

## **Loss Factor Discussion Paper: Preamble to Rule 9.2 and Appendix 7 Re: 2007 Regulation Change**

### **Background**

The current loss factor methodology is based on the Transmission Regulation A.R. 174/2004 ('T-Reg') A revised Transmission Regulation, A.R. 86/2007, was made law in 2007 ("2007 T-Reg"). The 2007 T-Reg changes certain aspects of the loss factor calculation, incorporating some recommendations from stakeholders. The AESO is required to make the necessary changes to the Loss Factor Rule to meet the requirements of 2007 T-Reg for implementation in 2009. Other changes to the Loss Factor Rule will be made based on outcomes of stakeholder consultation; however the requirements of the 2007 T-Reg are a higher priority.

### **Timeline**

Similar to 2004, the AESO is soliciting input from stakeholders prior to the proposed changes to the loss factor rules entering the formal ISO Rules approval process. The AESO has initiated the consultation early due to the time required to modify the loss factor software, the time required to complete the annual loss factor process and the highly mathematical nature of the Rule.

- Receive Comments from Stakeholders by June 08, 2007 following the introduction of the 2007 Regulation
- 2007 LF re-runs results will be provided regularly based on the 2007 T-Reg – first run provided June 19 2007
- Stakeholders Meeting on Regulation changes, June 18, 2007. Detailed plan regarding the discussion was sent to Stakeholders for comments in the week of July 9, 2007. The discussion is a tracked copy of the draft proposed changes to the loss factor rule
- Meeting to review comments and discuss on July 18 2007
- Receive comments from Stakeholders on discussions held on July 18 by July 20, 2007 (none received)
- Submission Draft to AESO internal review committee and stakeholders by July 25, 2007
- Stakeholders Consultation on proposed changes to the loss factor rule, October 1 - 12, 2007
- Receive Comments from Stakeholders on proposed changes to the loss factor rule by mid-October, 2007
- Submission of final proposed loss factor rule to AESO Executive Rules Committee (ERC) for approval by early November.
- January to March 2008 – loss factor software will be modified to reflect the approved loss factor rule. Testing, integration and production changes will be completed.
- May 2008 – the 2009 Loss Factor calculation process begins (Process normally takes about six months)

## Issues Addressed in the 2007 T-Reg

The following are the issues addressed in the 2007 T-Reg:

1. Opportunity Service Loss Factor – Presently and consistent with the 2004 Regulation, tie line and DOS loss factors are calculated differently than the generators' loss factors. Generators' loss factors are calculated based on their average impact on the system loss where as the opportunity service loss factors are calculated based on their total impact on the system loss.

The 2007 T-Reg streamlines the loss factor calculation by applying the same average impact methodology to all loss factor customers such as generators, import and DOS on and after January 01, 2009. Exports will not have a loss factor. Imports and exports will pay for average losses on the inter-ties themselves. The exact nature of the calculation process discussion is underway and the AESO will produce examples shortly.

2. Loss Factor Range – The loss factor range is currently a function of the average system loss in Alberta (e.g. +2X Average System Loss to -1X Average System Loss). The range changes as the average system loss changes. An un-intended outcome of this requirements is that a relatively large drop in average system losses, such as can be expected following the commissioning of the north south 500 kV line, will reduce the loss factor range. A smaller range will 'clip' more loss factors to the limits of the range and will cause a higher shift factor and loss factors will be less representative of the actual impact on system losses.

The 2007 T-Reg requires a fixed range of loss factors (+12% to -12%) to be used on and after January 01, 2009. This range is independent of any variable.

3. TMR – Transmission Must Run (TMR) units are dispatched as per AESO's OPP's to maintain reliable power system operation in Alberta. TMR levels have been considered in all previous AESO loss factor calculations.

The 2007 T-Reg specifically requires that TMR, if necessary, is part of normal operation. The TMR clause removes any confusion among the stakeholders as to whether TMR is normal operation or abnormal operation given that transmission policy also requires the development of a relatively unconstrained system.

## Other Issues

The AESO may consider other changes to the Rule based on the nature of the change and the time required making the change. Changes may include additional information in the generic stacking order, the order of new units being dispatched, AESO's commitments with

respect to preliminary loss factor calculations, and the inclusion of import in the stacking order, etc.

### **Next Steps**

The Rule and Appendix 7 is offered in an 'overwritten' format for ease of tracking and identifying the changes. These changes can then be used as a basis of discussion as the formal consultation begins (see the timeline above). The AESO will be offering several more meeting settings to discuss the Rule changes. The AESO will also provide examples as to how the tie lines may be treated for the purposes of calculating average losses on export and import conditions.