 11, the IESO will look to include renewable resources into other aspects of the IESO administered markets. As an ongoing expectation, the IESO will consider the established floor prices as market conditions change.
Power Workers Union	The PWU notes that manoeuvring nuclear for SBG can have significant cost impacts, and maintenance and operational impacts. For nuclear a single large manoeuvre is preferred to multiple smaller manoeuvres.	Clarification	Thank-you for the additional clarity relating to nuclear operational impact. Although nuclear dispatch is out of scope of the Renewables Integration Initiative it should be noted that the IESO works with generation owners and will respect the technical limitations these resources owners identify.

Respondent Name	Q2. Are there limitations that were not identified in the Dispatch Order for Baseload Generation Discussion Paper?	Response Type	IESO Response
Brookfield renewable Power Inc	The contractual issues were intentionally put out of scope of the dispatch order determination. Since most of the generation in IESO is contracted, we are of the opinion that contractual constraints are an essential part of the analysis to determine the dispatch order and should therefore be part of the solution.	Contract	The IESO did consider contract implications and, specifically for the purpose of cost and environmental impact, assumed the "worst case" from a ratepayer perspective. This meant that all curtailed energy would be paid at the contract rate. Any other assumption would show that renewable curtailment with its current no pay contract structure (RES or FiT) would be less expensive. The IESO appreciates the challenges you have raised and will work with the OPA to coordinate rule and contract changes, provided it does not jeopardize the needs of the system operation. However, the negotiation and future contract design is out of scope for SE-91.
Bruce Power Marketing	Derating by condenser steam discharge valves are dependent on the length of time. The time limits depend upon reactor power and the amount of steam discharged through the valves.	Technical detail	Thank-you
Ontario Power Generation	The IESO proposes that the relative dispatch order for baseload generation should be wind and solar, hydroelectric, then nuclear. The ordering cannot be stated quite so simplistically. Hydroelectric resources can span a wide range of flexibilities and the operators of these facilities must maintain the ability to offer these resources in a merit order that will ensure efficient and safe operation. Imposing a floor price on hydroelectric resources would not be practical. Hydroelectric generators have sufficient economic drivers to ensure that their offers for these resources are economically rational.	Technical detail	Thank-you. The IESO acknowledges these characteristics and expects to develop an approach that will continue to ensure all resource types can offer in a manner that results in efficient and safe operation.
Ontario Water Power Association	The IESO is also accurate in referencing the restrictions imposed by water management plans pursuant to the LRIA and the multiplicity of social, economic and environmental values that can constitute the basis for such restrictions. It should be noted that non-compliance with a plan (e.g. water levels and flows) is subject to unique penalty provisions of the legislation. Section 28(2) (b) prescribes that a person is guilty of an offence if the person fails to comply with the approved water management plan. In addition to the standard fines and/or imprisonment penalty provisions, the Act provides that the fine may be increased by an amount equal to the monetary benefit that was acquired by non-compliance, removing any financial incentive to operate in a manner other than is prescribed in the plan.	Technical detail	Thank-you
Power Advisory LLC	In addition to the points regarding further analysis of forecast oversupply, transmission congestion, and generation curtailment, additional analysis is needed regarding the technical limitations of baseload generation identified in the Discussion Paper.	Further detail required	More information has been requested from respondent. The IESO is unclear as to what additional information is required beyond the technical limitations identified within the discussion paper (including supplements within the stakeholder feedback).
Power Workers Union	The Discussion Paper should note that solar and wind units are smaller increments of capacity per unit such that the IESO can more easily manage many SBG events using these smaller increments compared to the larger increments of capacity associated with nuclear facilities.	Technical detail	Thank-you
Robert Cary & Associates Inc	We note that even as recently as 3rd Dec, hydroelectric facilities on the Niagara and St Lawrence rivers have ramped up significantly in hours of negative prices. We find this puzzling, as we cannot see spillway management as a problem at those facilities. It is not clear from the IESO's discussion paper why floor prices for such generation should be below floor prices for wind or solar generation.	Clarification	As disscussed at the Nov 21 Floor Price Focus Group session by both the IESO and a member of the stakeholder group, hydro electric facilities are required to meet various safety and regulatory obligations by operating and/or spilling as their obligations dictate. Where spill is unavailable, facilities are required to generate in order to meet these obligations. These obligations may present themselves at any time of day just as the wind may blow at anytime of the day. Safety and regulatory obligations will take precedence.

Respondent Name	Q2. Are there limitations that were not identified in the Dispatch Order for Baseload Generation Discussion Paper?	Response Type	IESO Response
Robert Cary & Associates Inc	In general, as noted by the IESO, wind facilities can be dispatched down to say 10% capacity and continue operating. Beyond that point wind facilities are likely to require to be stopped. This always introduces some risk of delay in restarting. This is particularly significant in certain seasons and ambient conditions, when restart of a facility can take several hours. Any floor provisions applicable to wind should therefore reflect the two steps, with the first (lowest) price increment set below floor prices for hydroelectric and for nuclear steam dump.	Technical detail	Thank you. The IESO will consider this factor during the development of mechanisms as part of the Floor Price Focus Group activities. The IESO will work with stakeholders to develop a process that acknowledges this particular point.
Robert Cary & Associates Inc	We note that nuclear curtailment can be implemented in any one of three ways: steam dump; reactor chemistry; and shutdown. The first two have part load capability only, but are recoverable without the 48 to 72 hour min shutdown period associated with any full unit shutdown. We would therefore expect that the capability represented by the first two steps would have a higher price floor than the unit shutdown.	Technical detail	Thank-you
Robert Cary & Associates Inc	We would also appreciate clarity assurance that the nuclear curtailment rules will be the same as the wind and solar curtailment rules, albeit with different floor prices.	Clarification	More information has been requested from respondent. However, the IESO would like to note that all dispatch obligations are subject to common rules and expectations, as well as to the compliance of those instructions.

Respondent Name	Q3. Are there other factors that should be considered when determining a dispatch order for baseload generation?	Response Type	IESO Response
Brookfield renewable Power Inc	A better approach would be one akin to the behaviour of a fully contracted vertically integrated utility. Under a surplus situation, such utility would look at the most efficient ways to limit their financial exposures by either increase demand through exports or reduce the output of its contracted generation fleet. It will use the least expensive measure for customers, given the contractual arrangements, to alleviate the surplus situation. In order to achieve an economic efficient solution, we think the IESO should first attempt to fully utilize the interties capacity available during SBG situation before it dispatched down generating units.	Out of Scope	Thank-you. The IESO agrees that interties can be an effective means to mitigate SBG, but these transactions must remain efficient. Through SE- 94 the IESO will study the effect of an export tariff during various conditions, including times of SBG. The IESO will continue to monitor the discussions of both stakeholder engagement procceses and ensure consistency. For more information on SE-94, please visit http://www.ieso.ca/imoweb/consult/consult_se94.asp
Brookfield renewable Power Inc	Under this dispatch down process a unit specific floor price should be developed based on the cost of operation of each generating unit. The determination of these costs should incorporate safety, environmental, regulatory, facility mechanical and contractual constraints associated with each part of the IESO generation portfolio.	Other	Thank you. The IESO will consider this factor during the development of mechanisms part of the Floor Price Focus Group activities.
Brookfield renewable Power Inc	It appears that there will simply be one floor price for all nuclear generation regardless of the various technical capabilities of the different units across the province. Indeed it may be more economical, under certain conditions, to dispatch down 300MW of nuclear generation through operations of CSDs than dispatching down other types of generation.	Clarification	The IESO has not determined the structure of the floor price mechanism. This will be developed as part of the Floor Price Focus Group activity. However, the structure will be developed with considerations to overall cost effectiveness.
Ontario Power Generation	In the white paper the IESO discusses operational needs for proactively dispatching wind and solar resources. It must be acknowledged that this type of operation requires the IESO to take out-of-market actions. The IESO has stated that market participants should have a full perspective and appreciation for the overall impacts stemming from the recommendations brought forth from SE-91. Therefore, rules, processes, and transparency issues associated with this type of operation should be addressed in this stakeholder engagement process.	Other	Thank-you
Ontario Water Power Association	In addition, the provisions of regulation with respect to waterpower resource royalties and rentals bears mention. Under this framework (Gross Revenue Charge), waterpower facilities are taxed at a rate linked to the generation produced, even when prices fall below zero (0). In this regard, we agree with OPG's recommendation that any hydroelectric generator whose only alternative is to spill water should it be dispatched below its economic offers should be considered as baseload generation. Given the existence of water rentals, it is economically efficient for generators to offer available hydroelectric energy as a positive incremental cost and be prepared to spill water rather than operate at	Other	Thank-you
Power Advisory LLC	Other than IESO references made to their present 18-Month Outlook document provided at the November 21, 2011 Floor Price Focus Group, stakeholders require additional analysis regarding the following information: a. Forecast oversupply beyond the timeframe projected in the 18-Month Outlook b. Forecast of transmission constraints and congested generation on a zonal basis within and beyond the timeframe projected in the 18-Month Outlook c. Forecast curtailment of generation within zones where transmission constraints prevent energy from congested generation to be successfully injected onto the IESO-Controlled Grid (ICG) d. Overall power system costs associated with scheduling and dispatching all generation units under different oversupply scenarios, as stakeholders and market participants need to understand these estimated cost and applicable scenarios is in order to facilitate proper discussion around potential solutions	Out of Scope	Thank you. The IESO has conducted an economic and environmental analysis which will be provided in an accompanying presentation. Beyond the accompanyingmpanyingmpanying presentation, and specifically for the items identified within parts (a), (b) & (c), the IESO does not intend to forecast beyond its current publicly available products.
Power Advisory LLC	Even though the paper states that the IESO is "seeking to develop a dispatch order for baseload generation", the primary question should be whether distinct offer price floors for various baseload generators should be established at all, or why wind and solar generation (as opposed to nuclear generation or must-run hydroelectric generation) are in all cases the preferred alternative for priority economic curtailment.	Clarification	Thank you. This will be discussed during the development of mechanisms as part of the Floor Price Focus Group activities.

