



AUC

Alberta Utilities Commission

Alberta Electric System Operator Needs Identification Document

**AltaLink Management Ltd.
Amelia 108S Substation Upgrade and Connection**

February 20, 2013

The Alberta Utilities Commission

Decision 2013-053: Alberta Electric System Operator
Needs Identification Document
Application No. 1608306

AltaLink Management Ltd.
Amelia 108S Substation Upgrade and Connection
Application No. 1608414

Proceeding ID No. 1808

February 20, 2013

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1 Introduction

1. The Alberta Electric System Operator (AESO) filed an application with the Alberta Utilities Commission (AUC or the Commission), pursuant to Section 34(1)(c) of the *Electric Utilities Act*, seeking approval of the needs identification document (NID) for the addition of a second 240/25-kilovolt (kV) transformer and associated equipment to Amelia 108S substation and to install a second circuit on the existing 240-kV 943AL transmission line towers (the project). This application was registered on March 30, 2012, as Application No. 1608306 (the NID application).
2. AltaLink Management Ltd. (AltaLink), pursuant to Permit and Licence No. [U2007-043](#),¹ is the operator of the substation. In addition, AltaLink, pursuant to Permit and Licence No. [U2007-044](#),² is the operator of the 240-kV transmission line 943AL from the substation to transmission line 943L and pursuant to Permit and Licence No. [U2007-045](#),³ is the operator of the 240-kV transmission line 943L from Deerland 13S substation to the Josephburg 410S substation in the Fort Saskatchewan area.
3. Pursuant to Section 35(1) of the *Electric Utilities Act*, the AESO directed AltaLink to submit to the Commission for approval, under the *Hydro and Electric Energy Act*, a facility application to meet the need identified in the NID application.
4. AltaLink filed an application with the Alberta Utilities Commission (AUC or the Commission) seeking approval to alter and operate the substation, and transmission lines 943L and 943AL pursuant to sections 14, 15, 17 and 19 of the *Hydro and Electric Energy Act*. The application was registered as Application No. 1608414 on May 2, 2012 (the facility application).
5. Pursuant to Section 15.4 of the *Hydro and Electric Energy Act*, both the AESO and AltaLink requested the Commission to combine and consider the NID application and the facility application jointly. The Commission considered the applications together in Proceeding ID No. 1808.
6. The Commission issued information requests to both the AESO and AltaLink on July 13, 2012. The AESO and AltaLink responded to the information requests on July 18, 2012, and July 23, 2012, respectively.

¹ Substation Permit and Licence No. U2007-043, Application No. 1486706, June 19, 2007.

² Transmission Line Permit and Licence No. U2007-044, Application No. 1486706, June 19, 2007.

³ Transmission Line Permit and Licence No. U2007-045, Application No. 1486706, June 19, 2007.

7. The Commission issued a notice of applications on August 24, 2012, to all interested parties, including occupants, residents, landowners, companies and agencies, within 800 metres of the proposed development wherein the deadline to file an intent to participate was September 14, 2012. The notice of applications was published in the Fort Saskatchewan Record on August 30, 2012, and was posted on the AUC website.

8. In response to the notice of applications, BA Energy Inc. filed an objection letter with the Commission on September 14, 2012. BA raised three issues in its submission:

- the expansion of the substation and plot plan in relation to its Heartland Upgrader Project
- a new road to access the substation site, and
- future FortisAlberta Inc. distribution facilities to be built and connected to Amelia 108S substation on BA Energy Inc. land

9. The Commission also received a letter in support of the substation upgrade from MEG Energy Corporation on October 15, 2012.

10. On November 9, 2012, BA Energy Inc. submitted that additional discussions with AltaLink and FortisAlberta Inc. had resolved its concerns. As a result, BA Energy Inc. withdrew its objection to the project.

2 Discussion

2.1 The NID application

11. In its NID application, the AESO stated that FortisAlberta Inc. requested transmission system access service to serve increasing demand in the Fort Saskatchewan area. The existing Amelia 108S substation was constructed and energized in 2007 to serve a direct-connected market participant who later cancelled its contract for transmission service. The substation had been idle since 2007. The substation was connected to the Alberta Interconnected Electric System by way of transmission line 943AL tapping on to transmission line 943L. The AESO determined that the need for additional capacity could be reliably met by upgrading the substation.

12. The AESO stated that the upgrade would include:

- adding a second 240/25-kV transformer and associated equipment to the substation
- installing the second circuit on the existing 240-kV double-circuit transmission line structures on which transmission line 943L was constructed
- utilizing both the new circuit and transmission line 943AL to form an in-out double-circuit connection to supply the substation

13. The AESO directed AltaLink to implement the upgrade to the substation.

14. The AESO submitted that power flow, voltage stability and short circuit analyses were performed to assess transmission system performance pre- and post-construction of the proposed

transmission development. The loads were adjusted to include forecast growth in the time period used in the technical analyses. Results indicated that the proposed transmission development would not cause any thermal overloads or voltage violations in the area.

