

February 21, 2006

Loss Factor Stakeholder Group

## Re: <u>Summary of 2010 Loss Factor Estimates</u>

The AESO is pleased to present a summary of 2010 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 new 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 2010 (the fifth year, based on 2006) for the Alberta Interconnected Electric System (AIES).

In order to provide an assessment of the possible range of 2010 loss factors, the following four scenarios were evaluated:

- A. 2010, base case (system average loss: 3.8%)
- B. 2010, no 500 kV line from Edmonton to Calgary (system average loss: 4.2%)
- C. 2010, a reduction of approximately 500 MW of southern generation
- D. 2010, no 500 kV connections from Calgary to Edmonton and a reduction of approximately 500 MW of southern generation

Owing to the confidential nature of the generation development, base cases will not be provided for 2010. The Generic Stacking Order (GSO) for 2010 '2010 Generic Stacking Order Version 1 – September 23, 2005', posted on the AESO web site, was used as the basis for dispatching generation.

The following assumptions were used to develop the loss estimates for 2010:

- Major transmission upgrades (240 kV) were included in the southeast, southwest and northwest.
- The 500 kV KEG conversion was included
- The 500 kV Edmonton to Calgary line, except in scenarios B and D
- No generators have been decommissioned in the 2010 cases from the 2006 cases
- All loss factor assessments are made on raw loss factors evaluations and then normalized and compressed as necessary
- All generation assessments for 2010 based on the 10 year plan and projects in the AESO project inquiries list. Generation levels shown in the 2010 GSO.
- Wind Generation Assumption is as per the 2010 GSO on the AESO web site.
- In the development of the cases no unit above #151 was dispatched in the base 2010 cases.

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• Several generation projects in the 2010 timeframe have submitted cancellation notices or have made requests to modify their output. The changes received in January 2006 are not large changes. Therefore, the base cases were not modified based on these submissions.

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

- All existing generation has been included in the 2010 cases.
- All proposed generation in the 2010 GSO has not been approved by the AEUB. Generators used in the analysis have project inquiries and is based on the 10 year plan. This information was used to build the base cases.
- Any major transmission enhancements in the cases following 2006, with the exception of the 500 kV connections due in 2009, have not been approved by the AEUB. As a result, the transmission system may also change.

A background map of Alberta with the 2010 loss factor estimates is attached for your reference.

If you have any questions regarding this issue please contact me at 403 539 2614.

Yours truly,

Robert Baker, P.Eng. Manager, Operations Forecasting



## - 4 -Location of Generation within in Areas

Location	Name
Northwest	RAINBOW 1, RAINBOW 2, RAINBOW 3, RAINBOW 4, RAINBOW 5, FORT NELSON, BEAR CREEK G2, BEAR CREEK G1, GRANDE PRAIRIE ECOPOWER CENTRE, STURGEON 1, STURGEON 2, VALLEYVIEW, P&G WEYERHAUSER
Fort McMurray	MUSGKEG, McKAY RIVER, SYNCRUDE AURORA, SUNCOR MILLENIUM, MEG ENERGY
Cold Lake	MAHKESES, COLD LAKE, PRIMROSE, FOSTER CREEK G1
Edmonton	GENESEE 1, GENESEE 2, GENESEE 3, KEEPHILLS #1, KEEPHILLS #2, DOW GTG, ROSSDALE 8, ROSSDALE 9, ROSSDALE 10, SHELL SCOTFORD, SUNDANCE #1, SUNDANCE #2, SUNDANCE #3, SUNDANCE #4, SUNDANCE #5, SUNDANCE #6, REDWATER, WABAMUN #4
Red Deer	NOVA JOFFRE, BIGHORN, BRAZEAU
Calgary	CALPINE CTG, CALPINE STG, CARSELAND, CAVAILIER, BALZAC
Bow Hydro	BARRIER, BEARSPAW, CASCADE, GHOST, HORSESHOE, INTERLAKES, KANANASKIS, POCATERRA, RUNDLE, SPRAY, THREE SISTERS
Battle River	BATTLE RIVER #3, BATTLE RIVER #4, BATTLE RIVER #5
Sheerness	SHEERNESS 1, SHEERNESS 2
Medicine Hat	CITY MEDICINE HAT
South	CASTLE RIVER, SPRING COULEE, PINCHER CREEK, STIRLING, GLENWOOD, CASTLE ROCK RIDGE, GW POWER SODERGLEN, SUMMERVIEW PHASE 2, CHIN CHUTE, BENIGN KETTLES HILL, BLUE TRAIL, TABER WIND, McBRIDE, COWLEY EXPANSION 1, COWLEY EXPANSION 2, COWLEY NORTH, COWLEY RIDGE WIND POWER PHASE2, DRYWOOD 1, SUMMERVIEW 1, OLDMAN, COWLEY RIDGE WIND POWER PHASE1, SUNCOR MAGRATH, TAYLOR HYDRO, TAYLOR WIND PLANT
ВСН	BCH – Export, BCH - Import
SK	SPC – Export, SPC - Import
West	HR MILNER, POPLAR HILL, NORTHSTONE ELMWORTH, DIASHOWA