Respondent Name	Q3. Are there other factors that should be considered when determining a dispatch order for baseload generation?	Response Type	IESO Response
Power Advisory LLC	Generators should not be restricted by rules that restrict their offer prices by different and distinct price levels. No other North American jurisdiction with a similar wholesale electricity spot market provides for distinct offer price floors based on generator type differentiated by fuel.	Clarification	Ontario is the only jurisdiction with a two schedule system and the contract structures that incent non-marginal behaviour. As such, there has been no valid precedent to consider for adoption.
Power Advisory LLC	It is essential that the IESO first consider broader market design implications in terms of inadvertently creating inefficiencies in other areas (e.g., 'seams' issues regarding intertie transactions, etc.) if distinct offer price floors for baseload generation type are to be established. For example, consideration needs to be given to the design integration and dispatch coordination of supply resources that are 'locked-in' to produce and inject energy onto the ICG for an applicable real-time dispatch hour (e.g., self-scheduling generation facilities and import transactions) and whether the application of offer price floors and applicable dispatch instructions (both hourly and intra-hour) result in efficient scheduling and dispatch solutions for all generators and dispatchable loads to meet power system needs.	Clarification	Thank you. The IESO agrees and will ensure that all solutions will be measured against their impact to the market and its efficient and reliable operation.
Power Advisory LLC	The application of distinct offer price floors for baseload generation types should consider: a. When offer price floors will apply (e.g., always, during specific timeframes, etc.), therefore requiring clear definition of an SBG event and when Ontario's power system is experiencing an SBG event b. Dynamic application of SBG events in so far as different SBG events exist (e.g., short-term events lasting a few hours versus longer-term events lasting several weeks) potentially requiring specific solutions matched to different SBG events (e.g., matching outage coordination and maintenance schedules for sufficiently large baseload generation facilities and the feasibility of having scheduled shutdowns for these facilities in those periods where SBG events are projected to occur for prolonged periods of time) c. Any differences between global SBG events versus local SBG events and whether different offer price floors are needed for different areas of the ICG (even for the same baseload generation type)	Further detail required	The IESO has conducted an economic and environmental analysis which is provided in an accompanying presentation. The Floor Price Focus Group effort is targeting the efficient operation of the ICG under all conditions, and it is not apparent how any variation in the application of floor prices for the various scenarios put forth would yield a more efficient result.
Power Workers Union	Prior to finalizing its recommendations for floor prices the IESO should consider and assess the potential impacts of the recommendations from the Market Forum currently underway. The Market Forum's draft recommendations include proposals to encourage dispatchable load. Should these proposed changes for dispatchable loads be approved, the IESO should plan to use this additional flexibility to mitigate the impacts of variable generation on SBG.	Out of Scope	The activities of the Market Forum and other market development initiatives will be monitored to ensure policy consistency. However, it is unlikely that the changes proposed for consumers would obviate the need for floor prices and renewable dispatch.
Power Workers Union	The IESO will need to deal effectively with local congestion in southern Ontario and flows into Michigan or Toronto. Loop flows could also be impacted.	Other	Thank-you
Power Workers Union	Market rules for exports and imports should be reassessed in the context of the dramatically increased variable generation capacity.	Out of Scope	Although out of scope for SE-91, the IESO is considering changes to intertie processes through SE- 94. The IESO will study the effect of an export tariff during various conditions, including times of SBG. The IESO will continue to monitor the discussions of both stakeholder engagement procceses and ensure consistency. For more information on SE-94, please visit http://www.ieso.ca/imoweb/consult/consult_se94.asp
Power Workers Union	Floor prices should be reviewed and updated annually to reflect the most current marginal costs and changed circumstances. Stakeholders should be advised of revisions one month prior to implementation.	Other	Thank you. Over time, the IESO will continue to montior and re-examine the impact of mechanisms established through SE-91 and the Floor Price Focus Group. The IESO will endeavour to do so in an open and transparent process.

Respondent Name	Q3. Are there other factors that should be considered when determining a dispatch order for baseload generation?	Response Type	IESO Response
Power Workers Union	The IESO should consider export tariff solutions to global oversupply. The IESO defines global oversupply as "when demand in Ontario is lower than the amount of baseload generation that is online and which wants to continue to run". Under global oversupply the Market Clearing Price is typically negative, meaning that all online generators are willing to pay in order to stay online for economic, equipment, regulatory or safety reasons. The IESO should continue to work to minimize the detrimental economic and operational impacts of SBG.	Out of Scope	Although out of scope for SE-91, the IESO is considering changes to intertie processes through SE- 94. The IESO will study the effect of an export tariff during various conditions, including times of SBG. The IESO will continue to monitor the discussions of both stakeholder engagement procceses and ensure consistency. For more information on SE-94, please visit http://www.ieso.ca/imoweb/consult/consult_se94.asp
Robert Cary & Associates Inc	The floor price framework now being proposed is a complete departure from this fundamental principle of incentive framework rather than compulsion. The proposal introduces a level of restriction whereby market participants would be compelled to offer production in a way that (absent full OPA contract compensation for foregone energy revenues) would conflict with their proper economic interests. We do not consider that the fundamental nature of this change has been fully or properly considered to this point. We also believe that this fundamental change of principle can be avoided.	Contract	It should be noted that the IESO's preferred option is to have natural market incentives drive the behaviour of the participant when determining offer prices, and agrees with this fundamental point. However, Ontario operates a hybrid market which, given the incentives created by certain types of contracts, makes these changes necessary. The IESO will forwarrd your contract concern to the OPA
Robert Cary & Associates Inc	The floor price framework also introduces other changes to the operation of the market as a whole. We have not yet seen any analysis by the IESO of these impacts. A common floor price for a large quantity of generation will mostly preclude price excursions below that floor price. Unrestricted generators will be sheltered from the risk of such negative price excursions, so that their offer price strategies may become even less sensitive to SBG exposures.	Clarification	Thank you. The IESO has conducted an economic, regulatory, and environmental analysis which has been provided in an accompanying presentation. However, this will be discussed during the development of mechanisms as part of the Floor Price Focus Group activities.
Robert Cary & Associates Inc	The IESO has to date used non-market control actions such as the constraint down of Bruce unit production to address SBG situations. This is consistent with use of control actions to prevent imports into such surplus situations. If in the future the IESO will be relying on market dispatch with restricted offer prices to address SBG situations, will it still be in a position to use control actions to mitigate imports? Is there a potential that generators in other markets will be able to force Ontario imports, and thus force additional curtailment of Ontario wind resources, by offering to Ontario at prices lower than the known floor prices?	Out of Scope	The IESO will consider and evaluate all options on an ongoing basis. At this time we do not foresee the removal of this control action.

