

Status update on Wind Power Standing Committee (WPSC) - Recommendations and Action Items  
 (as of January 2009)

Table 1: Key/Priority Recommendations				
Title	WG Recommendations	WPSC/WPIWG Recommendations	Status	Due Date
CAA and ME Requirements	1.1 Consolidated website for educational and industry information.	The IESO recommends creation of a central information depository web page to better reflect needs of new proponents, wind developers and Market Participants (MPs). This web will include information pertaining to specific wind related CAA/ME processes and requirements.	Complete	End of October, 2007
	1.2 Information sharing with CanWEA and OPA.	Links and references to this IESO specific web page from CanWEA and OPA web sites. Periodic quarterly presentations by IESO during CanWEA sessions.	Complete	
	1.3 CAA and MR requirements should be included as part of OPA RFP's.	OPA's RFPs should include a reference to the IESO CAA and ME requirements.		End of Summer 2008
Near Term Forecasting Requirements	1.4 Prescription of wind forecasting performance measures.	The IESO will continue to analyze wind forecasting performance of individual projects. IESO would accordingly suggest and prescribe performance measures incorporating an industry recognized forecasting methodology and a minimum acceptable forecast accuracy level.	Work in progress	End of April, 2008
Near Term Forecasting Requirements	1.5 MPs coordinate and develop their own centralized forecasting service.	If the MPs choose to pursue an option of coordinating and developing their own centralized forecasting system, the IESO would facilitate such activity by providing IESO services and products to MPs. These services include providing forecasting performance data, availability of existing (API) and User setup interface with IESO tools. Cost of third party forecaster services would be borne by participating wind farms.	Completed, as no action required at this stage.	

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Near Term Forecasting Requirements	1.6 IESO to analyze cost benefits associated with forecasting errors and use of persistence forecasting for 1 Hour ahead basis.	The IESO will investigate costs and benefit analysis of current levels of forecasting errors, including costs/benefits of adopting persistence forecasting for the hour ahead pre-dispatch, and impacts on market and price of power. Various levels of wind penetration will be incorporated.	Complete	End of April, 2008
Near Term Forecasting Requirements	1.7 IESO to provide incentives and compliance requirements for wind operators to provide reasonably accurate and updated forecasts.	Incentives could be part of the OPA contracts with the generators. IESO will pursue option of contract incentives for forecast performance with OPA upon establishment of forecast accuracy levels. Compliance requirements do exist which will be reviewed and may be re-defined to drive appropriate behaviour based on forecasting performance measure and accuracy study results. Meanwhile we expect that MPs would do their best endeavours to produce quality forecasts as well as performing periodic updates as per existing market rules.	Work in progress	September, 2009 or as applicable  Coordination with OPA
Wind Constraining Issues	1.8 Wind generators need to develop bilateral contracts with loads to encourage consumption during Excess Baseload Generation (EBG) events.	Wind generators themselves should promote via their contracts with consumers for load programs to encourage consumption during EBG events.	Work in progress	September, 2009 or as applicable
Operational Control	1.9 IESO to analyze needs of power management control tools for new wind generators.	IESO will internally investigate the need to require new wind generators to install power management control –PMC (curtailment/ramping) tools at facilities connecting to the ICG.	Preliminary analysis <b>completed</b> . Preliminary analysis does not necessitate a need for PMC at this stage. More work required.	End of March, 2008

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<b>Title</b>	<b>WG Recommendations</b>	<b>WPSC/WPIWG Recommendations</b>	<b>Status</b>	<b>Due Date</b>
<b>Mid-term</b> Forecasting Requirements & Method	<b>1.10</b> Development of mid-term Wind Capacity Contribution (WCC) method	IESO to develop mid-term wind forecasting methodology for use in resource adequacy models re: 18 month outlook and ORO.	Completed	End of 2008
<b>Near-term</b> Forecasting Requirements & Methodology	<b>1.11</b> Development of near-term Wind Capacity Contribution method	IESO to develop near-term wind forecasting methodology for use in near term adequacy assessments re: SSR's and SAAs	Completed	End of 200

**Table 2: Recommendations – May be Re-Visited, if Required per Long Term Needs**

Title	WG Recommendations	WPIWG Recommendations	Status	Due Date
Near Term Forecasting	<p><b>2.1</b> IESO to undertake a pilot project to determine the effectiveness of centralized forecasting.</p>	<p>Based on estimates from other ISOs, the IESO estimates high costs associated with such a pilot project. Current levels of forecast errors and wind penetration do not support high expenditures at this stage. This option of pilot project may be re-visited in future if higher penetration of wind and associated outcome of forecast accuracy analysis and cost benefit studies warrant such need. Should a pilot project occur, the IESO would consider coordinating the effort. IESO will also monitor forecasting performance of programs of other ISOs and continue to benefit from their experience, as and where applicable, to evaluate its effectiveness in Ontario.</p>	<p>Considered complete/ Put on hold</p>	<p>N/A</p>
	<p><b>2.2</b> IESO to undertake centralized wind forecasting on behalf of wind farms.</p>	<p>Current levels of forecast errors and wind penetration do not necessitate a centralized system at this stage. Based on estimates from other ISOs, the IESO estimates high costs and expenditures associated with this system. IESO has a set of market rules, market manuals and a compliance regime that specifies the forecasting submission and update requirements for intermittent generators. We expect that MPs would do their best endeavours to produce quality forecasts per existing requirements.</p> <p>An IESO centralized system undertaking is dependent upon the outcome of forecasting accuracy studies, cost benefit analysis associated with higher wind penetration levels and a pilot project, which would identify need of any centralized forecasting. Accordingly, this option may be re-visited in future upon outcome of such studies.</p>	<p>No action required at this stage. Considered complete at this stage (put on hold)</p>	<p>N/A</p>

**Table 2: Recommendations – May be Re-Visited, if Required per Long Term Needs**

Title	WG Recommendations	WPIWG Recommendations	Status	Due Date
CAA and ME Requirements	2.3 Require meteorological data - telemetry (wind speed, direction, temperatures etc) from wind farms along with other parameters in Chapter 4 Appendix 4.15.	IESO does not require such data. However, we would note that such data would be useful to MPs for (a) demonstrating due diligence with respect to compliance with forecasting related market rules and (b) for utilization in their forecasting methodology (for long term needs) as these requirements are developed.	Complete	August 20

**Table 3: Few Examples of additional recommendations emerging from WPSC meetings**

<b>Item #</b>	<b>Meeting Date</b>	<b>Action Item/Recommendation</b>	<b>Status</b>
29	November 16, 2007	IESO to make a comparison between actual and simulated production data as an option for short term forecasting.	Completed/Closed
31	November 16, 2007	Members are to review the issues list from the website and let the IESO know the priority they would like to see these issues addressed going forward.	Completed/Closed
32	February 20, 2008	Dave Hurd, Michael Cookson and David Timm to provide European ISO contacts to gather information from them on forecasting accuracy levels, methodology and incentive programs.	Completed/Closed
33	February 20, 2008	To IESO to include comments made by the members at the meeting on Mid-Term Forecasting Requirements, when the recommendations are taken to IESO Senior Management. The IESO will communicate the IESO decision back to stakeholders.	Completed/Closed