



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

Comments From: TransAlta Corporation  
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| <b>1. WIND POWER FORECASTING – Centralized Forecasting Model</b>  |  |
| <p>The AESO recommends that a centralized forecasting model be implemented in Alberta.</p>  | <input checked="" type="checkbox"/> Support<br><input type="checkbox"/> Oppose<br><input type="checkbox"/> Indifferent |
| <p><u>Reasons for Stakeholder Position:</u></p> <p>Wind Forecasting is to serve the needs of the AESO and the forecasts need to be focused/tuned towards their operational requirements.</p> <p>We would also expect a single central forecaster would be most economic.</p>  |  |
| <b>2. WIND POWER FORECASTING – RFP ASAP</b>   |  |
| <p>The AESO recommends that solicitation (RFP), evaluation and selection of a centralized forecasting service provider should proceed as soon as practicable.</p>   | <input checked="" type="checkbox"/> Support<br><input type="checkbox"/> Oppose<br><input type="checkbox"/> Indifferent |
| <p><u>Reasons for Stakeholder Position:</u></p> <p>While the current level of wind penetration is not an issue the AESO must operationalize forecasts to be prepared when more wind energy is added to the system. This means the operators must be comfortable with the system and gain experience from its use prior to when significant wind is on the system.</p> <p>This will also give the AESO and the forecaster the time needed to fine tune their applications and processes.</p> |  |
| <b>3. WIND POWER FORECASTING</b>  |  |
| <p>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.</p>   | <input checked="" type="checkbox"/> Support<br><input type="checkbox"/> Oppose<br><input type="checkbox"/> Indifferent |



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Reasons for Stakeholder Position:

Same answer as in 3 above. This is needed to put the wind forecasting in place. As well it serves to advise new entrants of the requirements so that there are no surprises.

**4. WIND POWER FORECASTING – Data Management**

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.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

Data management should be handled by the AESO as this flows with the contractual relationship between market participants and the AESO. Third party data management raises confidentiality issues.

**5. FORECASTING ACCURACY**

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.

- Support
- Oppose
- Indifferent

Reasons for Stakeholder Position:

There will be multiple forecast over multiple time horizons with the forecasts being used for various purposes. The ultimate use of the forecasts determines the accuracy requirements and the assessment of the consequences, if any, of inaccuracy.

We are unsure if the AESO means accuracy or an assessment of the uncertainty of any forecast. Forecasts by their nature have uncertainty and any measure of performance should be if the result is within the uncertainty bounds of the forecast estimate and not assessed against a single value forecast estimate.

The AESO needs to develop performance measures including accuracy however defined.

**6. FORECASTING - TRANSPARENCY**

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.

- Support
- Oppose
- Indifferent



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### Reasons for Stakeholder Position:

The aggregate wind power forecasts used by the AESO should be made available near term or real time.

The AESO must decide the extent of the forecasts disclosed, e.g. for how many hours ahead, the granularity of the information, and whether uncertainty for the forecasts is provided. The AESO may wish to consult with market participants as to what information may be useful.

The AESO should caution market participants that the information received is a forecast and that provision of the forecasts is for information purposes only.

### **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:

The protocol is premised on the AESO having made the decision that wind power management should be triggered. An important part of the discussion which has not taken place is the decision process in deciding to trigger WPM.

WPM management is focused on limiting wind when system resources are inadequate to handle the change in wind output over time. There are many other changes in generation output, imports/exports and loads on the system at any time and there is a danger that WPM will be used to solve/mitigate non-wind issues. The decision process to clearly identify and associate cause with mitigative action needs to be fully described and prescribed.

Wind generation will be dispersed over wide geographies in Alberta. There will be many occasions when the local generation is providing system benefits including voltage support and loss reductions. In these circumstances prorata system wide curtailment may not make sense.

With these caveats we support the protocol.



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| <b>8. WIND POWER MANAGEMENT - Supply Surplus</b>   |   |
| <p>The AESO solicits input from all stakeholders on the proposed supply surplus protocol and proposed modifications to OPP 103 provided below.</p> <p>(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</p> <p>(2) Establish a Minimum Operating Level (MOL) for each asset and, where possible, assets should not be dispatched below their MOL.</p> <p>(3) Refine MOL definition to include new constraints not included in Minimum Stable Generation<sup>1</sup> (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).</p> <p>(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.</p> <p>(5) Revise the current "inflexible block" definition. The definition of "inflexible block" will need to be amended as follows:</p> <p>"inflexible block" means a block of energy that may be dispatched on or dispatched off, but not partially dispatched on, <u>except for a \$0 offer block it may be dispatched to the asset's MOL.</u></p> <p>Definition of "flexible block" does not require any changes since it accommodates the proposed \$0 SMP management protocol.</p> <p>(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.</p> <p><u>Reasons for Stakeholder Position:</u></p> <p>TransAlta believes the modifications to OPP 103 proposed by the AESO are premature in that changes are proposed which will impact cogeneration facilities without sufficient notice to those market participants.</p> <p>The changes suggested are set out in a process dealing with "wind integration". Notices sent out by the AESO concerning the process do not highlight that changes are suggested for</p> | <p><input type="checkbox"/> Support<br/> <input checked="" type="checkbox"/> Oppose<br/> <input type="checkbox"/> Indifferent</p> |

<sup>1</sup> 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.



## Implementation of MOF Recommendation Paper Stakeholder Comment Form

cogeneration operations under OPP 103 and therefore the affected parties may not have reviewed the changes. Further, MOL would be established for all types of generation and a wider consultation is thus needed.

OPP 103 is similar in some ways to congestion management and this process is uncertain at this time. The introduction of a new concept such as MOL has wider implications than just OPP 103 and should be taken through the broadest possible stakeholder consultation process.

We would like to understand how issues related to Industrial System Designations and how the proposed supply surplus rules respect legislation regarding ISD's.

Further, how does the proposed definition for MOL fit with an ISD designation and its right to service its own site load?

Specifically, if generation at levels beyond serving on site electrical requirements is required to produce the necessary steam on site, how will this be interpreted under the MOL?

Declaration of a MOL, as a physical quantity, must be flexible to allow hourly submission to reflect site operational conditions.

**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:

The same comments as were made in 8 apply to 9.

**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:

We support grandfathering of older wind farms which will not have the necessary communications in place and which also will not have equipment with the capabilities required to comply. As well, the older wind farms will decrease in significance as the amount of wind on the system increases.

We would suggest that it would be timely to review the entire WPFTR at this time to ensure the requirements can be met by the wind turbine equipment suppliers. This standard is now almost five years old and a review would be timely.

**11. ADDITIONAL COMMENTS**

Given the plans to implement the Forecasting System in 2009 and that the costs of the forecasting are to be paid by the wind farms producing energy, the AESO needs to consider the following:

- The current level of wind energy on the system of approximately 500 MW is not a concern but that the AESO has indicated a concern exists when approximately 900 MW is reached.
- The costs of the forecasting will be borne initially by wind farms which are not a level of concern. We would recommend the cost chargeout on the system be based on 1000 MW and that until such time as 1000 MW is achieved that the AESO absorb the costs related to the difference between the installed capacity and 1000 MW.
- The AESO needs to devise a chargeout process and consult with the wind industry on the process. We assume that this will become part of the tariff process.



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Please return this form with your comments by April 17, 2009 to:

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