Respondent Name	Q4. General Comments	Response Type	IESO Response
Brookfield renewable Power Inc	Another important aspect that is not addressed in the white paper is the role played by exports in SBG period. Before dispatching down internal generation, the proposed design should incent an increase in demand through exports(s) to neighbouring systems. In order to reduce SBG, IESO should favour the access of external load to Ontario excess power. It would make no sense to curtail down internal generation when there is still room on interties that would inevitably reduce the SBG at limited costs. This would be achieved by reducing exports fees as it would become more economic than compensating internal generation to reduce their output during SBG situation.	Out of scope	It should be noted that the export tariff is not within the IESO's control but through SE- 94 the IESO will study the effect of an export tariff during various conditions, including times of SBG. The IESO will continue to monitor the discussions of both stakeholder engagement procceses and ensure consistency. For more information on SE-94, please visit http://www.ieso.ca/imoweb/consult/consult_se94.asp
Brookfield renewable Power Inc	The benefits from reducing SBG are for all Ontarians. Therefore, the cost of dispatching down units that were designed and contracted to be non-dispatchable should be compensated through IESO uplifts charges like it is the case for CMSC payments.	Clarification	The IESO in its Renewable Integration Design Principles stated that CMSC would be paid consistent with the rules to all dispatched resources regardless of fuel type.
Brookfield renewable Power Inc	IESO should approach the reduction in SBG in a holistic fashion and clearly link this Stakeholder Engagement with Export Transmission Tariff study (SE-94).	Out of scope	The export tariff study is considering the impact of SBG. Although the IESO agrees that the export fee can have an impact it should be noted that it is unlikely that even with the complete elimination of the export fee the needs for renewable dispatch will change materially.
Ontario Power Generation	OPG would like to see the IESO expand and clarify the definition of baseload generation. The IESO generally considers a hydroelectric facility to be baseload only if it must generate due to various regulatory or public safety concerns and is priced negatively. Any hydroelectric generator whose only alternative is to spill water should it be dispatched below its economic offers should be considered as baseload generation. Given the existence of water rental costs, it is economically efficient for generators to offer available hydroelectric energy as a positive incremental cost and be prepared to spill water rather than operate at a loss. Which facilities fall into this baseload category is highly situational and can change frequently based on seasonal, daily, or hourly local conditions. Consequently, the market price does not have to be negative to be experiencing surplus baseload generation conditions.	Technical detail	Thank you.
Ontario Power Generation	The IESO is currently undertaking a study of the Export Transmission Tariff as part of SE-94 and this presents an opportunity to decrease SBG and alleviate some of the challenges of dispatching baseload generation.	Out of scope	The export tariff study is considering the impact of SBG. Although the IESO agrees that the export fee can have an impact it should be noted that it is unlikely that even with the complete elimination of the export fee the needs for renewable dispatch will change materially. Through SE- 94 the IESO will study the effect of an export tariff during various conditions, including times of SBG. The IESO will continue to monitor the discussions of both stakeholder engagement procceses and ensure consistency. For more information on SE-94, please visit http://www.ieso.ca/imoweb/consult/consult_se94.asp
Ontario Water Power Association	We also support the view that imposing a floor price on hydroelectric resources would not be practical. As OPG has correctly noted, hydroelectric resources can span a wide range of flexibilities and the operators of these facilities must maintain the ability to offer these resources in a merit order that will ensure efficient and safe operation.	Technical detail	Thank-you.
Power Advisory LLC	In light of the IESO's SE-91 Renewable Integration Initiative, it is imperative to state that present ambiguity and lack of details regarding the direction of future amendments to the IESO Market Rules will frustrate the financing and development of these generation projects. Specifically, changes under consideration that will result in energy from wind and solar generation being curtailed and/or dispatched off more frequently than under the present framework in the Market Rules represent material differences in the Market Rules that could not have been contemplated at the time developers executed their procurement contracts with the OPA.	Contract	Thank-you. Your concern will be passed on to the OPA.
Power Advisory LLC	Further, and even more problematic, the OPA has not made any declarations at this point as to how applicable contracts will be amended in light of forthcoming changes to the Market Rules.	Contract	Thank-you. Your concern will be passed on to the OPA.

Respondent Name	Q4. General Comments	Response Type	IESO Response
Power Advisory LLC	Final amendments to the Market Rules cannot be accepted by stakeholders and market participants until there is a full understanding of the OPA's position on applicable contract changes. Applicable amendments to the Market Rules go 'hand in glove' with applicable changes to OPA contracts. It does not make sense to decide one without an idea towards resolution on the other.	Contract	The IESO and OPA will endeavour to work together such that the timing for rules and contract changes go "hand in glove" provided it does not jeopardize the needs of the system operation.
Power Advisory LLC	Neither in any IESO documents or proposals, nor in the FIT contracts or supporting documents, is the term 'local oversupply' defined in sufficient detail to distinguish it from 'global oversupply'. Global oversupply has been loosely defined in the FIT contract with all other curtailment being ascribed to local oversupply.	Contract	Thank-you. The IESO will continue to provide information to the OPA as requested to further facilitate a definition for 'local SBG'. Your concern will be passed on to the OPA.
Power Advisory LLC	In order to understand the practices in other jurisdictions so as to help develop solutions for the Ontario's electricity market, the Consortium requests that the IESO provide stakeholders with research and analysis involving a benchmark from at least the U.S. jurisdictions regarding the integration of variable generation relating to scheduling, dispatching, and the compensation and application of offer/bid/price caps (both positive and negative) to applicable generators.	Clarification	This may be discussed during the development of mechanisms as part of the Floor Price Focus Group activities. However, Ontario is the only jurisdiction with a two schedule system and the contract structures that incent non-marginal behaviour. As such, there has been no valid precedent to consider for adoption.
Power Advisory LLC	Current Ontario Government policies ultimately support and encourage the development of variable generation. Therefore, any amendments to the Market Rules should not frustrate achievement of this Government policy. In order to ensure that these policy goals and objectives are met, the IESO and the OPA should reach out to key stakeholders in a timely manner, including those that typically do not participate in IESO consultation processes (e.g., lenders and financiers), in order to increase their understanding of the issues and derive workable solutions.	Contract	The IESO stakeholdering process is an open forum for all concerned parties to participate in. In addition the IESO does actively seek out other opportunities to discuss the forthcoming changes with various stakeholders including those not typically engaged in IESO consultations. This concern will also be passed on to the OPA.
Power Advisory LLC	Given the Ontario Government's goals and objectives for the progressive and rapid uptake and development of renewable generation embodied in the Green Energy and Green Economy Act (2009) and the LTEP, applicable renewable generators who are working to meet these goals and objectives should not have to take on development and operational risks within the Market Rules or applicable OPA contracts that essentially result from the present oversupply and SBG in Ontario.	Further detail required	More information has been requested from respondent. The IESO understand that the FiT contract itself was built with provisions for "present oversupply and SBG in Ontario" including the Additional Contract Payment provisions.
Power Advisory LLC	the Consortium offers the following specific recommendations: a. Contract amendment discussions with the OPA and applicable variable generation developers/operators should begin immediately b. For stakeholders, market participants, and variable generators to properly assess impacts in the IAM, Market Rules, and OPA contracts, additional data/information is required regarding present and future oversupply scenarios/situations and any resulting dispatch instructions from the IESO resulting in curtailment orders to variable generators c. Consider alternate market mechanisms that can help address oversupply situations first prior to establishing distinct offer price floors for baseload generation types d. Additional supporting analysis that assesses unintended or inadvertent market design issues and consequences resulting from the application of any mechanism that may be used to address oversupply situations (including the application of distinct offer price floors for baseload generation types) e. If it is then determined that distinct offer price floors are required for baseload generation types, provide clear definition on what constitutes an oversupply situation and when offer price floors will be applicable f. Assess different applications of offer price floors or other mechanisms that may be more effective in addressing prolonged oversupply and SBG events	Part (a)-Contract Part (b)-Contract Part (c)-Clarification Parts (d), (e), (f)-Clarification	(Part a) - Your concern will be passed on to the OPA. (Part b) - The IESO is not intending to do any further analysis of the frequency and magnitude of dispatch for the reasons expressed previously articulated at the SE91 sessions. We will provide insight into the needs analysis already done. (Part c) - The IESO will present further detail and analysis on alternative options considered to a floor price, found in the accompanying presentation. (Parts d,e,f) - Will be considered as options gain definition.

