

Minutes of Meeting

Date held: August 11, 2009	Time held: 9:00 am	Location held: Holiday Inn (Oakville)
Invited/Attended:	Company name:	Attendance Status: (A)ttended; (R)egrets; (S)ubstitute
Adams, Tom	Tom Adams Energy	A
Bell, Brian	Ontario Power Generation	A
Besner, Serge	Environment Canada	Via Teleconferencing
Boudreau, Ryan	Hydro One Networks Incorporated	A
Brason, Tracey	Brookfield Renewable Power	Via Teleconferencing
Burkom, Jack	Brookfield Renewable Power	Via Teleconferencing
Cheng, Clarence	Ministry of Energy & Infrastructure	A
Cheszes, Jonathon	Ontario Power Authority	A
Dubetski, Phil	Toronto Hydro Electric System Limited	Via Teleconferencing
Forsyth, Scott	Canadian Hydro Developers	A
Garg, Ajay	Hydro One Networks Incorporated	A
Hassan, Fred	Elenchus Research Associates for the Power Workers Union	A
Kennedy, Sarah	Canadian Hydro Developers	Via Teleconferencing
Kosnik, Tom	First Solar Development (Canada) Inc.	A
Krause, Don	Genivar	A
Kuber, Kathryn	Ministry of Energy & Infrastructure	A
Lamont, Michelle	Enbridge Ontario Wind Power	A
Lee, Andrew	Acciona Wind Energy Canada	A
Levy, Tom	Canadian Wind Energy Association	Via Teleconferencing
Loughren, Chris	Bruce Power	A
Malinowski, Martin	Rodan Energy & Metering Solutions Inc.	A
Mawani, Zohrab	GDF Suez Renewable Energy North America	A
Mehta, Adarsh P.	CanWEA Board	A
Nagpal, Jaideep	Ontario Power Authority	A
O'Rourke, Brian	SNC Lavalin	A
Pakela, Gregory	DTE Energy	Via Teleconferencing
Penn, Richard	Greenfield Energy Centre LP	Via Teleconferencing
Peterson, David	Ontario Power Generation	A

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Pundsack, Gary	Vestas-Canadian Wind Technology, Inc.	A
Rabadi, Adi	Invenergy Canada	Via Teleconferencing
Radan, George	Aquilon Power Corporation	Via Teleconferencing
Romaniuk, Oliver	NextEra Energy Resources	A
Singh, Bob	Hydro One Networks Inc.	A
Sorenson, Kevin	Gilead Power	A
Taylor, Kristopher	Essex Power Group	A
Tuenter, Hans	Ontario Power Generation	A
Venkatesh, Bala	Ryerson University	A
Chase, Maia	IESO	A
Chung, Jo	IESO	A
Finkbeiner, Darren	IESO	A
Hastings, Martin	IESO	A
Matsugu, Darren	IESO	A
Romeo, Rick	IESO	A
Tang, Jessica	IESO	A
Scribe: <i>Jessica Tang</i> Please report any corrections, additions or deletions e-mail to jessica.tang@ieso.ca		

All meeting material is available on the IESO web site at: [SE-57](#)

Agenda Item #1 Administration

Darren Finkbeiner welcomed the group and explained that Dave Robitaille was unable to chair the meeting today.

a. Review Agenda

The agenda was approved with no changes.

b. Action Items

Darren reviewed the open action items:

1. On-going as we proceed with SE-57
2. On-going as we proceed with SE-57
3. We have been receiving data from participants, but there is some sensitivity around providing the information publically. We can tell you that Hydro Generators have been spilling but we

don't have the approval to give out the numbers. Chris Loughren has provided numbers for Bruce Power maneuvers that are written in the minutes from the June 16, 2009 meeting.

A member asked for an update on the system impact assessment side of SE-57. Darren stated that the IESO is doing regional assessments, not per project assessments. He further stated that the IESO would be using defined thresholds when determining when assessments are required.

Another member asked for an update on the telemetry and visibility portion of SE-57. The member stated that any change may have a cost associated with it and an update would be appreciated. Darren stated that the intent is not to increase the burden on the participants. The IESO is currently looking at 5 MW as a threshold and if possible, the IESO would get the telemetry from the LDCs. This way, the IESO could piggy back off what already exists. Any additional information required will be kept at as low a hurdle as possible.

Agenda Item #2 – Centralized Forecasting

Martin Hastings of the IESO presented recommendations and actions moving forward on centralized forecasting. He stated that the IESO is moving forward with centralized variable forecasting and is looking for feedback on a model for paying for this service.

