



AUC

Alberta Utilities Commission

**Alberta Electric System Operator
Weasel Creek 947S and Abee 993S Substations
Needs Identification Document**

**AltaLink Management Ltd.
Abee Substation and Weasel Creek
Transmission Project**

**ATCO Electric Ltd.
Weasel Creek Transmission Project**

**ATCO Electric Ltd.
Abee Transmission Project**

August 15, 2012

The Alberta Utilities Commission

Decision 2012-220: Alberta Electric System Operator,
AltaLink Management Ltd. and ATCO Electric Ltd.

Weasel Creek 947S and Abee 993 Substations and Transmission Line Project
Applications No. 1607512, No. 1607550, No. 1607595 and No. 1607597
Proceeding ID No. 1363

August 15, 2012

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The Alberta Utilities Commission
Fifth Avenue Place, Fourth Floor, 425 First Street S.W.
Calgary, Alberta
T2P 3L8

Telephone: 403-592-8845
Fax: 403-592-4406

Website: www.auc.ab.ca

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Alberta Electric System Operator,
AltaLink Management Ltd. and
ATCO Electric Ltd.
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1 Summary of decision

1. For the reasons given below, in this decision the Alberta Utilities Commission (AUC or the Commission) approves the Alberta Electric System Operator's (AESO) needs identification document (NID) relating to the proposed Weasel Creek 947S substation, the Abee 993S substation and the associated 144/138-kilovolt (kV) transmission line development in the Athabasca/Lac La Biche area. The Commission also grants permits to construct and licences to operate the substations, transmission lines and related facilities proposed in ATCO Electric Ltd.'s (ATCO) two facility applications and AltaLink Management Ltd.'s (AltaLink) facility application along the preferred route recommended by each.

2 Background and discussion

2.1 The process for new transmission development in Alberta

2. Section 17 of the *Electric Utilities Act* assigns the following three of many duties to the AESO in its capacity as the Independent System Operator: provision of system access service on the transmission system, assessment of the current and future needs of market participants, and planning the capability of the transmission system and the making of arrangements to meet those needs. Section 33 of the same legislation further requires that the AESO develop plans for the transmission system to provide non-discriminatory system access service, and timely implementation of required transmission system expansions and enhancements.

3. In Alberta, two approvals from the AUC are required to build new transmission facilities other than critical transmission infrastructure: first, an approval, pursuant to Section 34 of the *Electric Utilities Act*, of the AESO's needs identification document which describes the need for transmission enhancement and the means by which or the manner in which the need could be met, and second, a permit to construct and a licence to operate the needed transmission facilities pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*.

4. The AESO is the agency responsible for preparing a needs identification document and filing it with the AUC for approval pursuant to Section 34 of the *Electric Utilities Act*. When considering a need application under Section 34, the Commission may approve the needs identification document, deny the needs identification document, or it may refer the needs identification document back to the AESO with suggestions or directions for changes or additions.

5. One important aspect of the legislative regime applicable to the Commission's consideration whether to approve the AESO's NID in this proceeding is Section 38 of the *Transmission Regulation* enacted under the *Electric Utilities Act*. Pursuant to Section 38(e) of the *Transmission Regulation*, the Commission must consider the AESO's assessment of need to be correct unless an interested person satisfies it that the AESO's assessment of need is technically deficient or it would not be in the public interest to approve the needs identification document.

6. Facility applications are prepared by a transmission facility owner assigned by the AESO pursuant to Section 24(1) of the *Transmission Regulation*. In this case, each of AltaLink and ATCO prepared facility applications respecting the particular facilities proposed to be constructed within their respective operating territories. Each transmission facility owner files its facility application for consideration by the AUC, which may approve or deny the application, or approve it subject to any terms or conditions it prescribes. When considering an application for a transmission facility under Section 17 of the *Alberta Utilities Commission Act*, the Commission must consider whether the proposed transmission facility is in the public interest having regard to the social and economic effects of the transmission facilities, and the effect of the transmission facilities on the environment.

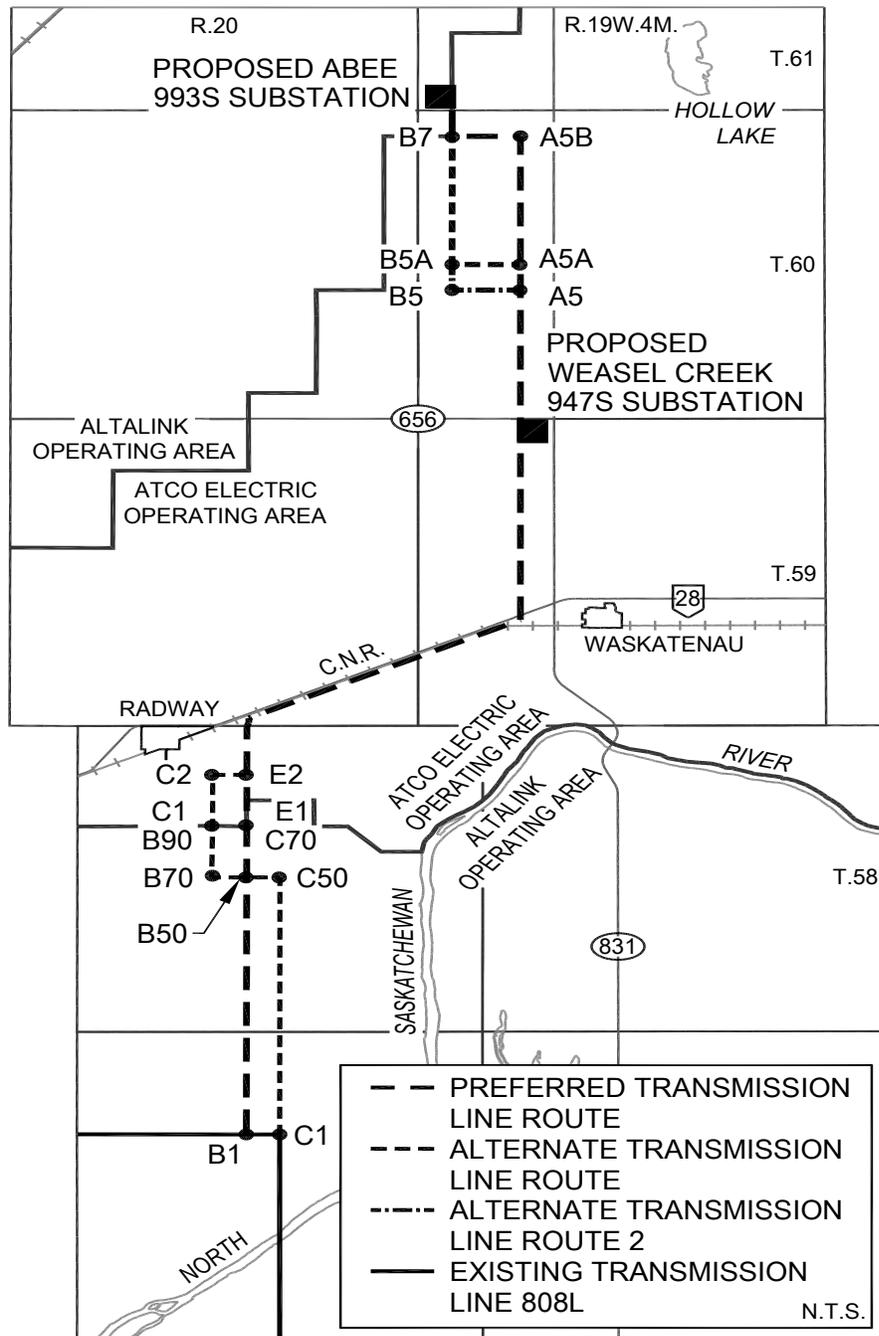
2.2 The applications before the Commission

7. On July 22, 2011, the AESO filed Application No. 1607512 with the AUC seeking approval of the needs identification document related to the proposed Weasel Creek 947S and Abee 993S substations and associated 144/138-kV transmission lines development in the Athabasca/Lac La Biche area. In its application, the AESO described the need as providing new points-of-delivery substations and associated transmission facilities to serve the pipeline developments of industrial customers. As the means to meet the identified needs, the AESO proposed to build the following transmission facilities:

- New substations
 - i. A new 138/4.16-kV Abee 993S substation with one 138/4.16-kV 15/20/25-megavolt ampere (MVA) transformer near the hamlet of Abee.
 - ii. A new 144/4.16-kV Weasel Creek 947S substation with one 144/4.16-kV 10/13.3/16.6-MVA transformer in the County of Smoky Lake.
- New transmission lines
 - i. Approximately 200 metres of new single-circuit 138-kV transmission line 437L to connect the proposed Abee 993S substation to a new transmission line to be designated as 7L437.
 - ii. Approximately 15 kilometres of new single-circuit 144-kV transmission line 7L437 to connect the proposed transmission line 437L to the proposed Weasel Creek 947S substation.
 - iii. Approximately 20 kilometres of new single-circuit 144-kV transmission line 7LA808 to connect the proposed Weasel Creek 947S substation to a new transmission line to be designated as 808AL.