Respondent Name	Q4. General Comments	Response Type	IESO Response
Power Workers Union	The IESO currently provides numerous forecasts as well as SBG forecasts. Combined with these existing forecasts and the new wind forecasting tools wind and solar generators will be better able to plan their maintenance schedules, factoring in the potential of SBG risk. Wind and solar should be required to monitor SBG forecasts and mitigate curtailment maintenance issues especially given the availability of the new IESO variable generation forecast system which the IESO expects to have operational in 2012.	Other	Thank you.
Power Workers Union	During stakeholder discussions the IESO stated that there will be circumstances under the new proposals where wind under local SBG can bid above $0 and get more revenue than under other markets or under the current IESO process. This revenue potential should be factored into the IESO's assessment of the marginal costs for wind when setting the floor price for wind and the OPA should factor this into their revised wind prices for future contracts and if amending current contracts.	Further detail required	More information has been requested from respondent.
Power Workers Union	The IESO should reassess how imports are treated in the Ontario market in parallel with implementation of the IESO Floor Price recommendations. Currently imports are committed to on a planned basis and priced the day ahead. If wind picks up during actual dispatch, there could be SBG causing hydroelectric or nuclear to be dispatched-off.	Clarification	Imports are re-evaluated every hour and are curtailed if they are contributing to SBG.
Power Workers Union	The IESO and OPA should follow through on the Minister's directive and ensure that all renewed contracts for NUGs are designed to be more sensitive to prevailing IESO dispatch requirements.	Other	Thank you. This concern will be passed along to the OPA. The IESO would like to note that the OPA currently has a process underway to review NUG contracts.
Power Workers Union	The IESO should not finalize recommendations on floor prices until the OPA has completed contract discussions with the variable generators. Generators and stakeholders must be fully aware of tradeoffs and costs associated with the proposed dispatch rules, floor prices and OPA contract amendments.	Contract	Thank-you. The IESO appreciates the challenges you have raised and will work with the OPA to coordinate rule and contract changes, provided it does not jeopardize the needs of the system operation. Your concern will be passed on to
Power Workers Union	If the IESO decides that floor prices should be based on the generators' marginal cost stakeholders must be advised of what those marginal costs are and how such marginal costs have been determined.	Clarification	This may be discussed during the development of mechanisms as part of the Floor Price Focus Group activities.
Power Workers Union	The IESO during stakeholder discussions indicated that the IESO and the OPA need to ensure clarity on the definition of local supply constraint (i.e. the OPA and generators need to confirm the definition of "a significant portion thereof"). This will be necessary to ensure that all stakeholders and operators understand when a local SBG event may occur and plan for such events.	Contract	Thank-you. The IESO will continue to provide information to the OPA as requested to further facilitate a definition for 'local SBG'. Your concern will be passed on to the OPA.
Robert Cary & Associates Inc	A contract structure that (i) provides full contract compensation for properly foregone energy production, and (ii) limits contract compensation to the difference between contract strike price plus EcoEnergy / WPPI benefit and non-negative HOEP, can achieve this without the need for market or contract restrictions on offer prices. Careful definition of the criteria for properly foregone energy production would incent offer behaviour close to zero, but with a degree of offer-price diversity according to each market participant's evaluation of risks and rewards.	Part (i)-Contract Part (ii)-Further detail needed	(Part i) - Thank-you. Your concern will be passed on to the OPA. (Part ii) - More clarification has been requested from respondent. It is unclear how this would work for regional oversupply that does not manifest in MCP. Also, there is a need to consider what issues would exist when dealing with the operational or ramp needs.
Robert Cary & Associates Inc	The concept of a curtailment ancillary service has been raised by the RES group on a few occasions and by Dachis and Dewees. It would allow generators otherwise incented to run at maximum production to offer prices at which they would reduce production to some specified level. It could be modeled as a dispatchable pseudo-load at the generation connection point. IESO settlement would be conceptually similar to that in place for existing competitive ancillary services.	Clarification	The IESO has reviewed the concept of a dispatch down service and does not see that it would lead to a beneficial improvement to the floor prices design. It is the IESO conclusion that it may lead to higher costs to ratepayers in the long run.
Robert Cary & Associates Inc	In proposing alternatives to the floor price regime, it becomes even more clear that the optimum solution, from an electricity system perspective, requires joint consideration of contracts and rules. The OPA contracts for base load and variable generation all provide incentives that are in conflict with the IESO's needs for renewable integration in the evolving supply mix as established by government in the years since the execution of RES I & RES II contracts. Solutions that emerge absent full and transparent OPA participation, and without joint and parallel consideration of contracts and rules have a high risk of being sub-optimal.	Contract	Thank-you. The IESO appreciates the challenges you have raised and will work with the OPA to coordinate rule and contract changes, provided it does not jeopardize the needs of the system operation. Your concern will be passed on to the OPA.

Respondent Name	Q4. General Comments	Response Type	IESO Response
Robert Cary & Associates Inc	We have expressed our concern in the Dispatch Technical Working Group at the lack of information on expected frequency or depth of wind, solar, hydroelectric and nuclear curtailments under the proposed frameworks. It seems to us that meaningful estimates, with confidence bands, are essential to an understanding of the impacts on different technologies under varying floor price sequence scenarios, and that this is properly a matter for the Floor Price discussions. We urge the IESO to collate and present the best available information as a basis for decision making.	Clarification	The IESO has conducted an economic and environmental analysis which will be provided in an accompanying presentation. Using coarse hydro electric spill and/or nuclear maneouvers results in an over curtailment and thus requires replacement energy that results in higher cost and carbon emissions.
Robert Cary & Associates Inc	We also seek some clarification of the quantum of market benefits expected from non-SBG curtailments. Absent some appreciation of the frequency and materiality of such events and their benefits, we find it hard to understand the basis for decision making in this area. We therefore look to the IESO to provide its best estimates of this information at the earliest opportunity.	Clarification	The IESO has conducted an economic and environmental analysis which will be provided in an accompanying presentation. Using coarse hydro electric spill and/or nuclear maneouvers results in an over curtailment and thus requires replacement energy that results in higher cost and carbon emissions.
Robert Cary & Associates Inc	From a market perspective, we would be concerned that nuclear facility ramp rates could preclude or limit response in real time. We are unaware of circumstances when nuclear facilities have been expected to operate on the margin with real time dispatch response, yet this appears to be the IESO's plan. If nuclear facilities are unable to respond within their partial curtailment range, then the IESO may turn back to curtailment of the min load portion of wind, so we would be directly impacted. If on the other hand the IESO would propose some other time frame for the activation of nuclear curtailment, please advise how this would work and to what extent it could be made available to wind and solar generation. Day ahead and pre-dispatch commitments are available to most fossil generation and to imports and exports. Other dispatchable generation will continue to be able to manage its production, and to preclude marginal operation, by managing offer prices up to two hours ahead. Variable wind and solar generation will therefore face short term dispatch without the mitigation ability available to most other resources. We therefore propose that, subject always to the essential confirmation of the OPA that they would provide full contract compensation in such circumstances, there be a window for multi-hour curtailment based on pre-dispatch. Unfortunately the negative incentive for exports to participate in day ahead commitment seems to preclude use of the day ahead commitment process as a basis for block curtailment, so we would suggest use of the three-hour-ahead pre-dispatch as an appropriate basis for block (ie multi-hour) curtailment of nuclear, baseload hydroelectric, and dispatchable wind and solar generation.	Further detail required	More information has been requested from respondent.

