

March 28, 2013

Dear Loss Factor Stakeholders:

Re: **Summary of 2017 Loss Factor Estimates**

The AESO is pleased to present a summary of 2017 non-binding Loss Factor Estimates, as agreed to by stakeholders during the Loss Factor Rule development. The purpose of the fifth year non-binding loss factor estimates is to provide a simple 'what-if' forecast of loss factors to assist business planning for generator proponents.

Attached is a summary of the loss factor estimates for 2017 regarding the Alberta Interconnected Electric System. New generation (as per the ISO Rule Section 501.10) and the 2017 Load Forecast are included in the calculation of the 2017 loss factor estimates. Any generation units/facilities that are assumed to be retired by 2017 have been removed.

In order to provide an assessment of the possible range of 2017 loss factors, one original scenario (Scenario A below) and four other "what-if" scenarios were evaluated to provide further information:

A. 2017, original base cases

The original scenario is adjusted to establish four "what-if" scenarios:

B. 2017, with Wabamun area coal generation reduced by 500 MW

C. 2017, with south of Calgary wind reduced by 500 MW of installed capacity

D. 2017, with south of Calgary wind increased by 500 MW of installed capacity

E. 2017, with Shepard generation dispatched (the Shepard generators were not dispatched in the 2017 original base cases due to low load and sufficient generation forecast).

As has been the practice in previous years, base cases will not be provided for the fifth year. The Generic Stacking Order (GSO) for 2017 was used as the basis for dispatching generation.

The following assumptions were used in the original base cases to develop the loss factor estimates for 2017:

- All Critical Transmission Infrastructure projects are included in the base cases as per the best information available.
- Major transmission upgrades (240 kV) were included.
- The 500 kV HVDC lines from the Wabamun area to the Calgary area and the Fort Saskatchewan area to the Brooks area has been included.
- All loss factor assessments are made on raw loss factor evaluations and then normalized and compressed as necessary based on the current ISO loss factor rules.

- Wind Generation additions are consistent with the AESO Long-term Generation Scenarios.

Conditions and Details

Please note the information used to calculate these non-binding loss factor estimates will likely change over the next five years, specifically:

- The 2012 Long-term Outlook load forecast was used in the 2017 base case development.
- All topology in the 2017 cases is as per the best information available from the AESO's project list and connection queue.
- All existing 2013 generation has been included in the 2017 cases, with the exception of any known retired generation.
- Proposed generation in the 2017 GSO may not have been approved by the Alberta Utilities Commission (AUC). Generators used in the analysis are entered as having completed gate 1 in the AESO's connection process. The AESO Long-term Generation Scenarios are used as an input to determine the wind capacity cut off for the 2017 base cases.
- Some major transmission enhancements in the cases following 2013, which are expected to be in-service by 2017, may not have been approved by the AUC. As a result, the transmission system topology is subject to change.

Please note individual loss factors will not be presented due to confidentiality.

A background map of Alberta along with area loss factor ranges (Figure 1) is attached for your reference. In the 2017 Loss Factor Estimate Map, the MATL area has been merged into the Southeast area.

If you have any questions contact the AESO at lossfactor@aeso.ca.

Yours truly,

Original signed by

Rob Senko,
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Figure 1: 2017 Loss Factor Estimate Map

Version 1 March 28, 2013