15. The AESO directed AltaLink to assist them to conduct a participant involvement program. The AESO and AltaLink notified stakeholders of the need for transmission development in the vicinity of the proposed development as described in the AESO description and summary of the participant involvement program. The AESO stated that there are no outstanding concerns regarding the need for the proposed development.

16. The AESO stated that the requested in-service dates for the proposed development were March 1, 2013, for Stage 1, and July 1, 2013, for Stage 2. The estimated in-service cost of the proposed transmission development is in the order of \$19 million (+20%/-10%). The AESO further stated that there were no system costs in respect of the proposed development.

2.2 The facility application

17. AltaLink requested approval to upgrade the substation by:

- adding one 240/25-kilovolt 30/40/50-megavolt ampere LTC transformer
- adding three 240-kV circuit breakers
- installing two switchgear buildings to house seven 25-kV circuit breakers
- expanding the existing substation fence line on AltaLink's leased land, and
- adding associated equipment

18. AltaLink also requested approval to modify 240-kV transmission line 943L to connect the substation via an in-out double-circuit configuration by adding conductors on the open side of transmission line 943AL structures for approximately one kilometre. One of the in-feed circuits from substation to Deerland 13S substation would be re-designated as transmission line 943L. The other circuit from the substation to Josephburg 410 substation would be redesignated as transmission line 1120L.

19. AltaLink submitted that it notified all occupants, residents and landowners within 800 metres of the project and consulted with all occupants, residents and landowners on or adjacent to the right-of-way. AltaLink stated that the proposed project is located in an area of heavy industry and there are no residences within 800 metres of the project.

20. On September 17, 2012, BA Energy Inc., the lessor of land for the site of the substation as well as the original market participant for whom the substation was built, filed an objection to the project with the Commission. However, following meetings with AltaLink and FortisAlberta Inc., BA Energy Inc. advised the Commission that its concerns with the application had been resolved and it withdrew its objection.

21. AltaLink submitted that it will comply with Alberta Environment and Water R&R/11-03 *Environmental Protection Guidelines for Transmission Lines*, 2011. AltaLink added that the potential environmental effects would be minimal as the work would occur at a pre-disturbed substation site and within an existing transmission line right-of way.

22. AltaLink filed a noise impact assessment respecting the upgrade to the substation and stated that anticipated noise levels would be within the permissible sound levels specified in AUC Rule 012: *Noise Control* (AUC Rule 012).

3 Findings

23. The Commission has reviewed the NID application and has determined that the NID application contains the information required by the *Electric Utilities Act*, the *Transmission Regulation* and AUC Rule 007: *Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations* (AUC Rule 007) for the transmission related facilities. The Commission notes the AESO's submission that the proposed development is not a system development, but is entirely customer related, in order to meet a request for transmission system access service by FortisAlberta Inc.

24. Since no interested person demonstrated that the AESO's assessment of the need for transmission system access is technically deficient or that approval of the NID application would not be in the public interest, the Commission approves the NID application pursuant to Section 38(e) of the *Electric Utilities Act Transmission Regulation*.

25. The Commission is satisfied that the anticipated noise levels of the substation and transmission line will be within the permissible sound levels as specified in AUC Rule 012.

26. The Commission accepts that the joint participant involvement program for the applications, conducted by AltaLink, meets the requirements of AUC Rule 007 and that there are no outstanding objections or concerns.

27. The Commission finds that the facility application meets the requirements of AUC Rule 007.

28. Based on the foregoing, the Commission considers the application to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

4 Decision

29. Pursuant to Section 34 of the *Electric Utilities Act* and Section 38 of the *Transmission Regulation*, the Commission approves the NID application and grants the AESO the approval set out in Appendix 1 – Amelia 108S Substation Connection – Approval No. U2013-105 – February 20, 2013 (Appendix 1 will be distributed separately).

30. The Commission approves the facility application pursuant to Section 19 of the *Hydro and Electric Energy Act* and grants AltaLink the following approvals pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*:

- Substation – Permit and Licence No. U2013-106 – February 20, 2013, to alter and operate Amelia 108S substation –as set out in Appendix 2 (Appendix 2 will be distributed separately).

- Transmission Line – Permit and Licence No. U2013-107 – February 20, 2013, to alter and operate transmission lines 943L and 943AL and redesignate them as transmission line 1120L as set out in Appendix 3 (Appendix 3 will be distributed separately).
- Transmission Line – Permit and Licence No. U2013-108 – February 20, 2013, to alter and operate the transmission line 943L as set out in Appendix 4 (Appendix 4 will be distributed separately).

Dated on February 20, 2013.

The Alberta Utilities Commission

(original signed by)

Tudor Beattie, QC
Commission Member