SCHEDULE R

Please see attached

Ontario Energy Board

Commission de l'énergie de l'Ontario

EB-2010-0008

IN THE MATTER OF AN APPLICATION BY

ONTARIO POWER GENERATION INC.

PAYMENT AMOUNTS FOR PRESCRIBED FACILITIES FOR 2011 AND 2012

DECISION WITH REASONS

March 10, 2011

...

generation as the primary driver for this forecast in the test period. The test period SBG forecast has a revenue requirement impact of $32.5 million.[12]

OPG explained that the IESO is responsible for mitigating SBG, but when SBG is anticipated OPG establishes offer prices so that any output reductions are based on market economics and a variety of operational constraints. OPG stated that historically it has used all available hydroelectric storage prior to spilling water, but also noted that its use of the Pump Generating Station ("PGS") is always based on the comparative economics of the pump/generate cycle in terms of the associated market prices.

SBG was the only aspect of the hydroelectric production forecast on which parties provided submissions. The PWU supported the inclusion of SBG in the production forecast. Board staff, AMPCO, CME, CCC, SEC and VECC submitted that SBG should not be included in the production forecast, but proposed that a variance account be used. The primary reason cited was the difficulty in forecasting SBG, and most parties noted that the expected 2010 SBG will be considerably lower than originally forecast. The forecast for 2010 was originally 0.2 TWh, but the year-to-date level (as of October 3, 2010) was only 0.0204 TWh. OPG maintained that this situation was due to lower than normal water flows during periods when SBG had been expected and cautioned that higher SBG was still expected before the end of the year.

OPG acknowledged in its Argument in Chief that a variance account for this factor might be appropriate. Board staff submitted that variations in production due to SBG should be treated in a manner similar to variations in water conditions and that OPG should record SBG production losses (ordered by IESO or of its own initiative) in a deferral account. Other intervenors supported the use of a variance account, including VECC, SEC, AMPCO, CCC, CME and PWU. SEC, supported by AMPCO, submitted that only SBG directed by the IESO should be charged to the account.

CME supported use of the account for tracking purposes but cautioned that it might challenge any amount in the account on the basis that "it is questionable as to whether an utility owner that causes adverse impacts on its own utility [through procurement decisions] can recover the costs of those adverse impacts in regulated rates."[13]

[12] Exh. L-5-24.
[13] CME Argument, para. 174.

In reply, OPG argued that it would be inappropriate to exclude SBG from the forecast as this would be inconsistent with the treatment of other factors which are included in the forecast. OPG went on to argue that if the Board is not prepared to accept OPG's original test period forecast of 1.3 TWh, it should at least accept a forecast of 0.4 TWh, which corresponds to the level in 2009 and the forecast for 2010.

OPG indicated its support for a variance account, but emphasized that it should measure variances from the best forecast of SBG. OPG further submitted that the basis for the account should be a modified version of that proposed by Board staff. OPG proposed that the reconciliation be based on:

> …any IESO order or instructions (if applicable), general market conditions (e.g. total demand, total baseload, total supply) and actual production reports from the SGB-affected generation units that show deviations from production that are contemporaneous with SBG conditions.[14]

OPG maintained that SEC and AMPCO's proposal was unworkable because SBG is not normally managed through IESO directives. OPG also argued that CME's approach would inappropriately penalize those resources within the market that help to mitigate the condition.

Board Findings

The only issue the Board needs to address is the inclusion of SBG in the production forecast and whether a variance account is appropriate.

The evidence is clear that SBG was a significant factor in 2009 and is likely to be so again in 2011 and 2012 with the expected increase in wind generation and the expected return to service of refurbished Bruce Nuclear facilities. The Board, however, does not find that the evidence supports a forecast of 1.3 TWh. This is a significant increase over the 2009 actual and even the 2010 forecast. Added to this is the fact that 2010 is now expected to have much lower SBG. The Board accepts that this is in large part due to lower water levels, but the Board finds that there is insufficient evidence to support a forecast of 1.3 TWh for 2011 and 2012. The Board concludes that rather than setting a forecast, a better approach will be to capture the impacts of all SBG through a variance account, with no allowance built into the forecast. This approach will bring transparency to the level of SBG and will assist in assessing whether OPG has taken adequate steps to mitigate the impact of SBG (which is discussed further below).

[14] Reply Argument, p. 27.

The Board will establish a variance account for SBG, with SBG to be measured on the basis proposed by OPG. The Board will not adopt the proposal of SEC and AMPCO that SBG be limited to instances where the IESO directs OPG to take action. The Board accepts OPG's position and evidence that SBG is currently addressed through market mechanisms as well as IESO orders or instructions. The Board has no evidence regarding the implications of requiring OPG to act only on the basis of IESO directives, but the Board is concerned that such an approach would not allow an adequate consideration of the other factors involved (safety, environmental, water level, economics) which the evidence shows are taken into account in responding to SBG conditions.

The evidence indicates that OPG uses the PGS to mitigate the impact of SBG if the market price spreads are large enough to incent OPG to deploy the PGS. The Board will review the use of PGS for this purpose when reviewing the amounts in the account. This is addressed further in Chapter 11 in the section on the Hydroelectric Incentive Mechanism.

The Board does not need to address at this time the issue raised by CME in relation to considerations which may arise at a future disposition of the account. The Board will review the account balance for prudence prior to determining disposition, as is the Board's normal practice.

3.2 Operating Costs

Historic and test period operating costs for the regulated hydroelectric facilities are summarized in the following table.

Table 5: Operating Costs Summary – Regulated Hydroelectric ($ million)

Cost Item	2007 Actual	2008 Actual	2009 Actual	2010 Budget	2011 Plan	2012 Plan
OM&A:						
Base OM&A	$78.6	$53.9	$61.5	$61.8	$68.7	$62.2
Project OM&A	7.0	14.6	9.1	5.3	9.7	10.0
Allocation of Corporate Costs	21.9	26.3	24.9	25.1	24.8	26.3
Allocation of Centrally Held Costs	16.1	14.6	17.4	20.3	22.9	25.5
Asset Service Fee	2.3	2.5	2.6	2.0	2.1	2.0
Total OM&A	$125.9	$111.8	$115.5	$114.4	$128.2	$125.9
Gross Revenue Charge	$241.8	$253.5	$259.6	$257.2	$257.1	$252.2

Source: Exh. F1-1-1

SCHEDULE S

Please see attached

Market Rules

Chapter 7
System Operations and Physical Markets

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Public

Issue Date: December 5, 2012

scheduling generation facility, complies with all of the applicable requirements of section 7.3 of Chapter 4; and

2.2A.4.2 submit to the *IESO*, for approval and in accordance with section 2.2A.5, information detailing the commissioning test plans for the *commissioning generation facility*.

2.2A.5 The detailed commissioning test plans, referred to in section 2.2A.4.2 shall be submitted to the *IESO* for approval and shall be scheduled in accordance with the procedures applicable to the *outage* coordination process described in section 6 of Chapter 5 and with any applicable *market manual* and shall include, but not be limited to:

2.2A.5.1 the time required for the *commissioning generation facility* to synchronise to and de-synchronise from the *IESO-controlled grid*;

2.2A.5.2 *energy* and reactive output levels;

2.2A.5.3 the timing of and ramp rates associated with changes in *energy* and reactive output levels; and

2.2A.5.4 run-back or trip tests for the *commissioning generation facility*.

2.2A.6 Except as otherwise provided in this section 2.2A, where a *commissioning generation facility* has been registered by the *IESO* pursuant to section 2.2A.2, the *IESO* shall, while such registration is in effect, treat the *commissioning generation facility* as a *self-scheduling generation facility* for all purposes under these *market rules* including, but not limited to, the submission of *dispatch data* and *settlement*.

