



**Alberta Electric System Operator
ATCO Electric Ltd.**

**New Lindbergh 969S Substation,
144-kV Transmission Line and Related Facilities**

Needs Identification Document and Facility Application

January 21, 2010

ALBERTA UTILITIES COMMISSION

Decision 2010-015: Alberta Electric System Operator and ATCO Electric Ltd.
New Lindbergh 969S Substation, Transmission Line and Related Facilities
Application Nos. 1605087 & 1605110
Proceeding ID. 254

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ALBERTA UTILITIES COMMISSION

Calgary Alberta

ALBERTA ELECTRIC SYSTEM OPERATOR

ATCO ELECTRIC LTD.

NEW LINDBERGH 969S SUBSTATION,

144-KV TRANSMISSION LINE AND RELATED FACILITIES

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1 INTRODUCTION

1. On May 13, 2009, the Alberta Utilities Commission (the Commission) received a Needs Identification Document (NID), Application No. 1605087, from the Alberta Electric System Operator (the AESO) pursuant to section 34 of the *Hydro and Electric Energy Act*, for approval of the need for a new substation to be designated as Lindbergh 969S Substation, a new 144-kV transmission line, and the alteration of existing related facilities in the vicinity of Elk Point in east central Alberta. The AESO stated that ATCO Electric requested service to the Inter Pipeline Fund (IPF) Lindbergh pump station facility on behalf of IPF.

2. The AESO proposed four alternatives to serve the new IPF Lindbergh load:

1. A 144-kV tap line off 7L24 approximately 19 kilometres (km) from Bonnyville 700S substation for 40 km to the new Lindbergh 969S substation.
2. A 144-kV in-and-out configuration approximately 19 km from Bonnyville 700S substation from 7L24 for 40 km of double circuit to the new Lindbergh 969S substation.
3. A 144-kV tap line off 7L53 approximately 34 km from Bonnyville 700S substation for 25 km to the new Lindbergh 969S substation as well as an upgrade to Irish Creek 706S Substation.
4. A 144-kV in-and-out configuration approximately 34 km from Bonnyville 700S substation from 7L53 for 25 km of double circuit to the new Lindbergh 969S substation.

The AESO performed a technical assessment and economic analysis of the four alternatives and concluded that all of the alternatives were found to be technically feasible and would not cause additional system overloads or voltage violations. The AESO stated that there were no marked differences in technical performance among the four proposed alternatives, with the exception of service reliability to IPF's pump station facility. Alternatives 2 and 4 provided a higher level of reliability, but at a higher cost than alternatives 1 and 3. Alternative 3 was more cost-effective than alternative 1 and overall, the AESO concluded that alternative 3 was the most technically feasible and cost-effective option.

3. Pursuant to section 35 of the *Electric Utilities Act*, the AESO directed ATCO Electric Ltd. (ATCO) to submit a facility proposal to the Commission that was consistent with the need identified in the NID. The AESO also requested that the Commission consider both applications jointly, pursuant to section 15.4 of the *Hydro and Electric Energy Act*.

4. On May 22, 2009, ATCO submitted Application No. 1605110 (the Facility Application) pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*. ATCO proposes to build and operate a new substation to be designated as Lindbergh 969S substation (the Substation), a new 28 km 144-kV transmission line to be designated as 7LA53, and to alter the existing Irish Creek 706S substation by adding three 144-kV circuit breakers and removing one 144-kV circuit switcher. ATCO also proposes to alter the existing 144-kV transmission line 7L53 from Vermillion 710S substation to Bonnyville 700S substation. The portion of 7L53 between Vermillion 710S substation to Irish Creek 706S substation is proposed to be renumbered as 7L117, and the portion of 7L53 between Irish Creek 706S substation and Bonnyville 700S substation is proposed to be renumbered as 7L53 (the Project).
5. ATCO conducted public and landholder consultation with all landholders, agencies and interested parties within 800 metres of the proposed 7LA53 transmission line right-of-way and substation site.
6. The estimated total cost of the Project submitted by ATCO is \$14,930,000 (+20%/-10%), where the customer contribution for the Project has been estimated to be \$12,088,000 and the system related costs are estimated to be \$2,842,000.

2 DISCUSSION

7. On July 10, 2009, the Commission received a written submission of objection to the Facility Application from the County of St. Paul No. 19 (the County) dated June 30, 2009, outlining concerns that were discussed with the AESO, which included a preferred alternative for the location of the transmission line. The County stated that these concerns were not noted in ATCO's application.
8. On July 31, 2009, ATCO filed an amendment to the Facility Application for minor route and site amendments as a result of obtaining further feedback from landowners. The amended routing would be approximately 300 metres shorter than the originally-proposed routing, with the transmission line length reduced from 28 km to approximately 27.7 km.
9. On August 10, 2009, the Commission received a second letter from the County dated August 6, 2009, stating that ATCO had met with the County and that it would like to withdraw its concerns regarding the application.
10. The Commission issued a single Notice of Application on September 8, 2009 to directly affected landowners. The Notice of Application was also published in two local newspapers.
11. One written submission was received from Mr. Francis Dumais on October 2, 2009 dated September 23, 2009. Mr. Dumais stated that he is the Service Owner of the Lands situated adjacent to the proposed development. Mr. Dumais stated that he was concerned with the location of the proposed Substation and with how the development would affect his livelihood as a Métis trapper and cultural advocate.

12. ATCO subsequently arranged a meeting with Mr. Dumais and on October 28, 2009, the Commission received a second letter from Mr. Dumais indicating that his concerns were more general in nature and that he had no further objection to the specific proposed development. Mr. Dumais requested that his objection letter be removed.