- iv. Approximately 10 kilometres of new single-circuit 138-kV transmission line 808AL to connect the proposed transmission line 7LA808 to the existing transmission line 808L.
 - v. A new 138-kV tap point on the existing 138-kV transmission line 808L.
8. The summer/winter ratings of the new 138-kV lines are 121/145-MVA whereas those of the 144-kV lines are of 109/138 MVA.
9. On July 28, 2011, AltaLink filed facility Application No. 1607550 with the AUC seeking approval to construct and operate the following facilities within its operating territory to meet part of the need identified in the AESO's NID:
 - i. A new 138/4.16-kV Abee 993S substation (LSD 3 SW-6-61-19 W4M) including one 138/4.16-kV 15/20/25-MVA transformer.
 - ii. Approximately 200 metres of new single-circuit 138-kV transmission line 437L from the proposed Abee 993S substation to Point B7 as shown in the attached map.
 - iii. Approximately 10 kilometres of new single-circuit 138-kV transmission line 808AL from its existing transmission line 808L starting at Point B1 or C1 as shown in the attached map to connect with ATCO's proposed transmission line 7LA808 at a point along the demarcation of ATCO and AltaLink operating territories. The exact location of the connection point depends on the final routing of the line.
 - iv. Alteration of the exiting transmission line 808L to facilitate the interconnection of the proposed transmission line 808AL.
10. On August 17, 2011, ATCO filed facility Application No. 1607595 with the AUC seeking approval to construct and operate the following facilities within its operating territory to meet part of the need identified in the AESO's NID:
 - i. A new 144/4.16-kV Weasel Creek 947S substation (LSD 15-32-59-19 W4M) with one 144/4.16-kV 10/13.3/16.6-MVA transformer.
 - ii. Approximately 17 kilometres of new single-circuit 144-kV transmission line 7LA808 from the proposed Weasel Creek 947S substation to connect with AltaLink's proposed transmission line 808AL at a point along the demarcation of ATCO and AltaLink operating areas. The exact location of the connection point depends on the final routing of the line.
11. On August 17, 2011, ATCO filed facility Application No. 1607597 with the AUC seeking approval to construct and operate the following facilities within its operating area to meet part of the need identified in the AESO's NID:
 - i. Approximately 12 kilometres of new single-circuit 144-kV transmission line 7L437 from the proposed Weasel Creek 947S substation to Point B7 as shown in the attached map.
 - ii. Alteration of the proposed Weasel Creek 947S substation.

12. The proposed facilities are shown on the following map.



13. The AESO, AltaLink and ATCO requested that the Commission consider the need application and the facility applications jointly, pursuant to Section 15.4 of the *Hydro and Electric Energy Act*. Consequently, the Commission decided to process Applications No. 1607512, No. 1607550, No. 1607595 and No. 1607597 jointly as Proceeding ID No. 1363.

2.3 Notice process

14. On September 26, 2011, the Commission issued a notice of applications. The notice of applications stated that any person who had concerns with or objections to the applications or who wished to support the applications must file a submission by October 28, 2011. The Commission provided its notice of applications to interested and potentially affected parties by the following methods:

- Mailed directly to landowners, residents and occupants with 800 metres of the proposed transmission facilities, as well as to various pertinent government agencies, organizations and industry companies. The mailing addresses were identified by the applicants.
- Published in two newspapers, the Redwater Review and Lamont Farm n' Friend, in the Athabasca/Lac La Biche area.
- Posted on the AUC website.

15. On January 10, 2012, the Commission issued a notice of hearing, advising that a hearing on the applications was to be held starting at 9 a.m. on May 8, 2012 in Redwater, Alberta. The notice of hearing also included notification that the AUC would hold an information session at 6 p.m. on January 31, 2012, at Provident Place in Redwater. The Commission provided its notice of hearing to interested and potentially affected parties by the same methods detailed in the prior paragraph.

16. A correction notice of hearing was published in the Redwater Review on January 31, 2012, and the Lamont Farm n' Friend on February 3, 2012. The correction notice updated the previously published map of the proposed development to show an additional alternate route submitted in ATCO's amendment to Application No. 1607597.

2.4 Interventions

17. The Commission received 16 submissions from individuals and landowner groups in response to the notice of applications issued on September 26, 2011. Some of these interveners withdrew their objections prior to the hearing. On May 1, 2012, the Commission issued its ruling on standing¹ of parties to participate in this proceeding. The Commission granted standing to each person who had demonstrated that they had rights that might potentially be directly and adversely affected by the Commission's decision with respect to one or more of the four applications. Pursuant to Section 9(2) of the *Alberta Utilities Commission Act*, the Commission held a hearing to consider the concerns of the registered parties granted standing.

2.5 Hearing

18. The hearing commenced on May 8, 2012, at Provident Place in Redwater, Alberta before a Commission panel comprised of Commission Member and Panel Chair Anne Michaud, Commission Member Neil Jamieson and Acting Commission Member Patrick Brennan.

19. During the course of the hearing, a number of landowners testified or made statements or both. A complete list of all hearing participants is attached to this decision in Appendix C;

¹ Exhibit 182.01, AUC Ruling on standing, May 1, 2012.

however, to assist readers of this decision, the Commission has included the following brief introduction to the landowners and residents who participated in the public hearing.

20. Mr. Dan Buryn was the only party seeking and granted standing in the AESO's need application. He participated at the hearing regarding the need application and filed final written argument on May 18, 2012. This was the last filing of material information on this proceeding and, therefore, the close of record in this proceeding was deemed to be May 18, 2012.

21. Mr. Dan Buryn has occupied and resided for many years on the SW 09-58-20 W4M. This quarter section of land is located along the preferred route in AltaLink's application and is owned by his father, Nestor Buryn, who had signed an easement agreement with AltaLink. Mr. Dan Buryn did not oppose the particular routing proposed; however, he had suggestions regarding the public notification process and other concerns with AltaLink's project.

22. Mr. Garry Klassen's father is the registered owner of NW 34-57-20 W4M located along the alternate route proposed in AltaLink's application. He opposed the alternate route in his submission filed with the Commission, but did not appear at the hearing. Given that the Commission has not approved the alternate route, these concerns are not discussed further.

23. Ms. Michele Del Colle gave a statement on behalf of her parents, Raymond Dodd and Victoria Dodd. Raymond and Victoria Dodd are the registered owners of NW 17-60-19 W4M, NE 17-60-19 W4M and NE 5-60-19 W4M. Their concerns were related to the potential impact of the preferred route in ATCO's Abee transmission project. They also testified regarding their concerns.

24. Mr. Andrew Shwetz gave a statement at the hearing. He is the manager of Ace High Farms Ltd. and the registered owner of NW 17-59-19 W4M and NE 17-59-19 W4M. His parents, Sylvester Shwetz and Phyllis Shwetz are the joint owners of the south half of SE 20-59 W4M and also testified. They rent the north half of this quarter from Mr. Jim Toews. The Shwetzes' concerns were related to the potential impact of the proposed route in ATCO's Weasel Creek facility application.

25. The Blue Route Group is comprised of seven families who are landowners adjoining the alternate route proposed in ATCO's Abee facility application. Eight members of the Blue Route Group, Paul, Jill, and Patrick Fortier, Veronica Melnyk, Tami Melnyk, Denis Flaska, Donna and Raymond MacKay, appeared as witnesses at the hearing, and gave statements expressing their concerns. Mr. Edward Hansen was not able to attend the hearing and his statement was submitted at the hearing by his counsel, Mr. Don Mallon. The members of Blue Route Group and their respective land locations are listed in Table 1.

Table 1. Blue Route Group Members

Name(s)	Land location
Fortier, Paul, Jill and Patrick	NW 31-60-19 W4M SW 31-60-19 W4M SE 31-60-19 W4M NE 30-60-19 W4M SW 19-60-19 W4M*
Flaska, Denis	NW 18-60-19 W4M
Mackay, Raymond	NE 18-60-19 W4M SE 18-60-19 W4M
Melnyk, Veronica	NW 30-60-19 W4M
Melnyk, Tami	SE 30-60-19 W4M
Hansen, Edward	SW 30-60-19 W4M
Foley, Denis	SW 19-60-19 W4M
Boychuk, Curtis	NE 18-60-19 W4M* SE 18-60-19 W4M*

*rental property

26. The Commission has reviewed the evidence and arguments provided by all registered parties. Any references to specific parts of the record are intended to assist the reader in understanding the Commission’s decision, but should not be taken as an indication that the Commission did not consider the entire record as it relates to any issue.

