

March 30, 2011

Alberta Loss Factor Stakeholder Group

Re: Summary of 2015 Loss Factor Estimates

The AESO is pleased to present a summary of 2015 Loss Factor Estimates, as agreed to by stakeholders during the Loss Factor Rule development. The purpose of the fifth year non-binding estimates is to provide a simple ‘what-if’ forecast of loss factors to assist business planning for generator proponents. Since the loss factor process only provides binding loss factors for one year, proponents wished to have an indication of loss factors five years out.

Attached is a summary of the loss factor estimates for 2015 (the fifth year, based on the 2011 Generic Stacking Order or GSO and generation projects) regarding the Alberta Interconnected Electric System (AIES). New generation and the 2015 load forecast are included in the calculation of the 2015 loss factor estimates. Sundance 1 and 2 have been removed along with other generators that have been retired.

In order to provide an assessment of the possible range of 2015 loss factors, the following five scenarios were evaluated:

- A. 2015, original base cases
- B. 2015, without Shepard generation dispatched
- C. 2015, without Sundance #7 generation dispatched
- D. 2015, without HR Milner #2 generation dispatched
- E. 2015, with south of Calgary wind reduced by 500 MW of installed capacity

As has been the practice in previous years, base cases will not be provided for the fifth year. The GSO for 2015 was used as the basis for dispatching generation.

The following assumptions were used in the original base cases to develop the loss estimates for 2015 (AESO Long-term Transmission System Plan - 2009 was used as a basis):

- Major transmission upgrades (240 kV) were included in the southeast, southwest and northwest.
- The 500 kV HVDC lines from Wabamun area to Calgary area and Redwater area to Brooks area.

- All loss factor assessments are made on raw loss factor evaluations and then normalized and compressed as necessary based on the current rules.
- Wind Generation additions are consistent with the 2009 AESO Long-term Transmission System Plan.

Conditions and Details. Please note the information used to calculate these loss factor estimates will likely change over the next five years, specifically:

- All Critical Transmission Infrastructure projects are included in the base cases as per the best information available.
- All existing 2011 generation has been included in the 2015 cases, with the exception of any retired generation.
- The 2009 Long Term Load Forecast was used in the base case development.
- All topology in the 2015 cases is as per the best information available from the AESO 2009 Long-term Transmission System Plan.
- Proposed generation in the 2015 GSO may not have been approved by the AUC. Generators used in the analysis have been logged in AESO's project list as project inquiries. This information was used to build the base cases. The AESO Long Term Generation Scenarios are used as an input to build the 2015 base cases.
- Some major transmission enhancements in the cases following 2011 which are expected to be in-service in 2015, 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.

A background map of Alberta along with area loss factor ranges (Figure 1) is attached for your reference.

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

Yours truly,

Original signed by

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Technical Lead, Engineering



Figure 1: 2015 Loss Factor Estimate Map

Version 1

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