

IESO Stakeholder Engagement

From: Naren Pattani
Sent: March 6, 2011 5:49 PM
To: Penic, Jordan
Cc: IESO Stakeholder Engagement; Naren Pattani
Subject: Comments from Discussions at the VTWG IESO Working Group Meeting on March 3, 2011

Jordan and the IESO Team,

First, thank you very much for both, arranging to seek input from the stakeholders and for the hospitality last Thursday (Mar. 3) including the excellent presentations by the IESO staff.

Since we are in the middle of intense activity this week, I will make my comments in a manner that is short and simple, and focused on “Non Market Participant” Solar Generation Facilities:

- Yes, we agree that this is a needed initiative, and the IESO should indeed have as much visibility as possible while also recognizing the potential incremental resource (effort) and financial burden on Solar Generators, especially the small, embedded plants that are not Market Participants and whose plants will be unmanned. The points below are an attempt to find a good balance between these competing requirements. The comments are with reference to Item numbers in your presentation.
- For Static plant Information, you may also need to know if the Plant has ‘tracking’ or if the panels are fixed.
- For Dynamic Data, we believe that the following data can be provided within reasonable effort and expenses: Plane of Array Irradiance (Item 1); Ambient Temperature (5); Pressure (6); Wind Speed (7) but without the wind direction; and MW Output (8)
- For the other forms of data, we have following additional comments.
 - Global Horizontal Irradiance (item 2), if you really need it, this may be possible to provide. (Alternatively, one could probably use a formula from Panel Angle and Item 1 data to create this, so perhaps the Forecasters can do that within their software).
 - The Global Diffused (Item 3) and Direct Irradiance (4) would be rather difficult and expensive to provide. We recommend that you leave these out, at least for the embedded non-market participants **10 MW or less**.
 - Since, for most solar plants 10 MW and less, the wind speed detector would be mounted at panel height (and not on special masts), it is likely not worth going the expense to give you the wind direction, which requires more sophisticated equipment. Thus, we suggest that you limit the wind data requirement for small embedded *Solar Plants* (10 MW and less) to just the wind speed and *not* the direction also.
 - We are not sure what you mean by Available Megawatts (Item 9) in the context of Solar Plants. As a minimum, this needs more defining before we can comment. Perhaps, Forecasters can simply do an arithmetic calculation (Installed Capacity minus MW Output) if that is all they are trying to get.
 - It would be very difficult, expensive, and likely impossible, for Non Market Participants to submit anything to do with real-time ice and snow conditions. As discussed, we are also not sure if this data is of any use in the context of Solar Plant MW forecasting. We recommend that this requirement be removed, at least for plants that are going to be unmanned and Non Market Participant.

- In the matter of discussions on redundancy, while panel-panel redundancy for power supply may be necessary if power to run monitors are from one panel, for example, we urge you not to require redundancy of power supply if such supply is provided from Station Service. We are also not sure if there can be a cost-benefit justification to provide any other form of redundancy (such as duplicate weather station, communication channels, etc.) which could require additional equipment; such requirement could be relatively more burdensome for solar plants 10 MW or less. We believe that, out of tens of solar plants, if one or few small plants cannot submit real-time data for a few days due to equipment breakdown, that would *not* be a significant impact of Forecasters who can then use, for short periods and for specific plants that cannot submit data temporarily, some form of default data based on current, generic weather data obtained from other sources.

Thank you, once again, for requesting these comments.

Naren Pattani
for Penn Energy Renewables Ltd.