2.2B Generation Facility Eligibility for the Real-Time Generation Cost Guarantee

2.2B.1 A *registered market participant* for a *generation facility* shall be eligible for the guarantee of certain elements of its costs, calculated in accordance with section 4.7B of Chapter 9, provided the following criteria are met:

2.2B.1.1 the *facility* is not a *quick-start facility*;

2.2B.1.2 the *facility* is a *dispatchable generation facility*; and

2.2B.1.3 [Intentionally left blank – section deleted];

2.2B.1.4 the *registered market participant* has, according to the timelines and in the form specified in the applicable *market manual*, submitted to

the *IESO* the following data for the *generation facility*: fuel costs for start up and ramp to *minimum loading point*; the *minimum run-time*; the *minimum loading point;* the *minimum generation block run-time;* and any incremental operating and maintenance costs associated with the *facility* for start-up and ramp to *minimum loading point* for that *facility,* and that the *IESO* accepts the data as reasonable.

2.2B.2 The *IESO* may, at any time, audit the data submitted in accordance with section 2.2B.1.4 if the *market participant* receives a generation cost guarantee payment pursuant to section 4.7B.3 of Chapter 9 on the basis of that data. If, as a result of such an audit, the *IESO* determines that the actual costs differed from the submitted data, the *IESO* shall recover any resulting over-payments made to the *market participant.*

2.2C Generation Facility Eligibility for the Day-Ahead Production Cost Guarantee

2.2C.1 A *registered market participant* for a *generation facility* shall be eligible for the guarantee of certain elements of the *facility's* costs, calculated in accordance with section 4.7D of Chapter 9, provided the following criteria are met:

2.2C.1.1 the *facility* is not a *quick-start facility*;

2.2C.1.2 the *facility* is a *dispatchable generation facility* with a elapsed time to *dispatch* greater than one hour;

2.2C.1.3 [Intentionally left blank – section deleted];

2.2C.1.4 the *registered market participant* has, according to the timelines and in the form specified in the applicable *market manual*, submitted to the *IESO* the following information for the *generation facility*: the start-up costs; and the speed no-load costs; and

2.2C1.5 the *registered market participant* has, according to the timelines and in the form specified in the applicable *market manual*, submitted to the *IESO* the following information for the *generation facility*: the *minimum loading point*; and the *minimum generation block run-time* and the *IESO* accepts all such information as reasonable.

2.2C.2 [Intentionally left blank – section deleted]

SCHEDULE T

Please see attached

Ontario Energy Board

Commission de l'Énergie de l'Ontario

Ontario

EB-2005-0490

Ontario Power Generation

Reliability Must-Run Contract
for the Lennox Generating Station

BEFORE: Pamela Nowina
Presiding Member and Vice Chair

Gordon Kaiser
Member and Vice Chair

DECISION

Background

Ontario Power Generation ("OPG") filed an application dated September 22, 2005 with the Ontario Energy Board seeking approval of the reliability must-run contract ("RMR Contract") entered into with the Independent Electricity System Operator ("IESO") in relation to OPG's Lennox generating station ("Lennox"). The Application was made under section 5 of OPG's Licence, which requires that any reliability must-run contract be approved by the Board prior to its implementation.

Lennox is a 2,140 MW dual-fuelled (oil- and natural gas-fired) generating station located near Kingston, Ontario. On July 15, 2005, OPG submitted to the IESO a "Notice of Request to De-register" Lennox. On August 4, 2005, the IESO denied OPG's request

...

- the RMR Contract specifies the situations under which the terms of the RMR Contract may be terminated (Articles 7.3 and 7.4);
- the nature and timing of any advance notice required for the IESO to call upon Lennox is addressed through reference to the Market Rules and the requirement for OPG to offer into the IESO administered markets (Articles 2.1, 3.1, 3.3 and Schedule A – Costs and Payments, Section 1);
- the payment terms, including the amount and timing of any availability payment are provided (Article 8 and Schedule A – Costs and Payments);
- the agreed upon dispatch data to be used to require Lennox to operate under the RMR Contract is contained in Article 3.3 and Schedule A – Costs and Payments, section 1, wherein Lennox is required to offer the maximum amount of each category of energy and operating reserve into the IESO-administered markets in a commercially reasonable manner and make each facility available if that facility is physically capable of responding to dispatch instructions, consistent with good utility practices and dispatch data from the IESO and consistent with the Market Rules (Article 4.1);
- the RMR Contract specifies the process for amending the RMR Contract (Article 9.3); and
- the RMR Contract provides penalties for failure to satisfy performance obligations (Article 3.9 and Schedule B – Performance Standards).

In assessing the application, interrogatory responses and the submissions of OPG and the IESO, the Board is satisfied that the RMR Contract complies with OPG's Licence conditions and the Market Rules.

2. Are the financial provisions of the RMR Contract reasonable?

The Board accepts the IESO submission that there are no other alternatives to the continued operation of Lennox that are currently under consideration or that could be brought to bear in a timely manner to maintain the reliability of the IESO-controlled grid. Therefore, the Board did not apply a cost prudence review of the Lennox facilities. The Board recognizes Lennox is a higher cost facility relative to other generating stations in the Province and notes the IESO's estimate that the RMR Contract will add $0.39/MWh to the costs to wholesale market participants during the one-year term of the contract.

With respect to whether the RMR Contract should provide for recovery of 100% of the fixed and variable operating costs (both fuel and non-fuel) of the Lennox generating station, the Board believes the cost-based financial structure of the contract is appropriate for reliability must-run contracts. Other jurisdictions like Alberta and New England also apply the cost-based principle. The Board finds that allowing OPG to recover 100% of its fixed and variable operating costs for Lennox is appropriate.

With respect to the appropriateness of the payment to OPG of a fixed "margin amount" of $1.283 million in addition to the recovery of the fixed and variable operating costs, the Board accepts the submissions of OPG and the IESO that there are other costs and risks associated with the RMR Contract in addition to fixed and variable operating costs. OPG noted that head office costs (other than those associated with fuel purchasing and fuel trading) are not included in the operating costs. There are also risks associated with fuel contracts and supply. The Board finds the fixed "margin amount" of $1.283 million to be a reasonable proxy to compensate OPG for the costs and risks not included in the fixed and variable operating costs.

Regarding whether the RMR Contract should include a revenue sharing mechanism and whether the "Retained Gross Revenue Amount" of 5% of the gross revenues is appropriate, the Board accepts the evidence that some form of revenue incentive could provide benefits to both parties. This mechanism supports the IESO's reliability objectives by providing incentives to OPG to use Lennox to generate electricity in all hours and particularly during peak hours since the amount of retained revenue is highest when market prices are at their highest levels. This evidence was not disputed and the Board therefore considers the 5% "Retained Gross Revenue Amount" to be acceptable.

With respect to whether the RMR Contract should include performance-based incentives, the Board notes the evidence that indicated that performance rewards and penalties are a common feature of reliability must-run contracts. The RMR Contract in this case uses Equivalent Force Outage Rate – Operation ("EFOR-OP") targets of between 4% and 6% during peak periods and between 6% and 8% during off-peak periods. This performance based reward/penalty mechanism is stated to provide an incentive for OPG to meet or exceed the historical Lennox