3 The public interest

27. When considering an application to construct or operate a transmission facility, the Commission is required by Section 17 of the *Alberta Utilities Commission Act* to consider whether the proposed project is in the public interest, having regard to its social and economic effects and the effects of the project on the environment. Regarding the interpretation of the term “public interest”, the Commission’s commentary in Decision [2009-028](#),² is applicable:

The Commission recognizes that there is no universal definition of what comprises the “public interest” and that its meaning cannot be derived from strictly objective measures. The Commission acknowledges that the ultimate determination of whether a particular project is in the “public interest” will largely be dictated by the circumstances of each transmission facility application.

In the Commission’s view, assessment of the public interest requires it to balance the benefits associated with upgrades to the transmission system with the associated impacts, having regard to the legislative framework for transmission development in Alberta. This exercise necessarily requires the Commission to weigh impacts that will be experienced on a provincial basis, such as improved system performance, reliability, and access, with specific routing impacts upon those individuals or families that reside or own land along

² Decision 2009-028; AltaLink Management Ltd. Transmission Line from Pincher Creek to Lethbridge, Application No. 1521942, Proceeding ID No. 19, March 10, 2009.

a proposed transmission route as well as other users of the land that may be affected. This approach is consistent with the EUB's historical position that the public interest standard will generally be met by an activity that benefits the segment of the public to which the legislation is aimed, while at the same time minimizing, or mitigating to an acceptable degree, the potential adverse impacts on more discrete parts of the community.

When assessing whether AltaLink's proposed route is in the public interest, the Commission must weigh the benefits described above with the site specific impacts that will be experienced by landowners and residents along the proposed route as well as others that may be impacted. The Commission understands that these impacts are real and may be significant. Transmission towers are large structures that may obscure scenery, impact agricultural operations, and may have an influence on land use and development plans. The Commission expects transmission facility owners to take all reasonable steps to avoid such impacts but acknowledges that despite the use of sound routing and planning practices such impacts are sometimes truly unavoidable given the nature of transmission lines. Where such impacts are truly unavoidable, the Commission expects that the Applicant would explore all reasonable steps to mitigate those impacts.

28. At the hearing, the qualifications of several witnesses as experts were reviewed, with requests made by counsel to have each recognized as an expert witness in their proposed field of expertise. The expertise of two particular witnesses tendered by interveners, Mr. Dauphinais and Mr. Cline was initially challenged by counsel for ATCO. Counsel subsequently conceded that each witness might proceed to testify on the basis that the Commission would reflect any lack of expertise supporting the evidence of each in the weight, if any, given to it.³

29. Section 20 of the *Alberta Utilities Commission Act* provides that the Commission is not bound by the rules concerning evidence that are applicable to judicial proceedings. Each of these two witnesses has greater technical qualifications and professional experience than a lay witness, giving them specialized knowledge about certain aspects of electrical transmission line routing. As such, their evidence was relevant to the issues under consideration in this hearing. For this reason, the Commission declines to rule that the evidence of either of them is inadmissible. However, the Commission has carefully weighed the evidence of each witness considering the particular expertise applicable to each aspect of their evidence and any lack of reliability or weaknesses of it demonstrated during cross-examination, or from other more persuasive contradictory evidence. The importance of certain testimony given by these two experts is discussed below in the Commission's findings.

4 AESO need Application No. 1607512

4.1 Discussion

30. The AESO's need application was prepared in response to two transmission system access service requests, one by ATCO, on behalf of Access Pipeline Inc. (Access), and the other one by Enbridge Pipelines Inc. (Enbridge), to supply electricity to two industrial pump stations.

³ Transcript, Volume 1 page 168, paragraph 15 to paragraph 23 and Transcript, Volume 2, page 303, paragraph 24 to page 304, paragraph 5.

31. The AESO assessed three options to connect Enbridge's Abee pump station to the Alberta Interconnected Electrical System, which is sometimes referred to as "the grid". The AESO also assessed four options to connect Access's Smoky Lake pump station to the grid. Based on technical performance and cost consideration, option 2, the option common to both Enbridge and Access, was found superior to the other options. Therefore, the AESO proposed option 2 as the technical solution to meet the need described in the needs identification document. Option 2 is also described above in paragraph 7.

32. The AESO, in coordination with AltaLink and ATCO, carried out a participant involvement program between October 2010 and July 2011, to provide interested parties with an opportunity to raise concerns regarding the need for this project. The AESO developed a one-page need overview document which was included in the mail-out that AltaLink and ATCO sent to landowners, residents and occupants within 800 meters of the proposed transmission facilities, as well as to various pertinent government agencies, organizations and industrial companies. The AESO also advertised its intention to file the needs identification document with the Commission in a local newspaper.

33. The AESO stated in its need application that there were no outstanding concerns related to the AESO's assessment of the need for this project.

34. The target in-service date for the proposed facilities was September 30, 2012.

35. The estimated cost for the proposed facilities was approximately \$32 million (+20%/-10% accuracy) in 2011 dollars. Almost all of the cost would be paid by the two industrial customers. Approximately \$0.4 million of the cost would be allocated to system cost, and therefore, to ratepayers.

36. In response to the notice of applications, the Commission received some 13 submissions from individuals who raised issues with the AESO's need application. The Commission sent a letter⁴ on February 10, 2012, to those individuals, requesting each party to specify the party's concerns and objections to the need application. Two parties responded to the Commission's letter in which they indicated they had no objections to the need application.

37. On March 3, 2012, Mr. Dan Buryn sent an email to the Commission raising concerns with the proposed transmission line near his residence, including the need for the project. In a standing ruling issued by the Commission on May 1, 2012, Mr. Dan Buryn, along with Access and Enbridge, were granted standing to participate in the proceeding.

38. Mr. Dan Buryn questioned whether cogeneration might eliminate the need for the proposed transmission facilities, both at the hearing and in his submissions filed with the Commission. He also questioned the electric load that would be supplied by the project.

39. The AESO replied that in Alberta, it is the industrial project developer who decides whether to develop its own generation in a particular area and that it is not the role of the AESO to dictate that generation be developed in any particular area. The AESO confirmed that, at the time of the hearing, it was not aware of any generation projects in the Abee or Weasel Creek area to serve this need.

⁴ Exhibit 139, AUC Correspondence to Parties, February 10, 2012.

40. The AESO clarified that system access is required to supply electricity to the pump stations of two industrial pipeline customers, Access and Enbridge. The AESO said that provision of such access service is aligned with the AESO's responsibility to forecast Alberta's electricity needs and plan the transmission system to provide efficient, reliable and non-discriminatory access to it, as well as to implement required system expansions and enhancements in a timely way.

41. Both Access and Enbridge supported the project, in particular, the AESO's need application. Access reiterated in its opening statement that the proposed transmission facilities are needed and necessary to provide power to its Smoky Lake pump station. The AESO's need application indicated that the nearest distribution system was 40 kilometres away.⁵ Testimony during ATCO's facility applications indicated that the nearest distribution system does not have the capability to provide 12-MVA at a far distance from a source substation. The AESO's need application had further stated that "FortisAlberta advised that supply from existing 25 kV distribution facilities was not feasible due to the distances involved and the need to maintain voltage quality and motor starting ability". Access was relying on temporary diesel generation units to serve its need for power at its Smoky Lake pump station until such time as system service access could be provided.

4.2 Commission findings

42. The Commission finds that the evidence and equipment specifications in the AESO's need application regarding the required voltage and functionality⁶ of the proposed facilities establish that they are transmission rather than distribution facilities in which sections 34 and 35 of the *Electric Utilities Act* are applicable.

43. The Commission has reviewed the need application and determined that it 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).

44. There is no evidence to suggest that any cogeneration development is available or planned in the project area to supply power to the two industrial customers. In Alberta, it is left to generation proponents to determine, in response to open market conditions, the location, timing, size and type of new generation which will be installed. The two industrial customers involved are as entitled as other members of the public to request and expect reasonable system access service at their expense pursuant to the *Electric Utilities Act*.

45. Having considered the evidence and the arguments made by all parties, the Commission is not satisfied that the AESO's assessment of need is technically deficient nor that the Commission's approval of the needs identification document would not be in the public interest. The Commission, therefore, finds the AESO's assessment of need to be correct and approves the needs identification document and the proposed option 2 as the means to meet the need identified in the AESO's NID.

⁵ Exhibit 1, Weasel Creek 947S and Abee 993S Needs Identification Document, page 15, Section 4.1, July 22, 2011.

⁶ Exhibits 22, 60 and 86, AESO Functional Specification, pages 8 to 12, Section 5.4, July 28, 2011, August 12, 2011 and August 15, 2011, respectively.

4.3 Decision

46. Pursuant to Section 34(1)(c) of the *Electric Utilities Act* and Section 38 of the *Transmission Regulation*, the Commission approves the needs identification document filed in Application No. 1607512 and grants the approval set out in Appendix 1 – Needs Identification Document Approval No. U2012–281 to the AESO for the Weasel Creek 947S and Abee 993S substations and associated transmission line development (Appendix 1 will be distributed separately).

