March 29, 2012

Dear Loss Factor Stakeholders:

Re: **Summary of 2016 Loss Factor Estimates**

The AESO is pleased to present a summary of 2016 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. 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 2016 regarding the Alberta Interconnected Electric System (AIES). New generation and the 2016 Load Forecast are included in the calculation of the 2016 loss factor estimates. Retired generation units/facilities have been removed.

In order to provide an assessment of the possible range of 2016 loss factors, the following six scenarios were evaluated:

A. 2016, original base cases

B. 2016, with Wabamun area coal generation reduced by 500 MW

C. 2016, with south of Calgary wind reduced by 500 MW of installed capacity

D. 2016, with Sundance #7 generation dispatched

E. 2016, without Shepard generation dispatched

F. 2016, with south of Calgary wind increased 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 2016 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 2016:

- All Critical Transmission Infrastructure projects are included in the base cases as per the best information available.
- 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 Fort Saskatchewan area to Brooks area have been included.
- All loss factor assessments are made on raw loss factor evaluations and then normalized and compressed as necessary based on the current rules.

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

- 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:

- An updated 2009 Long-term Load Forecast was used in the 2016 base case development.
- All topology in the 2016 cases is as per the best information available from the AESO's project list and connection queue.
- All existing 2012 generation has been included in the 2016 cases, with the exception of any retired generation.
- Proposed generation in the 2016 GSO may not have been approved by the AUC. Generators used in the analysis are entered as having completed gate 1 with the exception of Sundance 7 (included in Scenario D). The AESO Long-term Generation Scenarios are used as an input to determine the wind capacity cut off for the 2016 base cases.
- Some major transmission enhancements in the cases following 2012 which are expected to be in-service by 2016, 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@aeso.ca.

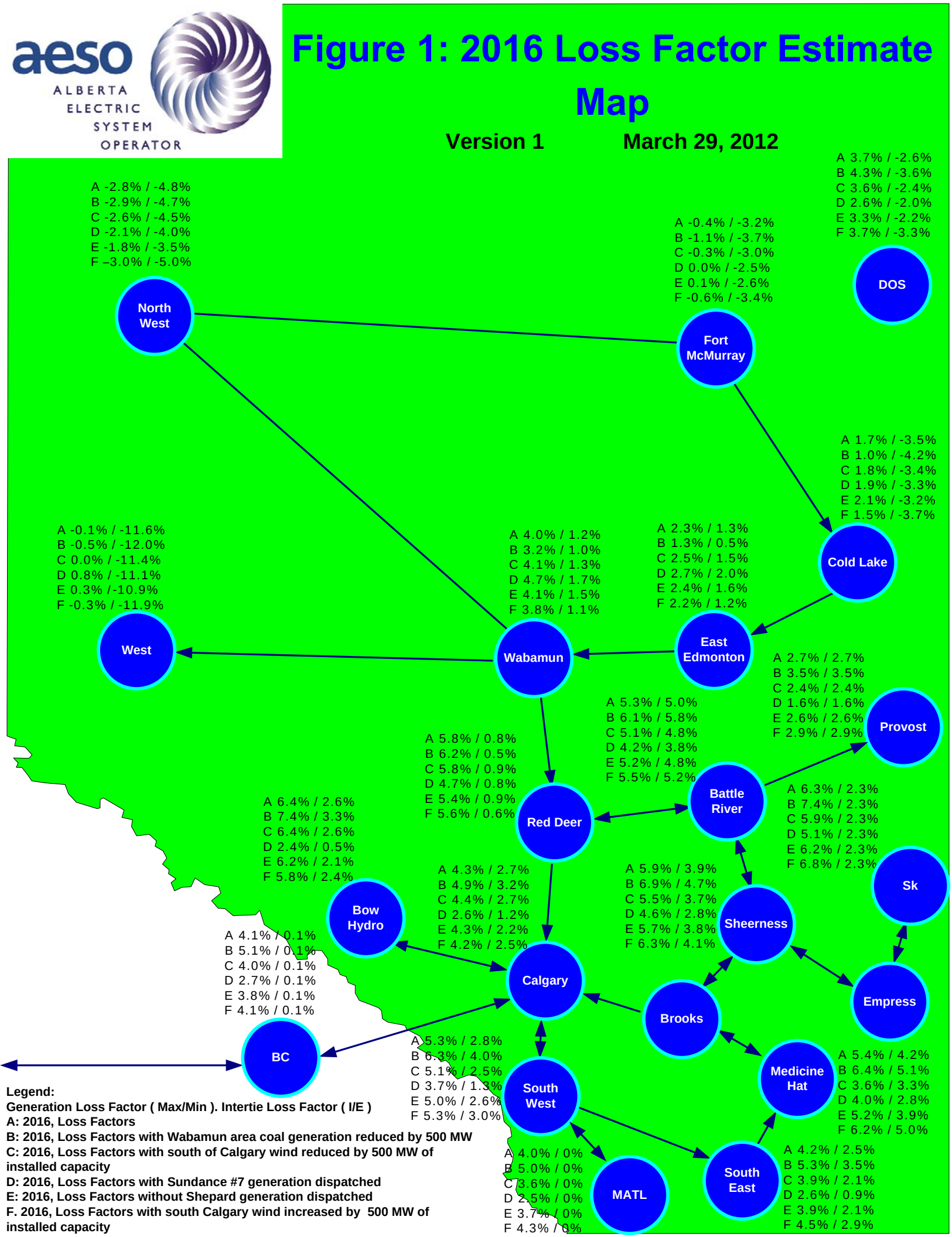
Yours truly,

Original signed by

Fred Ritter, P.Eng.
Technical Lead, Engineering

Figure 1: 2016 Loss Factor Estimate Map

Version 1 **March 29, 2012**



Legend:
Generation Loss Factor (Max/Min). Intertie Loss Factor (I/E)
A: 2016, Loss Factors
B: 2016, Loss Factors with Wabamun area coal generation reduced by 500 MW
C: 2016, Loss Factors with south of Calgary wind reduced by 500 MW of installed capacity
D: 2016, Loss Factors with Sundance #7 generation dispatched
E: 2016, Loss Factors without Shepard generation dispatched
F. 2016, Loss Factors with south Calgary wind increased by 500 MW of installed capacity