



## Alberta Electric System Operator

### Amendment to Hanna Region Transmission System Needs Identification Document

December 17, 2010

**ALBERTA UTILITIES COMMISSION**

Decision 2010-592: Alberta Electric System Operator  
Amendment to Hanna Region Transmission System  
Needs Identification Document  
Application No. 1606434  
Proceeding ID. 768

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**ALBERTA ELECTRIC SYSTEM OPERATOR  
AMENDMENT TO  
HANNA REGION TRANSMISSION SYSTEM  
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**1 INTRODUCTION**

1. The Alberta Electric System Operator (AESO) filed Application No. 1606434 with the Alberta Utilities Commission (Commission) on August 4, 2010 and on August 31, 2010, filed a revision to the August 4, 2010 application (collectively Application). The AESO requested approval for an amendment to Needs Assessment Approval No. U2010-135 (NID Approval).

**2 BACKGROUND**

2. The AESO filed a Needs Identification Document (Original NID) as Application No. 1605359, with the Commission on August 14, 2009. The Original NID addressed the need to upgrade the Hanna Region transmission system (Hanna).

3. Prior to filing the Original NID, the AESO sent two mail outs to over 57,000 addresses, placed advertisements in thirteen newspapers and held open house sessions in various regions within the Hanna NID area.

4. The Commission issued a Notice of Hearing for the original application. The Notice of Hearing was mailed to over 35,000 southeast Alberta residents through a postal code mail out. The postal code regions included the areas identified by the AESO which could be affected by the Original NID application, including a portion of southeast Alberta from the Saskatchewan border to west of Stettler and Drumheller, and from Brooks north to Killam and the Sedgewick area. The Notice of Hearing was also published in twelve newspapers. The Commission held information sessions in various locations within the Hanna NID area in November and December of 2009.

5. On April 29, 2010, the Commission approved the Original NID by way of the NID Approval. The NID Approval reflected a two-stage approach to the transmission development. Stage I specified the need for facilities required by 2012. Stage II specified need for facilities required by 2017. Specific development activities were included in the Hanna NID Approval for each stage.

6. Subsequently, the AESO assigned different parts of the project to the transmission facility owners (TFOs), AltaLink Management Ltd. (AltaLink) and ATCO Electric Ltd. (ATCO).

**3 DISCUSSION**

7. The Application included five amendments to the NID Approval.

## Amendment 1

8. Paragraphs 10 and 11 of the NID Approval provided for a 144-kV double-circuit line with a single side strung from Pemukan 932S substation to Monitor 774S substation, and from Lanfine 959S substation to Oyen 767S substation.

9. The AESO stated that while preparing the facility applications, ATCO identified concerns regarding the proposal to string one side of the line in Stage I and one side in Stage II. ATCO recommended that both sides of these lines be strung in Stage I, stating concerns with having to return to string the second line in Stage II, including weight distribution on the structures, an additional impact to local landowners, and the additional costs to mobilize construction resources. Accordingly, in the Application, the AESO requested an amendment to the NID Approval, as follows:

- a 144-kV double-circuit line with both sides strung from Pemukan 932S substation to Monitor 774S substation; and
- a 144-kV double-circuit line with both sides strung from Lanfine 959S substation to Oyen 767S substation.

## Amendment 2

10. Paragraph 13 of the NID Approval provided for a new 144-kV Cornish Lake 954S substation replacing the existing Rowley 768S substation and connecting in-and-out on the existing 144-kV line 7L25.

11. The AESO stated that in the Original NID, a new Cornish Lake 954S substation was required because it believed there was insufficient space to expand the existing Rowley 768S substation. However, ATCO subsequently determined that there is sufficient space to expand the Rowley 768S substation. Accordingly, in the Application, the AESO requested the following amendment to the NID Approval:

- converting the existing 72-kV Rowley 768S substation to a 144-kV substation and connecting in-and-out on existing 144-kV transmission line 7L25.

## Amendment 3

12. Paragraph 14 of the NID Approval provided for converting the existing 72-kV Stettler 769S substation to a 144-kV substation and installing a new 144-kV line from Nevis 766S substation to Stettler 769S substation.

13. The AESO originally planned to use a 144/72-kV 33.3-MVA tie transformer in the Stettler 769S substation; however, in order to meet the long term load growth in the area, a larger 144/72-kV 40/50/66-MVA tie transformer is required. Accordingly, in the Application, the AESO requested the following amendment to the NID Approval:

- converting the existing 72-kV Stettler 769S substation to a 144-kV substation, including a 144/72-kV 40/50/66-MVA tie transformer and installing a new 144-kV line from Nevis 766S substation to Stettler 769S substation.

## Amendment 4

14. Paragraph 16 of the NID Approval, provided in part for two new 10-MVAR, 144-kV capacitor banks at Three Hills 770S substation and two new 10/5-MVAR, 144-kV capacitor banks at Stettler 769S substation.