5 AltaLink’s facility Application No. 1607550

5.1 Discussion

47. The AltaLink transmission facilities are described above in paragraph 9. Both the new Abee 993S substation and the 200 metres 138-kV transmission line 437L would be located within private property owned by Enbridge, and their construction and operation were not opposed by any party. AltaLink investigated potential routes for the new 138-kV transmission line 808AL. AltaLink proposed route “B” as the preferred route and route “C” as an alternate route. The preferred route would traverse from node B1 to node B50 to node C70. The alternate route would traverse from node C1 to node C50 to node B70 to node B90 as shown on the map in paragraph 12 above.

48. AltaLink testified that both the preferred and alternate routes for transmission line 808AL were determined based on minimizing the overall impact of the routes after considering stakeholders’ feedback during consultations. The preferred route is approximately 9.6 kilometres and would be located entirely along quarter lines on agricultural lands. The alternate route would be approximately 11.2 kilometres, with 9.6 kilometres along an existing road allowance and 1.6 kilometres along quarter lines.

49. A comparison of the preferred and alternate routes shows that there would be fewer residences within 150 metres of the transmission line right-of-way on the preferred route. The preferred route would be approximately 1.6 kilometres shorter in length than the alternate route and would require less tree clearing. Construction of the preferred route should not involve interruption to electricity service to local landowners along it while interruption would occur along approximately 1.6 kilometres of the alternate route where there is an existing distribution line. The estimated cost of the preferred route would be approximately 1.4 per cent higher than the alternate route.

50. AltaLink conducted a public involvement program for the project that began in May 2010. Project-specific information packages were mailed to stakeholders and two rounds of personal consultations were conducted by way of telephone calls and individual meetings. The stakeholders in the project are comprised of landowners, residents and occupants within a minimum of 800 metres of the proposed transmission facilities, as well as government agencies, organizations and industries in the area. AltaLink also held a public open house about the project on November 17, 2010, in Redwater, Alberta.

51. AltaLink submitted noise impact assessment summaries for the substation and associated transmission lines which stated that anticipated noise levels would be within the permissible sound levels specified in AUC Rule 012: *Noise Control* (AUC Rule 012).

52. The estimated cost of the proposed facilities in AltaLink's application would be \$14,361,000 (+20%/-10% accuracy) in 2011 dollars.

53. Mr. Dan Buryn lives on a parcel of land along the preferred route in AltaLink's facility application. Mr. Buryn made suggestions regarding mandatory notification processes which he felt should be adopted during landowner consultations. During their consultation with Mr. Buryn, AltaLink representatives discussed the potential effects of electromagnetic fields (EMF) by the proposed power line, and the conclusions of Health Canada and other international health organizations on the possibility of health effects related to EMF. AltaLink representatives also discussed the viability of Mr. Buryn's proposed farm camp should the proposed line be constructed on his land. AltaLink had committed to work with the Buryns with respect to the specific location of transmission line structures prior to construction to mitigate the potential impacts.

54. The main concerns that Mr. Dan Buryn expressed at the hearing related to notification and consultation procedures arranging for land access and some associated safety issues. Mr. Buryn made several recommendations regarding the notification and consultation procedures, including mandatory posting of signage to notify landowners about proposed transmission line routes, earlier landowner consultation, and mandatory posting of signs in strategic areas to inform landowners and occupants should work be conducted on private property.

55. AltaLink responded that the use of signage was not considered an effective way to bring project information to the attention of a community. In its view, the type of consultation it undertook - direct communication, notification and consultation, with potentially affected parties, was more appropriate because it was direct communication. AltaLink was concerned that the posting of signage might be found intrusive and considered objectionable by many people.

56. AltaLink appreciated that Mr. Buryn's primary concern and motivation for making recommendations on notification procedures were related to his concern for the safety of people on his property. AltaLink stated that its practice was to notify individual property owners when representatives wanted to access private property to do any particular work and agreed that signs could be put up should work be done on someone's property. Its position was that the decision whether to do so should be made on a case-by-case basis depending on decisions reached through direct consultation with each owner at the time that work was proposed to be done.

57. AltaLink testified that its participant involvement program was designed to meet the public consultation requirements set out in AUC Rule 007. AltaLink believed that its participant involvement program was thorough and sought to address stakeholders' concerns in relation to the project. AltaLink had several consultations with Mr. Buryn since it became aware that he wished to be consulted about its project.

5.2 Commission findings

58. Based on the evidence and arguments provided by all interested parties, the Commission finds that AltaLink's facility application to construct and operate the Abee 993S substation and the transmission lines complies with the requirements prescribed under sections 14, 15 and 18 of the *Hydro and Electric Energy Act* and AUC Rule 007, and further, that it is consistent with the AESO's need application.

59. The Commission is satisfied that the noise impact assessment submitted with AltaLink's facility application fulfills the requirements of AUC Rule 012.

60. Alberta Sustainable Resource Development has confirmed that consultation or notification to First Nations is not required for this project because there is no impact to any Crown lands on the proposed route.

61. Alberta Culture and Community Spirit has granted AltaLink a *Historical Resources Act* clearance.

62. The Commission finds that AltaLink's participant involvement program and other landowner consultations were sufficient to communicate to all potentially interested parties the nature and details of AltaLink's project, and its potential impacts upon those parties. AltaLink's consultation efforts provided reasonable opportunity for anyone to express, consult and discuss with AltaLink representatives any aspects of the project of interest or concern. The Commission accepts AltaLink's assurances that its consultation will continue undiminished throughout the project.

63. Notwithstanding the concerns expressed by Mr. Dan Buryn regarding potential impacts of electromagnetic fields on human health if the proposed transmission line is constructed near his residences or lands, the Commission finds that the evidence on expected electromagnetic fields levels does not support the conclusion that there will be health effects associated with the electric and magnetic fields produced by the proposed transmission line.

64. The evidence before the Commission in this proceeding was that the highest magnetic and electric fields within the right-of-way produced by the proposed transmission line would be 12 milligauss (mG) and 1.3 kilovolt/metre (kV/m), respectively. These fields diminish rapidly as you move away from the transmission lines. At the edge of the right-of-way, the magnetic and electric fields for the preferred route are 4 mG and 0.5 kV/m, respectively. In the absence of persuasive evidence to the contrary, the Commission accepts this evidence.

65. The evidence filed by AltaLink indicated that other electrical effects, such as radio, television and GPS interference, stray voltage and induction onto metallic obstructions, created by the transmission line, can be mitigated and that AltaLink is committed to implementing effective mitigation measures if these effects are encountered.

66. The Commission finds that the preferred route is preferable to the alternate route because it has two fewer residences within 150 metres of the transmission line right-of-way, the line is shorter in length, less tree clearing will be required and the construction of the line involves no interruption to electricity distribution service.

67. Based on the foregoing, the Commission approves the preferred route proposed by AltaLink for new transmission line 808AL. Consequently, the Commission finds that approval to construct and operate the new Abee 993S substation, transmission line 437L, and transmission line 808AL along the preferred route is in the public interest having regard to the social, economic and environmental impacts, pursuant to Section 17 of the *Alberta Utilities Commission Act*.

5.3 Decision

68. Pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*, the Commission grants Permit and Licence No. U2012-282 – August 15, 2012, to AltaLink to construct and operate Abee 993S substation as set out in Appendix 2 (Appendix 2 will be distributed separately).

69. Pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*, the Commission grants Permit and Licence No. U2012-283 – August 15, 2012, to AltaLink to construct and operate transmission line 437L as set out in Appendix 3 (Appendix 3 will be distributed separately).

70. Pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*, the Commission grants Permit and Licence No. U2012-284– August 15, 2012, to AltaLink to construct and operate transmission line 808AL as set out in Appendix 4 (Appendix 4 will be distributed separately).

71. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission grants Permit and Licence No. U2012-288 – August 15, 2012, to AltaLink to alter the existing transmission line 808L in order to facilitate the interconnection of the proposed transmission line 808AL as set out in Appendix 5 (Appendix 5 will be distributed separately).

6 ATCO’s facility Applications No. 1607595 and No. 1607597

6.1 Preferred and alternate route selection

6.1.1 Application No. 1607595 – Weasel Creek

72. The transmission facilities proposed by ATCO in the Weasel Creek facility application are described in paragraph 10. The proposed Weasel Creek 947S substation is located within property of Access in the County of Smoky Lake, approximately six kilometres north of the town of Waskatenau. No concerns were raised with the location of the Weasel Creek substation by any party.

73. For new transmission line 7LA808, ATCO investigated five potential route options in detail and proposed one route, the east route, with two alternative connecting points with AltaLink’s transmission line 808AL, an east connection segment and a west connection segment. The east route would closely parallel Highway 28 and then turn north along a quarter line to connect with the Weasel Creek substation. ATCO applied for the east connection segment as the preferred connection for the east route. The east connection segment would run from node E1 (C70) to node E2. The west connection segment would run from node C1 (B90) to node C2 and then to node E2 as shown on the map found in paragraph 12.