Member Questions, Comments and Discussions

The following questions were asked along with the IESO response:

- Is there any cost information for the ERCOT/PJM/MISO models? The member went on to state that legacy wind farms do not have the cost of centralized forecasting included in their contracts and are unable to account for it.
Martin stated that ERCOT is not sharing their cost information and that he does not have cost information from PJM. MISO quoted around \$100,000 start-up costs and \$100,000-\$500,000 per year in operational costs. As for the legacy wind farms, Martin stated that these wind farms have an obligation to provide accurate forecasts to the IESO through the existing decentralized forecasting regime and that generators incur costs to provide these forecasts. While centralized forecasting would introduce new costs for variable generators, it would also eliminate the costs associated with decentralized forecasting. A move to centralized forecasting should result in no (if not reduced) incremental costs to legacy wind farms.
- If the IESO is implementing charges for centralized wind forecasting will they also implement charges for load forecasting?
No, the IESO will not be charging for load forecasting. While load forecasting and wind forecasting both involve the forecasting of a variable parameter, wind forecasting is more akin to generators providing offers and following a dispatch instruction. As such, wind forecasting is not functionally similar to load forecasting.

- What collected information will be available to the public?
The IESO stated that this has not been determined but they would like the forecast and output to be publically available.
- Would the information be at an aggregate level or down to the specific wind farm?
The IESO stated that this would be a conversation with the stakeholders and members of SE-57. To provide maximum transparency, the IESO would prefer to provide the information at the wind farm level. The IESO could not identify any reason for keeping the information confidential. If stakeholders have a concern with making the information publicly available, the IESO would like to hear from them.
- A member stated that the IESO does their best effort in forecasting demand. To the extent that wind displaces demand, the remaining demand number will be for the other, competitive resources.
The IESO added that wind is typically a must-take resource. Depending on the wind forecasts, there will be changes in the economic aspects of the market. The IESO is leaning towards making the forecasts available in order to facilitate the competitive market. The member added that centralized forecasting will remove the obligation to provide forecasts, but obligate the participant to provide other information such as what speed they will need to come offline.
- Was there any thought to adding the cost of centralized forecasting to uplifts?
Martin stated that there are two cost philosophies: 1. Centralized forecasting provides reliability benefits and these benefits accrue to everyone. Therefore, the cost should be socialized (as in MISO, ERCOT and PJM) 2. To be a generator, you have obligations, some of which improve reliability. For example, in Ontario generators currently incur costs associated with decentralized forecasting. To implement option 1 would mean a transfer of costs from the generators to the loads.
- What is the timeline for implementing centralized forecasting?
The IESO stated that there was no firm timeline. Martin will finish the stakeholdering aspect and then develop the RFP and rules in order to get the information needed from each wind farm. The hope is to have centralized forecasting in place by the second quarter of 2010. There is still a lot of work that needs to be scoped out, including integration into the IESO tools. The expectation is to have centralized forecasting in advance of FiT generation and to learn from our existing mass and gain some experience. Martin stated that once a contract is awarded, the setup is quite quick to implement (a couple of months), but that is for the third party only.
- How far ahead of real-time will the data collected be used?
The IESO stated that at least day-ahead. A follow up question was if the date would be considered when determining outage pre-approval. The IESO stated that theoretically it could, but it was not the primary objective.
- Is the fee charge tied to the cost of service, for example as more generators come online, the cost comes down?
There are different ways to manage cost recovery and the IESO is accepting submissions on the best design. Theoretically costs should come down as more generation comes on line.

- Would the IESO be thinking of using information from other jurisdictions? Would this be an additional cost?
This is something that the IESO would leave to the forecaster to decide and that these costs would be built into the RFP.
- Has the IESO looked into Marine forecasts as they give a heads up to what is hitting land?
Again, the IESO expects the forecaster to use all data available to them. A member stated that marine forecasts are done by Environment Canada and they were not sure if the IESO was prepared to contract out the human aspect of delivering the output of marine forecasts.

Agenda Item #3 - Management of Minimum Load Periods

Prior to Jessica's presentation, Darren gave an update on the standards aspect of SE-57. Darren stated that NERC is developing recommendations and the IESO does not want to create a standard for Ontario that is different from that of the industry unless Ontario has a unique requirement. NERC is coming up with committees and the IESO is trying to see what NERC is having done by when and ensuring that the standards developed will be appropriate for Ontario. The IESO is monitoring the committees. The IESO will use industry standards to help create IESO standards. Darren committed to giving an update on standards.

Jessica Tang presented comments received and recommendations moving forward on minimum load management.

Member Questions, Comments and Discussions

The following questions, along with the response, were asked regarding the presentation:

- There are no compensation mechanisms in the non-FiT contracts with the OPA is there curtailment compensation for non-FiT contracts?
The current draft FiT contract design includes terms that should incent the actions that the IESO wants to see and can be used as a guide. The IESO will be discussing the implications of this with the group and with the OPA. The IESO recognized the potential contract implications for proponents who have paid for delivery contracts without FiT contract payment structures for curtailment. The IESO also recognized that these and other concerns can be extended to OPA contracted commissioning facilities. The IESO will work with the OPA to explore these issues with the hope that non-FiT resources can be included.
- What is the difference between low demand and surplus baseload generation (SBG)?
There is no definitive definition of SBG as it is a moving target. It can be a variety of different things – a price, a demand. The IESO is looking for input from stakeholders on what they consider SBG and will then provide a solidified definition. SBG is not limited to global SBG, we are also looking at local SBG (for example, surplus generation in the Northwest).