15. The AESO stated that the capacitor bank sizes for the Three Hills 770S substation and the Stettler 769S substation were incorrectly referenced in the Original NID application. The Three Hills 770S substation requires one new 20-MVAR, 144-kV capacitor bank and the Stettler 769S substation requires one new 15-MVAR, 144-kV capacitor bank. Accordingly, in the Application, the AESO requested the following amendments to the NID Approval:

- one new 27-MVAR, 138-kV capacitor bank at Hardisty 377S substation;
- two new 30-MVAR, 144-kV capacitor banks at Pemukan 932S substation;
- two new 30-MVAR, 144-kV capacitor banks at Lanfine 959S substation;
- one new 20-MVAR, 144-kV capacitor bank at Three Hills 770S substation;
- one new 15-MVAR, 144-kV capacitor bank at Stettler 769S substation;
- one new 5-MVAR, 72-kV capacitor bank at Youngstown 772S substation; and
- one new 10-MVAR, 72-kV capacitor bank at Battle River 757S substation.

## Amendment 5

16. Paragraph 17 of the NID Approval provided for +/-200-MVAR, 144-kV Static VAR compensators (SVC) at Hansman Lake 650S substation, Pemukan 932S substation and Lanfine 959S substation.

17. As part of the TFOs' development, the AESO updated technical studies relating to the Hanna NID and determined that size and configuration of the SVCs should instead be two -100/+200-MVAR, 240-kV SVCs at each of the Hansman Lake 650S substation and the Lanfine 959S substation. Accordingly, in the Application, the AESO requested the following amendment to the NID Approval:

- two -100/+200-MVAR, 240-kV Static VAR compensators (SVC), each at Hansman Lake 650S substation and Lanfine 959S substation.

18. The AESO estimated that the cost of the project, outlined in the Original NID application would be approximately \$69.1 million. The currently estimated cost is approximately \$68.6 million.

19. The AESO did not conduct any additional public consultation stating that the participation involvement program associated with the original NID application included all areas that may be affected by the amendments in this Application and that the TFOs would include the proposed amendments during consultation for their respective facility applications.

## 4 FINDINGS

20. The Commission considered the Application pursuant to section 34(2) of the *Electric Utilities Act*.

**34(2)** On its own initiative or in response to views expressed by the Commission, the Independent System Operator may amend a needs identification document submitted to the Commission for approval.

21. Based on the evidence filed in the Application, the Commission is satisfied that the amendments will not result in any adverse environmental effects.

22. The Commission notes that the AESO conducted an extensive participant involvement program as part of the Original NID application and accepts the AESO's submission that the consultation included all areas that may be affected by the amendments in the Application. In addition, the Commission notes that the notice for the Original NID application was mailed to all potentially affected landowners and that the notice was advertised in newspapers throughout the region. Therefore, the Commission finds that additional consultation was not required for the Application.

23. The Commission accepts the AESO's submission that the amendments in the Application will allow the TFOs to meet the need expressed in the NID Approval in a more efficient manner than was originally proposed, and that the participation involvement program of the Original NID application adequately covers the amendments proposed in the Application.

24. Due to the nature of the Application, a Notice of Application was not issued and, therefore a hearing was not required because the Commission considered that its decision or order would not directly and adversely affect the rights of a person pursuant to section 9 of the *Alberta Utilities Commission Act*.

25. The Commission has reviewed the Application in light of the principles and matters it is required to consider pursuant to section 38 of the *Transmission Regulation*. The Commission notes that no party objected to the Original NID application and no party demonstrated that the AESO's assessment of the need to expand and enhance the transmission system in the Hanna region was technically deficient or that the approval of the Original NID was not in the public interest. Having reviewed the Application, the Commission considers that the outcomes of the AESO's five amendments to the Original NID, as set out in the Application, do not materially change the assessment of need. Therefore, in accordance with subsection 38(e) of the *Transmission Regulation*, the Commission considers that the Original NID, as amended, remains correct.

26. The Commission finds that the Application meets the requirements of *AUC Rule 007: Rules Respecting Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations*.

27. Having regard to the foregoing, the Commission is satisfied that the five amendments to the NID Approval are in the public interest and that the requirements under section 34 of the *Electric Utilities Act* have been met.

## **5 DECISION**

28. Pursuant to section 34 of the *Electric Utilities Act*, the Commission approves the Application and grants the AESO an amended Need Assessment Approval as set out in Appendix 1 – Need Identification Document – Approval No. U2010-435 – December 17, 2010 (Appendix 1 will be distributed separately).

Dated on December 17, 2010.

### **ALBERTA UTILITIES COMMISSION**

*(original signed by)*

Anne Michaud  
Commissioner