74. ATCO testified that the east route best met transmission line routing criteria and was the most favourable route option. The east route follows an existing 25-kV distribution line along the entirety of the highway alignment and is approximately 16.8 kilometres in length. Therefore, ATCO proposed to understring the approximate 7.2 kilometres of 25-kV distribution line on the proposed transmission line 7LA808. ATCO submitted that the east route had the smallest portion of right-of-way traversing cultivated lands and the least amount of tree clearing required. In addition, ATCO submitted that the east route had the fewest major turns and the fewest outstanding objections and parcels with objections.

75. ATCO said that the east connection segment was the preferred connection option. ATCO noted that the west connection segment was the inferior route connection option due to longer line length, higher cost and its identification as less favourable through stakeholder consultation. However, this connection segment had been applied for to allow connection to AltaLink's alternate route if it were approved by the Commission.

76. The estimated cost for the proposed facilities in this application would be \$13,838,000 (+20%/-10% accuracy) in 2011 dollars.

77. The Shwetz family opposed the Weasel Creek transmission project and asked the Commission to reject the proposed east route. They suggested an alternate route option along Highway 831 with a distribution line strung underneath. They believed that such an alternate routing would be a better use of lands and create less overall impact on lands in the area, including visual, agricultural, land planning and other impacts.

6.1.2 Application No. 1607597 - Abee

78. The transmission facilities proposed by ATCO in the Abee facility application are described in paragraph 11. ATCO investigated seven potential route options in detail and proposed the east route as the preferred route and a west route and a west route 2 as alternate routes. The preferred east route would in turn run from the Weasel Creek 947S substation, node A5, node A5A, node A5B, node B7 and then to the Abee 993S substation. The alternate west route would in turn run from the Weasel Creek 947S substation, node A5A, node B5A, node B7 and then to the Abee 993S substation. The alternate west route 2 would in turn run from the Weasel Creek 947S substation, node A5, node B5, node B5A, node B7, and then to the Abee 993S substation. These route options are shown on the map found in paragraph 12.

79. All three routes would primarily parallel quarter lines and section lines crossing cultivated lands. They would have similar line length, number of major turns, wetlands, fragmented lands and cost. The preferred east route and alternate west route 2 would have the greatest separation from the nearest occupied residence, approximately 470 metres to the right-of-way, among all seven potential route options. ATCO stated that the east route would have the least number of outstanding objections and parcels with objections.

80. The estimated cost for the proposed facilities in this application would be \$4,305,000 (+20%/-10% accuracy) in 2011 dollars.

81. The Dodd family requested that the Abee facility application not be approved. In the alternative, they requested that the proposed east route and west routes not be approved. The Dodds submitted that ATCO had failed to demonstrate that these proposed routes were superior or would stand out as the preferred routing options when compared to other potential routing options. Furthermore, they requested that the Commission consider the alternate routing options and modifications including those options recommended by their expert consultants Brubaker & Associates, Inc. (BAI).

82. Mr. Dauphinais from BAI testified, on behalf of the Dodds, and proposed four other routes⁷ that were each collocated with the existing distribution lines along Highway 831, Highway 656, Range Road 195, Township Road 602 and Township Road 610 wherever possible.

83. Mr. Dauphinais recommended Route BAI-1 as the preferred route, or alternatively, Route BAI-3. He stated that BAI-1 appeared to be superior to ATCO's east route in that it had more potential to minimize adverse residential and agricultural impacts. He added that the identified routes have the potential to minimize other impacts such as visual and aesthetic impacts, fragmentation, and the bisection of agricultural operations currently conducted on the Dodd family's adjoining quarters. Furthermore, he recommended consideration of Route BAI-4, west route 2 or ATCO's rejected routes B, C or D.

84. The Blue Route Group requested that the Commission approve ATCO's preferred east route. In the alternative, the Blue Route Group submitted that ATCO ought to follow the existing transmission line along Highway 831 (Blue Route Group 831 route)⁸ to avoid new land disturbances through agricultural lands.

6.2 Discussion

6.2.1 Routing consideration

85. ATCO testified that its route development process involves several stages, including review of available environmental and land use data, field studies and the incorporation of feedback from local stakeholders, landowners and key agencies, such as Alberta Transportation. ATCO indicated that each of its proposed routes and connection segments would be acceptable to ATCO, but that the preferred route or connection segment would best balance the potential social, environmental and economic impacts of the project.

86. ATCO stated that it generally applied the following criteria in transmission line routing:

- minimize impact to other land uses such as residences, built-up areas, and oil and gas facilities
- utilize existing linear disturbances to minimize new disturbance and clearing
- follow existing power lines where practical
- follow quarter and section lines where possible to minimize impact to agriculture
- keep routes as straight as possible in order to reduce line length and costly corner structures

⁷ Exhibit 151.08 to Exhibit 151.11, Evidence of James R. Dauphinais, March 9, 2012.

⁸ Exhibit 154.05, Evaluation of the Route Options for the Abee Transmission Project, March 9, 2012.

- minimize impact to environmentally sensitive areas such as watercourses, recreation areas, parks, campgrounds, and sensitive wildlife habitats
- avoid wet areas and steep slopes both for better access and to reduce environmental impact
- use feedback received from stakeholder input during consultation where practical

87. Mr. Secord, counsel of the Dodd and Shwetz families, argued that the governing routing principle in these two projects should not necessarily be avoidance of home sites. He argued that the key routing criteria should be avoidance of facility proliferation. He quoted Section 6.8.19 of AUC Rule 020: *Rules Respecting Gas Utility Pipelines* “Pipeline development is to be carried out in a manner that minimizes the overall impacts on the environment and public. Proliferation of pipelines would occur when new development results in greater surface disturbances and impact on the public than would be the case if existing infrastructure were used or if significant excess capacity or redundancy of capacity would result”. Mr. Secord argued that collocating the proposed line with the distribution line on Highway 831 or Range Road 195 would be less visually disruptive than placing it in the green field situation in the middle of those quarter sections and would also avoid the proliferation of transmission lines.

88. ATCO argued that all the routes put forward by Mr. Dauphinais were proposed to avoid the impact on the Dodds, particularly with respect to their cross-cultivated parcel and their desire that the line would not traverse that parcel. ATCO submitted that Mr. Dauphinais in his route recommendations had not considered their impacts on other landowners, including residences and other cross-cultivated parcels. ATCO suggested that the routes advocated by Mr. Dauphinais traded cross-cultivated impact on the Dodd family for the same impacts on other landowners. Mr. Secord argued that all the new routes suggested by Mr. Dauphinais would affect the Dodds. However, the Dodds would rather have the line in front of their house instead of running across the middle of their half section in 17-60-19 W4M.

89. Mr. Cline, of Grid Power, concluded in his report prepared for the Blue Route Group that ATCO’s preferred east route had the lowest land use impact of all three routes proposed by ATCO. He explained that the east route would result in the lowest impact to residences and reduce impact to agriculture, but at the cost of a small increase in environmental impact. He added that the east route would also avoid two locations of possible future development, i.e. a new residence being considered for SE 30-60-19 W4M, and a private airstrip planned to be located in NE 30-60-19 W4M. However, Mr. Cline submitted that ATCO should have given more consideration to the Blue Route Group 831 route. He suggested that over the long term, the Blue Route Group 831 route would cost \$1 million to \$1.6 million less than the other routes proposed by ATCO because the cost of the cross-country route would be significantly increased by the initial and ongoing landowner compensation payable for the acquisition of right-of-way. He noted that a route built “on road” would have no agricultural or environmental impacts. In conclusion, Mr. Cline was of the opinion that given the higher estimated cost, and the environmental and agricultural impacts of all the routes proposed by ATCO, compared to the Blue Route Group 831 route, ATCO should have also included this low cost, but high residential impact route as a routing alternative in ATCO’s Abee facility application.

90. The Shwetz family submitted that continuing understringing and collocating the transmission line along Highway 831 would decrease the adverse impacts on the lands belonging to or used by them. In final argument, their counsel, Mr. Cheng, noted that the geographic area in the Weasel Creek project had already been fragmented by existing distribution lines, roadway allowances, highways and other linear disturbances. The Shwetz family argued that collocating the transmission line to decrease the impact of these industrial developments in a rural setting had not been adequately explored or addressed by ATCO.

91. ATCO responded that it generally supports the collocation of transmission lines, for example, where significant reductions in land use impacts can be realized through collocation. Collocation of the transmission line is proposed for the portion of the east route which would parallel Highway 28 and the railway including understringing an existing distribution line. However, ATCO submitted that paralleling existing road allowances elsewhere would not strike the right balance in terms of land use impacts, particularly in relation to residential impacts.

92. ATCO's witnesses testified that potential routing opportunities along other existing road allowances and highways identified by the interveners were investigated during the early stage of ATCO's preliminary route development and again after the intervener routes were introduced in evidence. However, these routing options were rejected due to their proximity to residences, additional line length, greater cost, and higher impacts to land uses respecting yard sites and impacts associated with transmission line vegetation management requirements.