13. No other letters of objection or concern were received by the Commission.

14. ATCO provided the Commission with an outline of its plan for conservation and reclamation measures for the Project. ATCO stated that construction of the proposed Substation would be partially located on IPF's existing Lindbergh pump station site and ATCO has applied for a Crown lease on approximately 144 by 115 metres of area immediately south of the pump station site. ATCO indicated that development of the Substation site would result in minor environmental impacts and was consistent with surrounding land uses. ATCO further indicated that there are various other major surface industrial facilities in the vicinity of the Project and the Substation site would have an adequate setback from adjacent development and environmentally sensitive areas.

15. ATCO stated that it considered preliminary transmission line route options for 7LA53 based on a number of environmental criteria, including avoidance of environmentally sensitive areas and terrain in an effort to reduce environmental impacts. ATCO stated the proposed route for the new transmission line 7LA53 avoids larger expanses of wetland and muskeg areas. ATCO also indicated that the environmental and resource considerations for the proposed route were similar to the other alternative routes. The proposed route also provided good access and limited brushing requirements.

16. A Noise Impact Assessment (NIA) and supplementary information were also provided for the Substation. There are no residential dwellings within a 1,500-metre radius of the proposed substation site and the NIA concluded that the predicted noise contribution of the transformer in the substation would be 19 dBA Leq at a distance of 1,500 metres. ATCO's NIA further demonstrated that the noise level in the area of the Substation would not be affected by the addition of a transformer. The sound environment around the Substation is dominated by pre-existing oil and gas facilities within the 1,500-metre radius of the Substation, and the addition of a transformer in the proposed substation would not increase the overall noise levels in the area.

3 COMMISSION FINDINGS

17. The Commission has reviewed both the NID and Facility Applications, as filed by the AESO and ATCO respectively. The Commission notes that there are no outstanding concerns or objections in response to the Notice issued by the Commission with respect to both applications. The Commission also notes that a participant involvement program was conducted by ATCO and that there are no outstanding public or industry objections or concerns.

18. With respect to the NID, the Commission has considered section 38 of the *Transmission Regulation* which states:

- 38** When considering whether to approve a needs identification document under section 34(3) of the Act [*Electric Utilities Act*], the Commission must
- (a) have regard for the principle that it is in the public interest to foster
 - (i) an efficient and competitive generation market,
 - (ii) a transmission system that is flexible, reliable and efficient and preserves options for future growth, and
 - (iii) geographic separation for the purposes of ensuring reliability of the transmission system and efficient use of land, including the use of rights of way, corridors or other routes that already contain or provide for utility or energy infrastructure or the use of new rights of way, corridors or other routes, notwithstanding that geographic separation for the purposes of ensuring reliability of the transmission system or efficient use of land may result in additional costs,
 - (b) have regard for the following matters when it considers an application for a transmission facility upgrade or expansion, or operations preparatory to the construction of a transmission facility, namely, the contribution of the proposed transmission facility:
 - (i) to improving transmission system reliability;
 - (ii) to a robust competitive market;
 - (iii) to improvements in transmission system efficiency;
 - (iv) to improvements in operational flexibility;
 - (v) to maintaining options for long term development of the transmission system;
 - (vi) to a project to which section 27 applies to provide system access service,
 - (c) take into account the long term transmission system outlook document and the transmission system plan filed with the Commission,
 - (d) take into account the ISO's responsibilities under the Act and regulations, and
 - (e) consider the ISO's assessment of the need to be correct unless an interested person satisfies the Commission that
 - (i) the ISO's assessment of the need is technically deficient, or
 - (ii) to approve the needs identification document would not be in the public interest.

19. If no interested person has demonstrated that the AESO's assessment of the need to expand and enhance the transmission system to serve the new IPF Lindbergh load and its preferred Alternative 3 are technically deficient or not in the public interest, the Commission is required pursuant to section 38 (e) of the Act to approve the NID and Alternative 3, as filed by the AESO. Consequently, given that there are no objections nor evidence from interested parties that the AESO's assessment of the need for and choice of Alternative 3 are technically efficient or not in the public interest, the Commission approves the NID and Alternative 3 as filed.

20. With respect to the Facility Application, the Commission has reviewed the potential environmental impacts of the Project and ATCO's submissions as outlined above. The Commission finds that the Project will have no significant environmental impacts. Further, the Commission finds that the conservation and reclamation plan provided by ATCO is adequate and meets the requirements of *AUC Rule 007*.

21. The Commission has reviewed the NIA and supplementary information provided by ATCO. The Commission notes that no residences are located within a 1,500-metre radius of the proposed substation site and that the addition of a transformer will not increase the overall noise levels in the area. The Commission finds that the NIA and supplementary information are compliant with *AUC Rule 012*.

22. The Commission also accepts that the transmission development applied-for in the Facility Application will fulfil the need as described in the NID.

23. As there are no outstanding objections to the Facility Application and the technical, siting, environmental and noise aspects of the Project have been met, the Commission finds the Project to be in the public interest. The Commission further finds that the Facility Application complies with all requirements in sections 14 and 15 of the *Hydro and Electric Energy Act*.

4 DECISION

24. The Commission approves the NID, pursuant to section 34 of the *Electric Utilities Act*, and approves the Facility Application, pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*. Respective approvals set out in the Appendices are granted (the Appendices will be distributed separately).

Dated in Calgary, Alberta on January 21, 2010.

ALBERTA UTILITIES COMMISSION

(original signed by)

Thomas McGee
Panel Chair

(original signed by)

Mark Kolesar
Commissioner

(original signed by)

Tudor Beattie, Q.C.
Commissioner