- Can you clarify a trigger of wind curtailment?
Not at this time. We have no definitive trigger as price is not necessarily an accurate indication. We have seen SBG at prices above \$0 when there are heavy transmission constraints. We also have people making choices to come offline, which brings prices up during SBG. These are all considerations for determining an appropriate trigger.
- If you have to curtail wind, how do you choose which generator?
If there is an economic tie, we traditionally curtail pro-rata. We do respect resource technology and capability.
- We encourage the IESO to work quickly to implement what they can. What is the expected timeline?
The timelines depend on the various changes that may be implemented. If a rule change is required, it has to go through the Technical Panel and rule amendment process, which takes time. If it is a procedure or manual change, it can be implemented fairly quickly. A member stated that the move to average forecast can be done quickly. The IESO stated that there is a divergent set of opinions on denying SGOL and the requirements to implement such a change. The intent is to move quickly and let everyone know as each change comes in.
- Bruce Power is working with the OPA so that they understand the risk that Bruce Power faces. They are also working with NUG generators to gain the same understanding.
- The IESO stated that it is not wrong to manoeuvre nuclear units. We disagree with this statement. We agree that at times it may be necessary, but manoeuvring nuclear units should be an action of last resort.
The IESO is saying that nuclear units will have to manoeuvre from time to time and we agree that it is not appropriate to see these actions during periods when more economically and operationally efficient resources are available but there will come a time when there will need to be nuclear manoeuvres.
- When will we see Manitoba exports?
We should see exports at Manitoba when the MISO Protocol goes in place. The change to our tools to facilitate scheduling at Manitoba to permit these exports is expected later this year. Until the tool changes are complete, there is a posting for up to 5 people to run this program.
- Have you looked into removing the IOG?
With the use of an average demand forecasting, IOG should essentially disappear during periods of low demand. IOG is mostly due to the use of a peak forecast. If we go to average demand, the likelihood of IOG goes down. We will re-evaluate once this change is made.
- CAOR is in predispach but not real-time, why not address this issue?
We need to take one step at a time and limit the number of moving parts. The IESO is currently looking at a CAOR change and is completing analysis to determine appropriate next steps.

- Will you be using average demand all of the time?
We are looking at using it during low demand periods – but that definition does not exist at this time. Whatever the CAOR change is going to be it is expected to that it will be implemented in all hours.
- Can you please outline the changes the IESO is looking to implement as described as part of the manual/rule/procedure changes on slide 10?
Defining SBG, identifying SBG in SSRs, potentially a minimum load control actions list (similar to that of times of under generation)
- Discussions with NUGs have been mentioned several times. Are these discussions coordinated?
There are discussions ongoing and there is movement forward. These conversations are coordinated with the discussion with the OPA and others.
- Are you looking at just the curtailment or efficient dispatch?
Efficient dispatch would be a utopia, but we need the issue of curtailments decided as a minimum.
- Is there a timeline on the curtailment of existing wind?
There is no timeline at this time. There has only been one meeting with the OPA and there is no good sense of timing just yet.
- Is the IESO involved in discussions with the cost of transmission service? The new tariff proposal may exacerbate SBG conditions but not facilitate exports. It is the member's view that this may seem marginal and not a lot of relief but the margins will be worse with a higher export fee, it seems counter-intuitive.
Yes, the IESO has been involved in the export tariff discussions and are contributing to the body of work. We have talked about our concerns around possible contributions to SBG conditions, but the concerns are not as big as suggested.

Darren gave a bit of background on the discussions. Currently, the export charge is \$1/MW. There is a group looking at what an appropriate fee should be. SE-78 is dealing with the export tariff.

The IESO will be accepting comments on both centralized forecasting and minimum load management for two weeks.

As for a next meeting, the IESO would like to schedule a meeting when there is a fair amount of work complete. Darren asked for feedback around an in-person meeting versus a webcast.

Action Item Summary				
#	Date	Action	Comments	Status
1	January 31, 2008	The IESO will provide an overview of the potential injections to the Technical Panel in time for their deliberations on potential market rules.	This will be an on-going item as SE-57 progresses.	Open
2	January 31, 2008	The IESO is to coordinate the threshold for providing telemetry with the LDC's requirements.		Open
3	June 16, 2009	How often and how many MW of water Hydro generators have spilled to date as well as MW of manoeuvred nuclear generation.		Open
4	August 11, 2009	Update on standards development.		Open