93. ATCO explained that minimizing residential impact was one of its major routing criteria for transmission lines. It clarified that unlike distribution lines, transmission lines connecting generation facilities to substations, or substations to substations, generally would not provide service to any point between these locations. Residences located in close proximity to a transmission line would not be provided direct electricity service from transmission lines and, therefore, minimizing impacts to land uses, such as residences, would be one of the primary criteria used in transmission line routing.

94. ATCO added that the Dodds and the Shwetzes failed to adequately recognize the significance of the potential impacts of their proposed routes to residences. It disagreed with Mr. Dauphinais' suggestion that transmission line routing to avoid residences was primarily intended to minimize potential exposure to EMF. ATCO indicated that routing to avoid residences would be desirable to minimize other potential residential impacts, including visual impacts, land use impacts associated with yard sites, and ongoing brushing and right-of-way clearing impacts.

95. ATCO noted that the presence of an existing distribution line along a nearby road allowance would not eliminate the potential for additional visual impacts to occur from a collocated facility. The proposed transmission line structures would be significantly taller and wider than the existing distribution structures. Where a typical single-phase 7.2-kV distribution line would be approximately 11 metres tall and 0.3 metres wide, the structure required to support a three-phase 144-kV transmission line understrung with a single-phase 7.2-kV distribution line would be more than twice as tall (24 metres) and eighteen times as wide (5.6 metres). ATCO concluded that the larger structures and additional conductors required for a collocated facility would result in the potential for further visual impact.

96. ATCO admitted that the tree clearing required for intervener routes may be less in the aggregate than the tree clearing required for ATCO's three proposed routes. However, ATCO mentioned that visual impacts associated with transmission lines located along road allowances and in close proximity to residences could also increase due to the associated vegetation management practices. ATCO submitted that its vegetation management program required a vegetation control area adjacent to the transmission line right-of-way to be free of trees. Collocation of line construction and tree removal requirements would potentially increase impacts to yard sites, such as the reduction in tree screens or windbreak.

97. ATCO also explained that in order to maintain safe and reliable distribution service to the local end-use customers, temporary distribution lines would be required in locations where the intervener proposed to collocate facilities with an existing distribution line. To implement the collocation, all of the potential impacts associated with construction and operation of a permanent distribution line would occur, including construction activity impacts (land disturbance), land use impacts (agriculture, residential yards), visual impacts, and vegetation removal. ATCO emphasized that the impacts associated with vegetation removal and land disturbance would have the potential to occur over a long period of time.

98. ATCO assessed all of the proposed intervener routes⁹ using the same routing matrix applied to its three proposed route options. It compared the distances of residences from the proposed routes and found that all intervener routes would have a greater number of residences within 150 metres and a greater or equal number of residences within 800 metres.

99. ATCO also estimated that all intervener routes would result in dramatic cost increases. Compared with a \$1.8 million estimated project cost for the preferred east route in the Abee transmission project, the BAI-1, BAI-3 and the Blue Route Group 831 routes proposed by Mr. Dauphinais and Mr. Cline are estimated to cost \$3.5 million, \$4.2 million, \$3.7 million, respectively. Compared with a \$3.4 million estimated cost for the preferred east route in the Weasel Creek transmission project, the Highway 831 route option was estimated to cost at least \$5 million.

100. Alberta Transportation indicated that Highway 831 is a major two-lane highway with average annual daily traffic of 2,710 vehicles; that it also serves as a major secondary highway for travel to Fort McMurray and that the intersection of Highway 831 and Highway 28 may see improvements in the near future. Alberta Transportation also stated that it did not support the proposed alignment of the transmission line within Highway 831 and its preference was for placement of structures 30 metres or more from the existing centerline of Highway 831. It had no objection to ATCO's east route, west route and west route 2.

⁹ Exhibit 178.18, Detailed Metrics for Intervener Routes, April 23, 2012.

101. ATCO believed that a more realistic routing scenario for paralleling Highway 831 would be to place the structures 30 metres from the centerline of Highway 831. In doing so, it would result in structure placement 11 metres outside the highway right-of-way and onto adjacent private lands. However, ATCO submitted that placement of structures in such a manner would increase negative residential and land use impacts associated with routing along Highway 831, which it described as follows:

- structures would be placed in even greater proximity to residences
- the full 18 metres instead of nine metres of right-of-way would be located onto adjacent lands
- location of the full 18 metres right-of-way on adjacent lands would increase clearing impacts and impacts to yard sites
- additional clearing required for vegetation control would occur closer to residences and increase yard site impacts
- the agricultural impact will increase when compared with structure placement that follows field boundaries
- potential re-routing may be required at various locations where safety requirements do not allow for structure placement such as over top of residences, a community hall, yard buildings, farm storage and equipment

102. ATCO also consulted the County of Thorhild, which had requested that structures be placed one metre outside of a road allowance on adjacent private land. ATCO believed that the impacts associated with the placement of the transmission line one metre onto private land is similar to that of routing along quarter section lines, and as such, does not anticipate significant additional agricultural impacts.

103. ATCO reiterated that the key difference between its criteria for routing and siting distribution lines and transmission lines would be that transmission line routing gives greater consideration to impacts on residences and built-up areas. Where residences are not a constraint, or where impacts to residences have already been carefully considered in transmission line routing decisions, collocating facilities is likely consistent with ensuring other impacts are balanced as well. ATCO concluded that due to the impacts of collocating facilities in close proximity to numerous residences, and in the absence of significant advantages of the proposed intervener routes, collocation is not recommended in the Abee transmission project and the north part of the Weasel Creek transmission project.

6.2.2 Consultation

104. ATCO conducted a public involvement program for these two applications which started in October 2010. Project-specific information packages were mailed to stakeholders within a minimum 800 metres of the preliminary routes and personal consultations were also conducted. The stakeholders in the project area are landowners, residents and occupants within a minimum of 800 metres of the proposed transmission facilities, government agencies, organizations and industries in the area. ATCO also held a public open house to provide information about the applications on November 9, 2010, in Waskatenau, Alberta.

105. The Shwetzes agreed that ATCO had a lot of communication with them. However, they felt that ATCO had not addressed their concerns in a satisfactory manner. They said that ATCO did not provide sufficiently clear and thorough information about the Weasel Creek application throughout ATCO's consultations with them. They submitted that the consultation process conducted by ATCO was inadequate for the purposes of the participant involvement program requirements set out in Appendix A of AUC Rule 007.

106. The Dodds stated that they had met with representatives of ATCO from the time of their receipt of the initial notification materials until ATCO's filing of the Abee transmission application with the AUC. However, they felt that the information provided by ATCO was not sufficiently clear or informative and that ATCO's consultations and meetings did not address or resolve their concerns.

107. The Blue Route Group did not raise any concerns with ATCO's consultation program.

108. ATCO showed that following the open house, two rounds of personal consultations were conducted with each of the Dodds and Shwetzes, followed by subsequent discussions regarding their respective concerns. The first round of consultations on the preliminary route options aimed to explain the potential impacts of the projects, to document the views and concerns of participants, to collect site-specific information about potential impacts to their lands and to identify the route options with the least overall impacts. The second round of consultations on the selected route options was aimed to gather further site-specific details about the potential impacts and mitigation measures, to identify opportunities to further reduce the impacts of the projects through localized adjustments to the line location or structure position and to identify the preferred and alternate routes.

109. ATCO submitted that feedback provided by each party consulted was considered. For example, following consultation and discussion of mitigation measures with one landowner, ATCO amended its application for the Abee transmission project to allow for the use of H-frame structures over a cross-cultivated field to reduce the number of structures placed in the field. ATCO also pointed out that west route 2 was proposed to accommodate the Dodds and another landowner's concern.

110. ATCO indicated that the individual concerns expressed by the Dodds and the Shwetzes were weighed against the overall input received from all other parties consulted on the projects. ATCO acknowledged that selection of the preferred and alternate routes may not be consistent with the comments and preferences of any particular stakeholder. ATCO admitted that two consultation meetings were held with the Dodds without the presence of their daughter Ms. Del Colle as requested, but that it did include Ms. Del Colle in all subsequent consultation activities.

6.2.3 Environmental consideration

111. ATCO provided an environmental protection plan¹⁰ for the Weasel Creek and Abee transmission projects. It described the measures and procedures to be used during construction, operation and reclamation of the projects. Subject to regulatory approval, construction was scheduled to commence in late August 2012, and continue through to

¹⁰ Exhibit 178.03, Environmental Protection Plan, April 23, 2012.

January 2013. Therefore, the plan would address construction activities occurring during both non-frozen and frozen conditions. ATCO promised that clean-up of disturbed portions of the right-of-way would be conducted immediately following construction, or as soon as soil and weather conditions would permit. ATCO was confident that the plan would allow for the construction of the projects with minimal impact to the environment.

