

Stakeholder Engagement SE-57

Response to Written Stakeholder Comments on Embedded and Renewable Generation



On February 10, 2009, the IESO made a number of presentations to the embedded and intermittent generation stakeholders. Stakeholders were requested to send in written comments on the presentations by March 4, 2009.

Comments were received by three stakeholders, as summarized below, along with the IESO's responses.

Ontario Power Generation

1. The Draft Priority Dispatch document, discussed at the February 10, 2009 stakeholder meeting, focuses on the near term, two hours or less, in which surplus baseload generation (SBG) is identified in the pre-dispatch or dispatch schedules. However, many resources in the Ontario market require advance notice in order to curtail generation. In some cases, the advance notice requirements can extend to days. For example, certain hydroelectric facilities may only be allowed to initiate spill during daylight hours and due to regulatory/safety issues the spill may extend for a period greater than the actual SBG event.

IESO Response

The IESO respects and understands the limitations on certain generation equipment and will use this as consideration when determining dispatch priority.

2. Any type of contracted generation receiving a fixed price may be indifferent to market prices and therefore have no incentive to proactively reduce output. Currently, these resources may only be curtailed in emergency situations. Additionally, these resources may not receive any contractual payments when curtailed which will result in an economic burden to the proponent.

IESO Response

The IESO will not be addressing the issue of contractual compensation for those generators. Presently, the IESO can curtail any resource to maintain reliability regardless of financial/contractual impact.

3. The IESO must develop a means to mitigate SBG well in advance of the actual event. This would require coordination and consideration of compensation for those willing to respond proactively.

IESO Response

The IESO agrees with this concept in theory. A large amount of SBG, is only realized in real-time (due to failed exports, etc.) and cannot be addressed well in advance of the event. However, when forecasted, the IESO will be putting into place a procedure that will attempt to mitigate SBG in advance of the event. The result of this attempt may depend heavily on Market Response.

4. There should be consideration given to demand side solutions, including an export bid cap.

IESO Response

The IESO will consider this option.

5. The IESO must consider solutions to SBG which are within their control. For example, during periods of forecasted SBG, the IESO could use the average demand forecast in pre-dispatch instead of the current peak demand forecast. As well, the IESO could eliminate IOG during these periods. Additionally, the IESO should ensure that they do not over-forecast demand during SBG periods.

IESO Response

The demand used in forecasting is intended to support reliable operation. The IESO is considering 'average' and 'minimum' demands during SBG. The IESO will also look into the option of eliminating IOG during these periods.

6. The communication protocol for expected SBG conditions should be reviewed and enhanced to identify both system wide and regional SBG conditions. The IESO should consider the communication used by other markets that proactively communicate SBG conditions both prior to the event and during the event.

IESO Response

The IESO agrees with this comment and are looking at best practices to communicate SBG conditions to the market (for example, SSRs, minimum generation alerts, etc.).

7. The IESO must document SBG procedures in the Market Manuals including trigger points for proactive mitigation.

IESO Response

All changes to any SBG procedure will be documented, along with trigger points where appropriate.

8. The IESO should open the mandatory bid window in cases where this would alleviate SBG.

IESO Response

The IESO agrees and, as we do today, will continue to open the mandatory window if doing so can solve reliability concerns.

9. In conclusion, this issue is of great importance to the reliable operation of the Ontario power system and therefore requires broad stakeholder input. The IESO must reach out to engage participants who might not normally be involved in the stakeholder process. To ensure these discussions take place, a further stakeholder meeting should be arranged.

IESO Response

The IESO will be setting up another stakeholder meeting to further discuss this issue.

AbitibiBowater Inc.

Presently, IESO does not control or have any direction on a customer's embedded generation for any generation consumed "behind the fence". The IESO can only direct on energy delivered to the Grid.

The draft discussion paper raises the possibility of the IESO directing a customer's embedded generation in order to avoid (or at the least, minimize) cases of SBG. This could have some significant unintended consequences.

For an industrial customer, embedded generation serves several roles: provision of lower cost (self-generated) energy for the customer, reduction of transmission related costs (peak shaving, peak avoidance) and load security.

If an industrial customer is operating his embedded generation such that his draw from the grid is minimized, his transmission related charges (Network and Line Connection Demand charges) are also minimized. Direction from IESO to reduce his embedded generation levels to accommodate a SBG situation would, under the present application of the transmission charges, result in increased costs to the Customer. How does the IESO propose to keep the Customer whole in this case? For a Customer with 100 MW of embedded low cost generation being directed down, a swing of 100 MW on his demand charge would represent an incremental cost to the Customer approaching \$100 K from which the Grid is the sole beneficiary. Waiving the incremental demand charges would be a good start.