SCHEDULE U

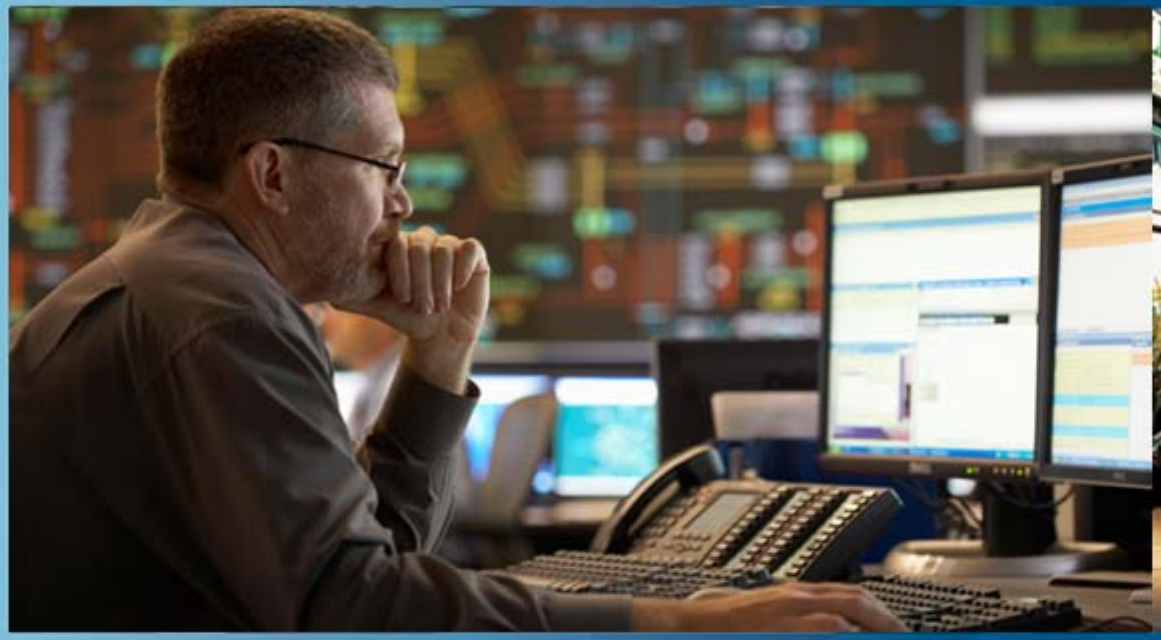
Please see attached

ieso
Power to Ontario.
On Demand.

Feedback, Responses, and Analysis: Floor Price Focus Group

SE-91 Renewables Integration

January 24, 2012 - Revised



Why Floor Prices?

- IESO two-schedule (constrained and unconstrained) market design and/or contract designs will lead to inefficient and costly outcomes that can impact the environment and at times reliability.

- The implementation of floor prices will reduce costs to ratepayers and maximize the environmental benefit of Ontario's electricity system.

- IESO analysis suggests that the environmental and financial savings achieved by incorporating wind into the 5-minute dispatch are estimated to be $180-225 million and 1.6-2.0 Mt of avoided CO_2 emissions, in 2014.

SCHEDULE V

Please see attached

Ontario Energy Board

Commission de l'Énergie de l'Ontario

EB-2007-0040

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

AND IN THE MATTER OF an Application by the Association of Major Power Consumers in Ontario under section 33 of the *Electricity Act, 1998* for an Order revoking an amendment to the market rules and referring the amendment back to the Independent Electricity System Operator for further consideration, and for an Order staying the operation of the amendment to the market rules pending completion of the Board's review.

PROCEDURAL ORDER NO. 2

On February 9, 2007, the Association of Major Power Consumers in Ontario ("AMPCO") filed with the Ontario Energy Board (the "Board") an Application under section 33(4) of the *Electricity Act, 1998* seeking the review of an amendment to the market rules made by the Independent Electricity System Operator (the "IESO") on January 18, 2006. The Board has assigned file number EB-2007-0040 to the Application.

The amendment that is the subject matter of the Application is identified as MR-00331-R00: "Specify the Ramping Capability in the Market Schedule" and relates to the ramp rate assumption used in the market dispatch algorithm within the IESO-administered markets (the "Amendment").

On February 9, 2007, the Board issued its Notice of Application and Oral Hearing in relation to the Application. By Order dated February 9, 2007, the Board stayed the operation of the Amendment pending completion of the Board's review of the Amendment.

...

is required to pay where numerous parties intervene, costs may act as a prohibitive deterrent and frustrate the checks and balances of the Board's market rule review process. If the IESO is required to pay all of the costs, the number and frequency of challenges to rule amendments may increase and frustrate the intended processes and IESO operations for an efficiency and reliability sector. Such inefficiencies would ultimately be borne by consumers and generators that are required to pay the IESO's costs through uplift.

The Board has considered the submissions of the parties and has determined that it is not appropriate in this case to defer its decision on cost awards as requested by the IESO. The Board has also determined that cost awards in this proceeding should be recovered from the IESO. This is the first application of its nature that will be heard by the Board, and appears to raise legitimate issues for the Board's consideration in relation to the criteria set out in section 33(9) of the Act. The Board also notes that, as market participants, members of AMPCO are in fact participating in the funding of cost awards in this matter through their payment of the IESO's administrative costs in accordance with the market rules. As such, the Board considers that this is an appropriate case in which to exercise its discretion in a manner that differs from the more typical approach of stipulating that costs be recovered from the applicant. The fact that costs are to be recovered from the IESO in relation to this proceeding should not, however, be understood as tacit recognition that this should necessarily be the case in relation to all future market rule amendment review applications that may come before the Board. The Board also takes this opportunity to remind all of the parties that, as in all cases, parties are expected to act responsibly and that the Board retains discretion to address irresponsible or inappropriate participation through the cost award process.

Cost Awards: Eligibility

In addition to the IESO's submission that it should receive an award of costs in the event that AMPCO's application is unsuccessful, requests for cost eligibility have been received from AMPCO, VECC and APPrO. TransAlta Energy Corp. and TransAlta Cogeneration L.P. have reserved their right to apply for an award of costs should special circumstances arise in the proceeding.

SCHEDULE W

Please see attached

ONTARIO ENERGY BOARD

In the Matter of the *Electricity Act, 1998,* s. 33;

And in the Matter of the *Ontario Energy Board Act, 1998*, s. 21;

And in the Matter of an application by Acciona Wind Energy Canada Inc., Brookfield Power Wind Prince LP, CP Renewable Energy (Kingsbridge) Limited Partnership, Erie Shores Wind Farm Limited Partnership, Greenwich Windfarm, LP, Talbot Windfarm, LP, Enbridge Renewable Energy Infrastructure Limited Partnership, Kruger Energy Port Alma LP, Suncor Energy Products Inc., Canadian Renewable Energy Corp., and Canadian Hydro Developers, Inc. (collectively the "RES Generators") for an order that the Independent Electricity System Operator ("IESO") prepare evidence that is relevant to a pending appeal of a Market Rule Amendment dated November 29, 2012.

APPLICATION

1. The Applicants, Acciona Wind Energy Canada Inc., Brookfield Power Wind Prince LP, CP Renewable Energy (Kingsbridge) Limited Partnership, Erie Shores Wind Farm Limited Partnership, Greenwich Windfarm, LP, Talbot Windfarm, LP, Enbridge Renewable Energy Infrastructure Limited Partnership, Kruger Energy Port Alma LP, Suncor Energy Products Inc., Canadian Renewable Energy Corp., and Canadian Hydro Developers, Inc. (collectively the "RES Generators") hereby apply to the Ontario Energy Board (the "OEB" or the "Board") requesting the Board to exercise its discretion under s. 21 of the *Ontario Energy Board Act, 1998* (the "*OEB Act*") to give directions requiring the IESO to prepare evidence that is relevant to a pending appeal (the "Pending Appeal") by the RES Generators of the Renewable Access Amendments (as defined in paragraph 4 below). The information requested is listed in Schedule B to these submissions.

2. The grounds for this application are as follows:

   (a) The RES Generators intend to appeal the Renewable Access Amendments to the OEB in accordance with s.33 (1) of the *Electricity Act* ("*EA*");[1]

[1] The Pending Appeal relates only to the dispatch and floor price provisions of the Renewable Access Amendments as they relate to renewable facilities. The Pending Appeal will not address any of these amendments as they relate to dispatch or floor prices for nuclear facilities.

(b) The RES Generators have advised the IESO of their intention to appeal and have requested that the IESO provide the information requested in Schedule B, all of which is relevant to the Pending Appeal. The information requested in Schedule B is necessary to prepare the Appeal. It is more narrow than the information that the Board has ordered the IESO to produce in its previous review of IESO market rules (EB-2007-0040, the "Ramp Rate Appeal") (See: Schedule C);

(c) The IESO has refused to provide any of the requested information;

(d) The statutory timelines for the Pending Appeal are very constrained. By ordering the production of this material now, the discovery process will be more timely and orderly, and the Board will have a better record upon which to make its determinations under s. 33 of the EA;

(e) Section 21 of the OEB Act, and

(f) Such further and other grounds as counsel may advise.