112. The Shwetzes were concerned about the impacts to shelterbelts, and the removal of trees and brush. Shelterbelts have been valuable to their agricultural practices, and offer protection against erosion and of the drainage ditch. Shelterbelts had also offered wildlife habitat and high aesthetic value for them. The Shwetzes also expressed concerns regarding the presence of Swainson hawks, a sensitive species that had been spotted in the windbreak areas of their lands.

113. The Shwetzes expressed concerns about the adverse impacts that siting, construction and operation of the proposed transmission line would have on a riparian area and drainage water course located in the vicinity of the proposed east route. They also noted the presence of a wetland area in the vicinity of the transmission line easement area along the east route, which they believed had not been adequately accounted for by ATCO.

114. The Blue Route Group was concerned about how the Abee transmission line would impact the wildlife and birds that presently inhabit the shelterbelts. It submitted that there were few natural shelterbelts left in the area and the loss of more shelterbelts will lead to a decrease in wildlife and bird habitat in the area.

115. ATCO retained EBA Engineering Consultants Ltd. (EBA) to identify and assess potential environmental impacts associated with these two projects. The environmental scope of the EBA report includes land use, designated areas, wetlands, watercourses, terrain and soils, vegetation and wildlife.

116. The EBA report predicted that loss of habitat due to the removal of shelterbelts would be low and not significant. EBA acknowledged the presence of Swainson hawks and recommended mitigation measures. In addition to these measures, ATCO committed to follow the procedures and measurements outlined in its environmental protection plan regarding the presence of wildlife.

117. The EBA report identified water bodies that may potentially be impacted by the projects, including the wetland noted by the Shwetz family. ATCO gave assurances that where possible, such impacts would be avoided and that it would follow the measures set out in its environmental protection plan to reduce or mitigate such impacts.

6.2.4 Agricultural impacts

118. Certain interveners expressed concerns regarding potential agricultural impacts associated with the projects. Their concerns included shelterbelt destruction and associated wind erosion and deterioration of the drainage system, spread of clubroot, soil condition after construction of the line, inconvenience and inefficiency resulting to agricultural operations, and safety concerns related to power lines and structures.

119. The Shwetzes identified a thick mature shelterbelt which they described as integral to protection from wind erosion and shelter of the drainage system running through the east route on SE 20-59-19 W4M. It would be removed due to the placement of proposed transmission structures. They also indicated that soil condition would be adversely affected after ATCO mulches their right-of-way through their quarters, which would result in little to no vegetation to be re-established and to grow in the area. The Blue Route Group stated that removal of the shelterbelts would result in lower crop yields on both sides of the shelterbelt and consequently more loss of soil.

120. The interveners expressed concern about how the proposed transmission structures would affect their agricultural equipment operations. They were concerned about the increased cost, difficulty and inefficiency that would occur if they were required to farm around the poles given the large size of agricultural equipment used by them or their renters. The Dodds were particularly concerned about their renter finding their lands no longer desirable for agricultural operations and that they would have to rent other lands to continue their farming business.

121. The interveners expressed concerns with safety issues when farming around the power line. They felt that should the line be located midfield, it would be very dangerous to their family, friends and co-workers. The Dodds expressed concerns regarding the potential impact of the transmission line on GPS and other electronic equipment utilized for agricultural operations.

122. The interveners also expressed concerns with crop disease during construction of the line and maintenance of the line. The Shwetzes said that ATCO's clubroot management plan did not provide enough protection for their farming operation. They also indicated that ATCO had not offered to provide weed control and keeping equipment clean during line construction on their lands. The Blue Route Group stated that crop disease could lay dormant in the soil for long periods of time and it was difficult to prove how the disease was spread.

123. The Dodds retained the services of Thompson Agricultural Consulting Ltd. (Thompson) to review the Abee transmission application and to determine agricultural and property issues with the application. Thompson reported that the Dodds' property has a higher grade of soil capability for agriculture and that the soil grade on neighbouring lands is not rated as valuable.

124. ATCO retained Serecon Valuations Inc. (Serecon) to assess the potential impacts to agricultural operations associated with the placement of transmission structures on cultivated land and the potential impacts associated with the removal of shelterbelts. Serecon stated that calculable impacts would not be expected on area farming operations as a result of the removal of certain shelterbelts. However, Serecon noted that a change in farming pattern would impact the way a producer would have to maneuver equipment within these properties, and subsequently would increase costs associated with that equipment and would also reduce revenues from crop production. Serecon estimated that this change in farming pattern as a result of pole structures being placed within cultivated fields would cause negative monetary impacts in the range of \$21.42 to \$122.01 annually per structure. Serecon concluded that changes in field patterns would, therefore, be considered minimal in terms of overall impact and would be compensated for by way of ATCO's annual structure payments.

125. ATCO submitted that as part of its environmental protection plan, it developed a Best Management Practice – Crop Disease Protection, which had adopted the best management practices identified under the Government of Alberta’s Clubroot Management Plan to address the spread of clubroot and noxious weeds. It would include a number of equipment cleaning practices designed to prevent the spread of noxious weeds and soil born diseases, specifically clubroot. ATCO stated that it had worked with the counties of Smoky Lake and Thorhild to minimize the risk of spread of clubroot and noxious weeds. In addition, ATCO also committed, in its environmental protection plan, to allow for re-vegetation of low shrubs where removal of shelterbelts was required.

126. ATCO stated that it had designed the proposed overhead transmission lines to comply with the *Canadian Standards Association C22.3* and the *Alberta Electrical Utility Code*, both of which are accepted in Canada and Alberta. It submitted that its design should provide safe physical clearances across various types of access situations, i.e. farmland, roads, pedestrian, etc. ATCO also committed to ensure that during construction and operation of the lines, its employees and their contractors would comply with all requisite access and site conditions that are designed to protect the safety of employees, landowners and their families, and the general public. ATCO added that should height restrictions be a concern due to the use of farm equipment exceeding safe clearance, ATCO will work with landowners to ensure that such issues are addressed and mitigated. Mitigation measurements could include adjusting proposed structure locations or the use of taller structures.

127. ATCO agreed that the soils on the Dodds’ land are Class 2 as determined using the Canada Land Inventory Soil Capability for Agriculture database considered in the Serecon report. ATCO stated that in addition to the specific mitigation measures in its environmental protection plan, there are also a number of soil handling and preservation techniques described in its report that may be applied to return land as close to its pre-construction state as is practical.

128. ATCO also retained Midgard Consulting Inc. (Midgard) to review the potential impact on the operation of GPS due to the presence of the proposed transmission line. Midgard noted that the frequency band used by GPS systems, and the frequencies of both the electromagnetic field and radio frequency interference that could be generated by the transmission line have a significant spectrum separation. Midgard therefore concluded that GPS receiver operation is unlikely to be affected by the proposed transmission line.

6.2.5 Social consideration

129. The interveners expressed concerns with the potential adverse residential, visual, noise, health, and psychological impacts associated with the projects. The Blue Route Group stated that removal of the natural shelterbelts would cause a negative visual impact and reduce the privacy and security presently enjoyed by a number of residents on the proposed west routes. They added that at least one potential building site for Ms. Tami Melnyk’s family on SE 30-60-19 W4M would have to be eliminated should either of the west routes be approved. The Blue Route Group also noted that a private airstrip was planned and some work for the airstrip had already begun for the Fortier family on NE 30-60-19 W4M for the purpose of starting an aerial spraying business, which could be potentially blocked by the proposed west routes.

130. The Dodds had indicated particular concerns about the potential adverse health impacts of the Abee facility application and the stress that their involvement in this process had caused them. They submitted that should the east route be approved and developed, there would effectively be three power lines (either distribution or transmission line) in the immediate area of their residence and lands.

131. ATCO noted that avoidance of transmission lines routes in close proximity to residences was one of its major criteria in the Weasel Creek and Abee projects. ATCO mentioned that no scenic viewpoints had been identified in the project area and pointed out that the closest residence owned or occupied by a member of the Blue Route Group is approximately 490 metres from the alternate west route and west route 2. ATCO also noted that the Dodds' and Andrew Shwetz's residences are approximately 700 metres and 860 metres, respectively, from the preferred east route.

132. ATCO submitted noise impact assessment summaries for the proposed substation and associated transmission lines. In the noise impact assessment, the anticipated noise levels were estimated to be within the permissible sound levels specified under AUC Rule 012.

133. ATCO said that it will work with the Fortiers to re-align the planned airstrip in the event that either of the alternate west routes is approved and interferes with their use of the airstrip.

134. ATCO noted that the County of Smoky Lake had not issued building permits pertaining to a future potential residence on Ms. Melnyk's land.

135. Some interveners expressed concerns regarding reduced value of their lands and residence due to the presence of the proposed transmission lines. They submitted that their lands are an investment saving for their future. The Shwetzes argued that ATCO's compensation structure did not represent the current market value of properties in the area.

