



June 2, 2008

Vince Kostesky  
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**Re: Voltage Profile Improvement in Loss Factor Base Cases.**

Dear Vince,

Thank you for your letter on the loss factor base case voltage profile issue and providing TCE's suggestions. The AESO would like to confirm the processes to be followed in the upcoming 2009 base case development and clarify few issues raised by TCE.

1. Voltages at *major* buses, 240 kV and higher, with more than 500 MW of net injection (load or generation) will be evaluated to within **1%** of the historical SCADA voltage, subject to availability of resources.
2. All other transmission buses will be evaluated to within **5%** of the historical SCADA voltage, subject to availability of resources.
3. Historical voltages will be determined from the SCADA database following the current process.
4. TCE mentioned in the letter "*The AESO has not described the methodology by which the historical operating voltage has been determined in the April 30 letter to stakeholders.*" The AESO published a letter to the stakeholders on its website (March 19, 2008) to initiate the current discussion ([http://www.aeso.ca/downloads/Voltage\\_Profile\\_letter.pdf](http://www.aeso.ca/downloads/Voltage_Profile_letter.pdf)). The letter describes the current process step by step. The AESO did not include the same content in the April 30 letter as this letter is a continuation of the March 19 letter. The AESO did not receive any letters or concerns on the current process of determining the historical voltage level as described in the March 19 letter.
5. The voltage profile modeling, which is a function of load, generation, and other voltage control devices, is an iterative task. The generation is modeled according to the Generic Static Order (GSO) and the loads are modeled as per the latest project information using their In-Service-Date (ISD) according to the loss factor rule. These all factors need to be balanced to achieve the bus voltage target.

6. TCE mentioned in the letter *“TransCanada has conducted parallel analysis of the loss factor calculations. This modeling work has demonstrated that 1 kV variations in voltages on a major 240 kV bus from historical operating levels compared to modeled levels can result in material differences in loss factors.”* The term material is very subjective and the AESO found the difference in the loss factors is small considering the 0.25% triggering factor in the loss factor re-calculation. The AESO contends the published threshold regarding change should still be the measure by which changes should be determined.
7. The timeframe, the AESO as mentioned earlier, to finalize the loss factor base cases is for 2009 is underway and timing is crucial. The AESO will maximize its effort to bring the bus voltages to the specified levels as stated above.

As always, please contact me if you have any questions.

Yours truly,

*Original signed by*

Robert Baker, P.Eng.  
AESO, Operations Forecasting

C.c. Jerry Mossing - AESO