3. These grounds are set out in further detail below.

The Pending Appeal of the Renewable Access Amendments to the OEB

4. On November 29, 2012, the IESO Board passed five related market rule amendments (the "Renewable Access Amendments").[2] The Renewable Access Amendments were published on January 3, 2013.

5. The combined effect of the Renewable Access Amendments is to create a scheme under which the IESO can unilaterally, without regard to the economic impact of affected market participants, and without further consultation, determine which renewable generators may have access to the IESO-Controlled Grid.[3] This scheme includes the ability to set and reset minimum prices below which renewable electricity generators may not offer their electricity to the IESO-Administered Markets[4] (the "Floor Price")[5] and a system of choosing which generators can have access to the IESO-Controlled Grid in the event that generators bid the same price.[6] As a result, even if it is economic for a renewable generator to offer electricity below the Floor Price, their offer will be refused and their electricity cannot be delivered to the IESO-Controlled Grid. Further, even if generators all bid at the Floor Price, the IESO purports to claim the right to determine which of them should have access.

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[2] MR-00381-R02: Dispatching Variable Generation
MR-00381-R03: (Floor Prices for Variable and Nuclear Generation)
MR-00381-R04: (Market Schedule and Congestion Management Settlement Credits (CMSC) for Variable Generation)
MR-00381-R05: (Tie Breaking for Variable Generation)
MR-00381-R06: (Publication Requirements: 5-Minute Forecast for Variable Generation).
Copies of these Amendments are included at Schedule A

[3] Defined in the Electricity Act as "the transmission systems with respect to which, pursuant to agreements, the IESO has authority to direct operations."

[4] Defined in the Electricity Act as "the markets established by the market rules."

[5] MR-00381-R03: (Floor Prices for Variable and Nuclear Generation).

[6] MR-00381-R05: (Tie Breaking for Variable Generation).

6. The RES Generators are IESO market participants, all of whom are connected to the IESO–Controlled Grid and rely on access to the IESO-Controlled Grid for their commercial viability. All of the RES Generators have Renewable Energy Supply ("RES") procurement contracts with the Ontario Power Authority (the "OPA"). To the knowledge of the IESO, these contracts require the RES Generators to deliver their electricity to the IESO-Controlled Grid in order to receive payment under their RES procurement contracts. They do not get paid if they do not deliver electricity.

7. The consequence of Renewable Access Amendments is thus that, when the IESO floor price is met, the RES Generators will be denied access to the IESO-controlled grid and will be unable to deliver their electricity in accordance with the OPA procurement contracts.

8. It is difficult to estimate the full cost of this to RES generators because they do not have access to system planning or operational forecasts to estimate the number of hours that the minimum floor price will be met and thus the number of hours that they will be curtailed. Neither the IESO nor the OPA have been prepared to provide this information. The RES Generators estimate the potential cost of this change to them is in the order of $100 million over the next five years.[7] Without compensation, the direct consequence of the Renewable Access Amendments is a direct wealth transfer from RES Generators to the OPA.

The RES Generators have advised the IESO of the Pending Appeal and requested information, all of which is relevant to the issues in the Pending Appeal.

9. By letter dated November 20, 2012, the RES Generators advised the IESO Board that they consider these amendments to be discriminatory and inconsistent with the purposes of the *Electricity Act, 1998* ("EA").[8] By letter dated November 28, 2012, the RES Generators advised the IESO[9] that they intend to apply to the OEB for an order setting aside the amendments in accordance with s. 33 of the *Electricity Act, 1998* and that the grounds of appeal to the OEB are that the SE-91 Amendments, as proposed:

   i. Unjustly discriminate against the generators who are subject to it by selectively exposing them to uncompensated and involuntary curtailment in order to provide societal benefits that the IESO believes would result from a preferred dispatch order. Other market participants are not subject to uncompensated and involuntary curtailment to provide social benefits that allegedly arise from a preferred dispatch order;

   ii. Unjustly discriminate in favour of the OPA by transferring wealth directly from RES Generators to the OPA as their contractual counter-party; and

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7 Costs beyond this period are difficult to estimate in that they are strongly dependent upon future government policies and decisions.
8 See letter from RES Generators to IESO Board of Directors, November 20, 2012: Schedule D.
9 See letter from RES Generators to IESO Board of Directors, November 28, 2012: Schedule E.

iii. Are inconsistent with the following purposes of the *EA*:

a) to promote the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources, in a manner consistent with the policies of the Government of Ontario (*EA*, ss. 1(d));

b) to provide generators, retailers and consumers with non-discriminatory access to transmission and distribution systems in Ontario (*EA*, ss.1(e)); and

c) to facilitate the maintenance of a financially viable electricity industry (*EA*, ss.1(i)).

10. As appears from the above, the grounds for appeal relate to discrimination against renewable generators, discrimination in favour of the OPA, and consistency with the purposes of the *EA*. By letter dated November 28, 2012, the RES Generators requested the IESO to provide information specifically linked to these categories in preparation for the appeal of the Renewable Access Amendments. The specific information requested in that letter which is still requested in this application is attached at Schedule B hereto.

11. By letter dated December 27, 2012, counsel for the IESO refused to provide any of the requested information. The letter stated: "The view of the IESO has been and remains that contractual issues between your clients and the Ontario Power Authority are outside of the scope of MR-00381 and, therefore, of any appeal." Thus, the IESO's letter was clearly not responsive to the information requested and if this information is to be considered by the Board in a timely way, the RES Generators have no option but to request the Board to direct the IESO to provide it.

12. All of the information listed in Schedule B is relevant to the Pending Appeal and necessary to prepare the Appeal.

13. The range of information in Schedule B is more narrow than the information that the Board has ordered the IESO to produce in its previous review of IESO market rules (EB-2007-0040, the "Ramp Rate Appeal") (See: Schedule C). The RES Generators will request the information in Schedule C upon the commencement of the Appeal.

The statutory timelines for the Pending Appeal

14. As this Board is aware, the time for its review of an application under s. 33 is very constrained. An application for review must be filed within 21 days of notice of the rule being published and the Board must issue an order within 60 days of the application being filed.[10] This is the shortest decision making time frame under which the Board conducts a full hearing. By comparison, the Board's Performance Standards for Processing Applications indicate that the only hearings that can normally be resolved in these time frames are QRAM and FIT licence applications, both of which are somewhat

[10] *OEB Act*, s. 33(4) and (6).

mechanical and *pro forma*. For all other hearings, a time line of an oral hearing is typically 180 to 210 days.[11]

15. As a result, ensuring that relevant information is on the record for the Board to make a decision is a particular challenge, and one that requires a more proactive approach than is in the typical hearing process.

16. In this case, the notice was published on January 3, 2013 and the RES Generators must file their application with the OEB on January 24 and the Board must complete the discovery process, conduct a hearing and complete deliberations all within 60 days, i.e., by March 25, 2013.

17. The RES Generators are requesting the Board to move proactively in accordance with s. 21 of the *OEB Act* so that materials may be produced in an orderly and timely fashion and specifically in time for filing the Appeal on January 24, 2013. This section was invoked by the Board in its one previous review of an IESO Market Rule amendment.

18. In the Ramp Rate Appeal, the Board noted that it was not possible to hear motions on the adequacy of production of materials because of the short time frames of the review process. The RES Generators propose to better accommodate the discovery process by requesting the Board to exercise its discretion to order production of materials prior to formally commencing an appeal.

19. The RES Generators submit that no party is prejudiced by this request. The information requested is relevant to the appeal and must be provided in any event. Requiring the filing now simply puts the OEB in a better position to evaluate compliance of the Renewable Access Amendments with the statutory criteria in s. 33.

Conclusion

20. The RES Generators therefore respectfully request the Board to exercise its discretion under s. 21 of the *OEB Act* to give directions requiring the IESO to prepare evidence that is relevant to the Pending Appeal by the RES Generators of the Renewable Access Amendments.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Dated: January 11, 2013

George Vegh
McCarthy Tétrault LLP
Telephone 416-601-7709
Email: gvegh@mccarthy.ca
Counsel for RES Generators

[11] See, OEB Performance Standards for Processing Applications