A Customer may move to voluntarily increase his demand from the Grid when SBG is forecast and negative pricing shows up in the pre-dispatch reports, however (1) the reliability of the pre-dispatch price signals still has a long way to go to be able to "take them to the bank" and (2) non-dispatchable loads have a much greater degree of flexibility to respond in these cases than dispatchable loads do (2 hours ahead for any bid changes and constrained by the Day Ahead Adequacy envelope submitted the day before).

IESO Response

The IESO appreciates the feedback provided by AbitibiBowater. For clarity, the IESO has the authority to curtail embedded generation as per IESO Market Rules Chapter 5, Section 3.5.1.3. The IESO is aware of the compensation concerns associated with dispatching off embedded generation. This dispatching off may result on higher costs for the load or LDC or the embedded generator may not be getting their contract price because they are not generating.

OptiSolar Farms Canada

1. In the SE-57 stakeholders group discussions on February 10, 2009, stakeholders were asked to come up with some suggestions on how the IESO could go about implementing a system of generator shutdowns during periods of Surplus Base Generation (SBG). It is OptiSolar Farms' Canada's belief that a voluntary system of compensation be implemented to make this possible.

Currently interruptible load customers benefit from discounted energy rates under the premise that the loads can be shed during critical system peak periods. OptiSolar would like to suggest a voluntary system which emulates the interruptible load scenario for interruptible generation. In other words, a premium offered to all generators which voluntarily enter into interruptible OPA power purchase agreements. This would provide insurance to the IESO that specified generators could be shed from the grid (distribution or transmission) in the event of system surplus base generation capacity occurs. Distribution connected non market participants could be dispatched through the LDC. (For example, OptiSolar Farms Canada has provided solar farm remote trip and closing ability to Bluewater Power for Sarnia Solar 2, a 10 MW project in the BWP service territory.)

Of course some definition of frequency would have to be provided in order for proponents to evaluate the economics of entering into such agreements.

Thank you for your time and consideration. If I can be any further assistance please do not hesitate to contact me.

IESO Response

The IESO thanks OptiSolar Farms for their comments and appreciates the suggestion. The IESO will engage the OPA in introducing new contract terminology to meet this concern.

2. OptiSolar Farms Canada supports the IESO Embedded Generation Stakeholders group CCA process recommendations presented at the stakeholders meeting February 10, 2009.

In particular:

- IESO should move toward a regional SIA approach with quarterly updates, eliminating the need for SIA for each project which injects 10 MW into the transmission grid,
- Transmission solutions resolve grid impacts more effectively than distribution solutions.

The System Impact Assessment process for the injection of greater than 10 MW into the grid is most economically and logically done on a regional basis considering all of the generators connected to the region's grid, and optimizing the location, size and the cost of any grid solution.

In addition, the IESO, OEB, OPA and Hydro One must quickly resolve the outstanding development bottleneck associated with the timing and cost allocation issues regarding the impacted projects. Projects cannot move forward without these issues being resolved. Cost allocation may have a significant negative impact on the economic viability of proceeding with these projects.

OptiSolar Farms Canada strongly recommends that the IESO, OEB, OPA, and Hydro One allow projects that have been identified through the Connection Impact Assessment process to inject more than 10 MW into the grid, be allowed to proceed with their CCRAs, and that no additional costs be allocated to these projects. The potential grid costs (i.e. dynamic VAR generators/absorbers) provide grid flexibility to all generators connected to the grid and ultimately serve the common good, making possible the connection of green energy projects.

Additional costs in upgrading the transmission grid were never conceived as necessary when the RESOP fixed price contracts were introduced by the OPA.

Thank you for your time and consideration.

IESO Response

The IESO is pleased that OptiSolar Farms Canada supports the IESO Embedded Generation Stakeholders group CCA process recommendations presented at the stakeholders meeting February 10, 2009.

The IESO understands and agrees that the timing and cost allocation will impact the economic viability of the projects and they have to be resolved without delay. The clarification of the two items needs to be provided by the Ontario Energy Board (OEB). The IESO will undertake to discuss this issue with the Ontario Energy Board and will assist the OEB when it conducts this activity.