



**Implementation of MOF Recommendation Paper
Stakeholder Comment Form**

Comments From: Shell Canada Energy
 Date: April 17, 2009
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1. WIND POWER FORECASTING – Centralized Forecasting Model	
The AESO recommends that a centralized forecasting model be implemented in Alberta.	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Oppose <input type="checkbox"/> Indifferent
<u>Reasons for Stakeholder Position:</u>	
2. WIND POWER FORECASTING – RFP ASAP	
The AESO recommends that solicitation (RFP), evaluation and selection of a centralized forecasting service provider should proceed as soon as practicable.	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Oppose <input type="checkbox"/> Indifferent
<u>Reasons for Stakeholder Position:</u>	
<p>Given that wind generators will assume responsibility and costs for forecasting, representatives of the wind industry must be involved in the solicitation, evaluation and selection of a forecasting service provider.</p>	
3. WIND POWER FORECASTING	
The AESO will commence consultation on rules, procedures, standards and technical requirements regarding submission of wind generator forecast data/information including; data requirement such as turbine availability and on-site meteorological data, communication protocols, and data quality required from wind generation facilities (or individual forecasters) to deliver forecasts to the AESO.	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Oppose <input type="checkbox"/> Indifferent
<u>Reasons for Stakeholder Position:</u>	



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4. WIND POWER FORECASTING – Data Management	
<p>As part of its forecasting research and development work, the AESO will continue work to determine the capability, resources, systems and time required to perform the data management function. In parallel, the AESO will include data management as an optional requirement in the wind forecasting RFP.</p> <p><u>Reasons for Stakeholder Position:</u></p> 	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Oppose <input type="checkbox"/> Indifferent
5. FORECASTING ACCURACY	
<p>The AESO will monitor forecasting, market and operational results and develop measures of forecasting accuracy. The AESO intends to leverage available data and forecasting resources toward this end.</p> <p><u>Reasons for Stakeholder Position:</u></p> <p>In the case of a poor forecast that leads to additional cost and/or decreased system reliability, who bears responsibility?</p> 	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Oppose <input type="checkbox"/> Indifferent
6. FORECASTING - TRANSPARENCY	
<p>The AESO considers that system or aggregate wind forecasts should be transparent and made available to all market participants, particularly near term to real time.</p> <p><u>Reasons for Stakeholder Position:</u></p> 	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Oppose <input type="checkbox"/> Indifferent



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7. WIND POWER MANAGEMENT – Curtailment Protocol

The AESO seeks stakeholder feedback on the work group recommendations to use a Potential MW Protocol and specifically would like input from stakeholders regarding practicality and risks associated with this option.

- Support
 Oppose
 Indifferent

1. Pro rata allocation of the system wide wind curtailment among Wind Power Facilities (WPF)
2. Use of Potential MW Capability to allocate for each WPF
3. Curtailments should be re-assess and re-allocate every 20 minutes if the limit for any one WPF has changed by greater than 5MW

Reasons for Stakeholder Position:

Will the quality of the power generated by the turbine factor into the Curtailment Protocol?

8. WIND POWER MANAGEMENT - Supply Surplus

The AESO solicits input from all stakeholders on the proposed supply surplus protocol and proposed modifications to OPP 103 provided below.

- Support
 Oppose
 Indifferent

- (1) Include wind power facilities and co-generation facilities in OPP 103 procedures with co-generation to be subject to Minimum Operating Level (MOL) requirements
- (2) Establish a Minimum Operating Level (MOL) for each asset and, where possible, assets should not be dispatched below their MOL.
- (3) Refine MOL definition to include new constraints not included in Minimum Stable Generation¹ (MSG) but that affect the asset's ability to operate at or below a threshold. MOL is a physical operating limit (not an economic limit) for an asset constrained by legal/regulatory, environmental, health and safety, equipment reliability, operating level required to serve dispatched ancillary services, or operating level required to prevent damages to third party equipment. Examples of physical operating constraints for types of generation and import/export are included in the WG paper (Appendix A).
- (4) Develop a mechanism for pool participants to declare and submit the MOL. It is expected that the need for, approach and frequency of declaration may vary among generators and will need to be defined.
- (5) Revise the current "inflexible block" definition. The definition of "inflexible block" will need to be amended as follows:

 "inflexible block" means a block of energy that may be dispatched on or dispatched off, but not partially dispatched on, except for a \$0 offer block it may be dispatched to the asset's MOL.

 Definition of "flexible block" does not require any changes since it accommodates the proposed \$0 SMP management protocol.
- (6) Provide market indication of supply surplus conditions (similar to supply adequacy situations) to provide market participants an opportunity to take voluntary actions in the face of potential \$0 SMP conditions and also become aware that an out-of-market dispatch to clear the energy imbalance could be forthcoming.

Reasons for Stakeholder Position:

OPP 103 should be addressed by a separate consultation process since it affects all market participants.

¹ ISO Rule definition for MSG is "minimum stable generation" which means the minimum generation level that an asset can be continuously operated at without becoming unstable.

9. SUPPLY SURPLUS – protocol

The Supply Surplus work group also developed the following protocol respecting OPP 103:

- Support
 Oppose
 Indifferent

Step 1: Curtail opportunity services including import transactions.

Step 2: Take the following actions, taking into account the transmission system operating and reliability constraints and an objective of rotating the curtailments amongst market participants where possible:

- a. Curtail flexible \$0 blocks, by pro-rata assignment,
- b. Where wind generation is required to be curtailed pursuant to (a), assign the curtailment amongst each individual wind power facility using the wind power management protocol,
- c. Curtail inflexible \$0 blocks to the asset's MOL.

Step 3: Curtail an asset to 0 MW (go off line), considering the asset's minimum off time.

Reasons for Stakeholder Position:

OPP 103 should be addressed by a separate consultation process since it affects all market participants.



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10. Technical Requirements and Standards

Given the expected difficulty and expense in modifying and/or retrofitting some existing wind power facilities, the WPFTR (s 1.2 g) provided an exemption from the 2004 requirements for any facilities that interconnected under the technical requirements that were in effect prior to November 15, 2004 but specified that these facilities would be required to comply with the WPFTR if the facilities underwent a refurbishment or major upgrade.

- Support
- Oppose
- Indifferent

The AESO considers that this approach is reasonable and prudent but expects that the issue of applicability should be discussed in the rules and standards development and consultation phase. This will include a discussion of the potential grandfathering of certain wind facilities based on the terms and conditions of interconnection agreements and other relevant information.

Reasons for Stakeholder Position:

What is the timeline for developing the WPFTR? It is key that the performance parameters be defined, especially for "power limiting", "ramp limiting", and "sustained ramping".

11. ADDITIONAL COMMENTS

More clarity is required concerning cost allocation (forecasting service, Regulating Reserves, Load/Supply following, Ancillary Services).

Managing the integration of wind power provides an opportunity to develop demand side management tools and other innovative solutions.

Please return this form with your comments by April 3, 2009 to:

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