

May 11, 2012

Don Popowich  
Director, Facilities  
Alberta Utilities Commission  
Fifth Avenue Place  
4<sup>th</sup> Floor, 425 – 1<sup>st</sup> Street SW  
Calgary, Alberta T2P 3L8

Dear Mr. Popowich:

**Re: Medicine Hat Area Amendment to the Alberta Utilities Commission Southern Alberta Transmission System Reinforcement (SATR) Approval No. U2011-115 (SATR NID Approval)**

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1. The Alberta Electric System Operator (AESO) is applying to the Alberta Utilities Commission (AUC) for approval of an amendment to the SATR NID Approval to delete certain upgrades to the 600L and 880L 138kV transmission lines, all as more particularly described below.

### **Background**

2. On December 30, 2008, the AESO applied to the AUC for approval of a needs identification document for transmission reinforcement in southern Alberta (SATR NID). The AUC approved the SATR NID in Decision 2009-126 on September 8, 2009, and pursuant to same, Approval No. U2009-340 was issued to the AESO on September 17, 2009.
3. On December 7, 2009, the AESO filed the finalized milestones and monitoring process with the AUC pursuant to the Commission's direction in Decision 2009-126 and Approval No. U2009-340. The AUC approved the finalized milestones and monitoring process in Decision 2010-343 and, pursuant to same, Approval No. U2010-264 was issued to the AESO on July 19, 2010.
4. On September 1, 2010, by Application No. 1606526, the AESO filed amendments to Approval No. U2010-264 and Approval No. U2010-435<sup>1</sup> in respect of the proposed Cassils 324S substation. On September 13, 2010, by Application No. 1606564, the AESO filed an amendment to Approval No. U2010-264 in respect of shunt reactors at the proposed 240 kV Sub D. The AUC approved Application Nos. 1606526 and 1606564 on March 15, 2011 in Decision 2011-102 and Approval No. U2011-115 on June 7, 2011 by which the AUC also rescinded Approval No. 2010-264.

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<sup>1</sup> Amendment to Hanna Region Transmission System Needs Identification Document, Application No. 1606434, Decision 2010-592.

5. The SATR NID Approval reflects a three-stage approach to the transmission development. Specific development activities are included in the SATR NID Approval under each stage.
6. On October 5, 2010, the AESO reported that each of the SATR milestones had been met and that it had issued directions to the transmission facilities owner to prepare facility applications for SATR Stage 1 and Stage 2 components.<sup>2</sup>

#### **Existing SATR NID Approval Development**

7. The SATR NID Approval includes the following development:

##### ***SATR NID Approval, Stage I – Paragraph 8(f)***

*8.(f) “modification of the existing 138-kV transmission lines 600L and 880L from Peace Butte 404S substation to Bullshead 523S substation to Medicine Hat 41S substation”.*

#### **Proposed Amendment and Rationale**

8. For the reason provided below, the AESO proposes to amend the SATR NID Approval with the following specific amendment:
  - (a) Delete paragraph 8(f) under Stage I in its entirety.
9. In the SATR NID, the AESO recommended various Medicine Hat 138kV system changes, including the Peace Butte to Bullshead to Medicine Hat 138 kV line modifications.<sup>3</sup> Based on detailed engineering of the Medicine Hat 138kV reconfiguration, the AESO and AltaLink have now agreed that the Peace Butte to Bullshead to Medicine Hat 138 kV line modifications are no longer needed to meet the need identified in the SATR NID. Therefore, the AESO is proposing to remove the Stage I, paragraph 8(f) development from the SATR NID Approval.

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<sup>2</sup> Southern Alberta Transmission Reinforcement (SATR) Milestones and Monitoring Process (MMP) – Status Report for Q3 2010; [http://www.aeso.ca/downloads/SATR\\_Milestones\\_Quarterly\\_Update\\_Q3\\_2010-R1.pdf](http://www.aeso.ca/downloads/SATR_Milestones_Quarterly_Update_Q3_2010-R1.pdf)

<sup>3</sup> SATR NID, Table 7-2, Item II-2.

## **Related Information**

### **The Need for Transmission Development Remains the Same as Identified in the SATR NID**

10. In the SATR NID, the AESO explained that the need for transmission reinforcement in southern Alberta is driven predominantly by the forecast development of wind generation and the limited capability of the transmission system to deliver additional generation on a firm basis to the AIES.<sup>4</sup> The AESO recommended the construction of a 240 kV looped system in southern Alberta that would enable connection of the forecast wind power.<sup>5</sup>
11. The elimination of the 600L and 880L transmission line modifications from Peace Butte 404S substation to Bullshead 523S substation to Medicine Hat 41S substation does not change the need for transmission reinforcement identified in the SATR NID.

### **Engineering Studies**

12. This amendment does not change the AESO engineering study and analysis conclusions described in the SATR NID.<sup>6</sup>

### **Land Impact Assessment**

13. As the proposed amendment will have no visual or environmental impacts on the surrounding communities or the environment, the AESO has not undertaken an environmental and socio-economic assessment of the amendments.

### **Cost Estimates**

14. In the SATR NID, AltaLink estimated the cost of the modifications to 600L and 880L terminations to be in the order of \$0.6 Million (+30/-15%, 2008\$).<sup>7</sup> Therefore, the deletion of these modifications is estimated to reduce the cost of the SATR developments by \$0.6 Million (+30/-15%, 2008\$).

### **Information Provided to Stakeholders**

15. As the proposed amendments will not have an impact on the stakeholders in the development area, the AESO has not undertaken a participant involvement program in respect of the amendments.

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<sup>4</sup> SATR NID Executive Summary, page i.

<sup>5</sup> SATR NID Executive Summary, page ii.

<sup>6</sup> SATR NID, section 3, section 5, Appendix B Existing System Power Flow Analysis, Appendix D Alternatives Steady State Technical Analysis, and Appendix E Transient Stability Analysis.

<sup>7</sup> Application No. 1600862, AUC-AESO-2, Appendix B, Transmission Line – NID Estimate, NID Med Hat Area 138 kV Recon.xls, Line 6

**Request for Approval**

16. The AESO requests that the AUC approve the amendment to the SATR NID Approval as described herein.

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Yours very truly,



Doyle Sullivan, P. Eng.  
Director, Regulatory Services

cc Renee Marx, AltaLink Management Ltd.