136. ATCO responded that it did not anticipate any consequential reductions in property values and added that it strived to minimize the impact of its transmission lines by providing reasonable separation between the proposed transmission line and residences, aligning rights-of-way along property boundaries, roads and other linear features where practical, working with landowners and making adjustments to proposed structure locations where reasonable.

6.3 Commission findings

137. Based on the evidence and arguments provided by all interested parties regarding ATCO's Weasel Creek and Abee facility applications, the Commission finds that the facility applications comply with the requirements prescribed under sections 14, 15 and 18 of the *Hydro and Electric Energy Act* and AUC Rule 007. The Commission further finds that the facility applications to construct and operate the Weasel Creek 947S substation, Abee 993S substation and the associated transmission lines are consistent with the transmission system development plan as presented in the need application.

138. The Commission is satisfied that the proposed facilities fulfill the requirements of AUC Rule 012 based on the evidence submitted by ATCO.

139. Alberta Culture and Community Spirit has granted ATCO a *Historical Resources Act* clearance for its Weasel Creek transmission project and Abee transmission project, respectively.

140. The Commission finds that ATCO's participant involvement program and other landowner consultations were sufficient in communicating to all potentially interested parties the nature and details of these projects, and their potential impacts upon those parties. ATCO's consultation efforts provided reasonable opportunity for anyone to express, consult and discuss with ATCO representatives any aspects of the projects of interest or concern. The Commission accepts ATCO's assurances that this extensive consultation process will continue throughout the projects. Although ATCO did not include the Highway 831 route or other routes collocated with range roads as alternate routes in its Abee facility application, the Commission finds that the considerable evidence adduced at the hearing sufficed to inform interested parties about such routing alternatives and for the Commission to determine their relative impact.

141. The Commission acknowledges and supports ATCO's commitment to construct and maintain the proposed transmission facilities in adherence to Alberta Environment's R&R/11-03, *Environmental Protection Guidelines for Transmission Lines*, and in accordance with the terms and conditions of ATCO's right-of-way and easement agreements. It also accepts ATCO's commitment to address site-specific issues on an individual basis with each landowner prior to and during construction.

142. The Commission finds that the Weasel Creek and Abee transmission projects should not cause significant adverse environmental impacts, provided that ATCO complies with its environmental protection plans filed in this proceeding, and implements the other environmental impact mitigation measures specified in the applications. Accordingly, the Commission is satisfied that the anticipated environmental impacts associated with the projects will be mitigated to the extent possible.

143. Notwithstanding interveners' concerns regarding the potential impacts of EMF on human health if the proposed transmission lines are constructed near their residences, the Commission finds that the evidence presented on expected electromagnetic field levels does not support the conclusion that there will be health effects associated with the electric and magnetic fields produced by the proposed transmission lines.

144. The record indicates that other electrical effects, such as radio, television, cellular phone and GPS interference, and induction onto metallic objects, created by the transmission line, can be mitigated. The Commission acknowledges in this regard ATCO's commitment to implement effective mitigation measures if and when these effects are encountered.

145. The Dodds presented considerable evidence and arguments promoting other potential route options named BAI-1, BAI-2, BAI-3 and BAI-4 as equally viable. Mr. Dauphinais has given expert testimony about this proposition on their behalf. The Shwetzes also suggested an alternate route option along Highway 831 with an understrung distribution line. This evidence, requesting consideration of other routing alternatives than those recommended in the facility applications, fails to establish a realistic prospect that any of them would likely result in a lower overall adverse impact to everyone potentially affected by the proposed transmission facilities. In this respect, the recommendations of Mr. Dauphinais were not persuasive and were of little

assistance to the Commission. The Commission finds that his evidence has indicated that the preferred route is as viable as other alternatives he proposed.

146. ATCO's evidence indicated that the landowners potentially affected would be opposed to these intervenor proposed alternate routes. The mere transfer of impacts from one landowner or group of landowners to another located elsewhere who will be equally or more impacted, and as likely to object, is not a mitigation of landowner impacts. Accordingly, the proposal of alternate route options that will simply move the alignment of a transmission line from one group of affected individuals to another group of affected individuals without improving the line's overall impact does not warrant rejecting ATCO's recommended routes for further study of other alternatives.

147. The Commission has paid particular attention to the argument advanced by counsel for the Shwetzes that the ATCO facility applications should be rejected to allow for further consideration of the Highway 831 route. The Commission recognizes that it should have regard to the principle that it is in the public interest to foster geographic separation for the purposes of ensuring efficient use of land, including the use of routes that already contain utility or energy infrastructure such as Highway 831, as prescribed in Section 38(a)(iii) of the *Transmission Regulation*. This known and accepted routing principle favouring transmission line alignments that follow existing linear disturbances is seen in the selection by ATCO of the east route, where it closely parallels Highway 28 and the adjacent railway, and stringing an existing distribution line underneath the proposed transmission line. The Commission's assessment of the public interest in determining the preferable transmission line route further northward is dictated by its weighting of the site-specific impacts to landowners and residents along that part of the proposed route. The Commission was not persuaded by the evidence that the possibility of locating a route along Highway 831 or various range roads offered a sufficient prospect of reducing the residential impact of the proposed facilities. Rather, the preferred route remains preferable in minimizing overall adverse impacts. Consequently, consideration of the principle of fostering geographic separation did not change the Commission's conclusion.

148. While approval of ATCO's preferred route will not be welcomed by either the Dodd or the Shwetz families, nor avoid the burdens imposed upon them in the public interest, the whole of the evidence satisfies the Commission that its approval minimizes the overall impact and the adverse effects of these facilities upon all the affected landowners, and the effects generally upon any particular landowner. In this regard, the expert evidence of Mr. Cline¹¹ has been of assistance and, as ultimately recognized by ATCO in argument, corroborated ATCO's routing recommendation. In the particular circumstances of this proceeding, the cumulative impact of other potential routing considerations do not offset nor outweigh the ultimate concern of minimizing residential impact. Accordingly, the Commission finds that the priority given to this factor by ATCO in its choice of route is warranted and in the public interest.

149. With respect to the ATCO Weasel Creek facility application, the Commission finds that the preferred east route is in the public interest because it maximizes the paralleling of Highway 28 and the adjoining railway. This route selection also results in a dramatically lower impact to agricultural lands. The east route is the shortest route among all the route options and

¹¹ Transcript, Volume 2, page 305 to 306.

will require the least amount of tree clearing and right-of-way acquisition. In addition, it traverses the least amount of cultivated lands and has the fewest major turns.

150. With respect to the Abee facility application, the Commission finds that all three routes proposed by ATCO (east route, west route and west route 2) are very similar with respect to line length, estimated project cost, fragmented lands, wetlands and right-of-way requirements. However, these other things being relatively equal, the east route has less landowner impact than the west route and west route 2. In this regard, the Commission finds that the preferred east route is preferable to the alternates, the west route and the west route 2.

151. Based on the foregoing, the Commission finds that the preferred east route and east connection segment proposed by ATCO is the best route and connection segment for the new transmission line 7LA808 required to meet part of the transmission need in the area. Consequently, pursuant to Section 17 of the *Alberta Utilities Commission Act*, the Commission finds that approval of the new Weasel Creek 947S substation and the new transmission line 7LA808 along with the preferred route and connection segment is in the public interest having regard to the social, economic and environmental impacts.

152. Pursuant to Section 17 of the *Alberta Utilities Commission Act*, the Commission further finds that the preferred east route proposed by ATCO is the best route for the new transmission line 7L437 required to meet part of the transmission need in the area. Consequently, the Commission finds that approval of the new transmission line 7L437 along the preferred route is in the public interest having regard to the social, economic and environmental impacts.

6.4 Decision

153. Pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*, the Commission grants Permit and Licence No. U2012-285 – August 15, 2012, to ATCO to construct and operate Weasel Creek 947S substation as set out in Appendix 6 (Appendix 6 will be distributed separately).

154. Pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*, the Commission grants Permit and Licence No. U2012-286 – August 15, 2012, to ATCO to construct and operate transmission line 7LA808 as set out in Appendix 7 (Appendix 7 will be distributed separately).

155. Pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*, the Commission grants Permit and Licence No. U2012-287 – August 15, 2012, to ATCO to construct and operate transmission line 7L437 as set out in Appendix 8 (Appendix 8 will be distributed separately).

156. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission grants ATCO Order No. U2012-290 to connect transmission line 7L437 to AltaLink's transmission line 437L as set out in Appendix 9 (Appendix 9 will be distributed separately).

157. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission grants ATCO Order No. U2012-289 to connect transmission line 7LA808 to AltaLink's transmission line 808AL as set out in Appendix 10 (Appendix 10 will be distributed separately).

Dated on August 15, 2012.

The Alberta Utilities Commission

(original signed by)

Anne Michaud
Panel Chair

(original signed by)

Neil Jamieson
Commission Member

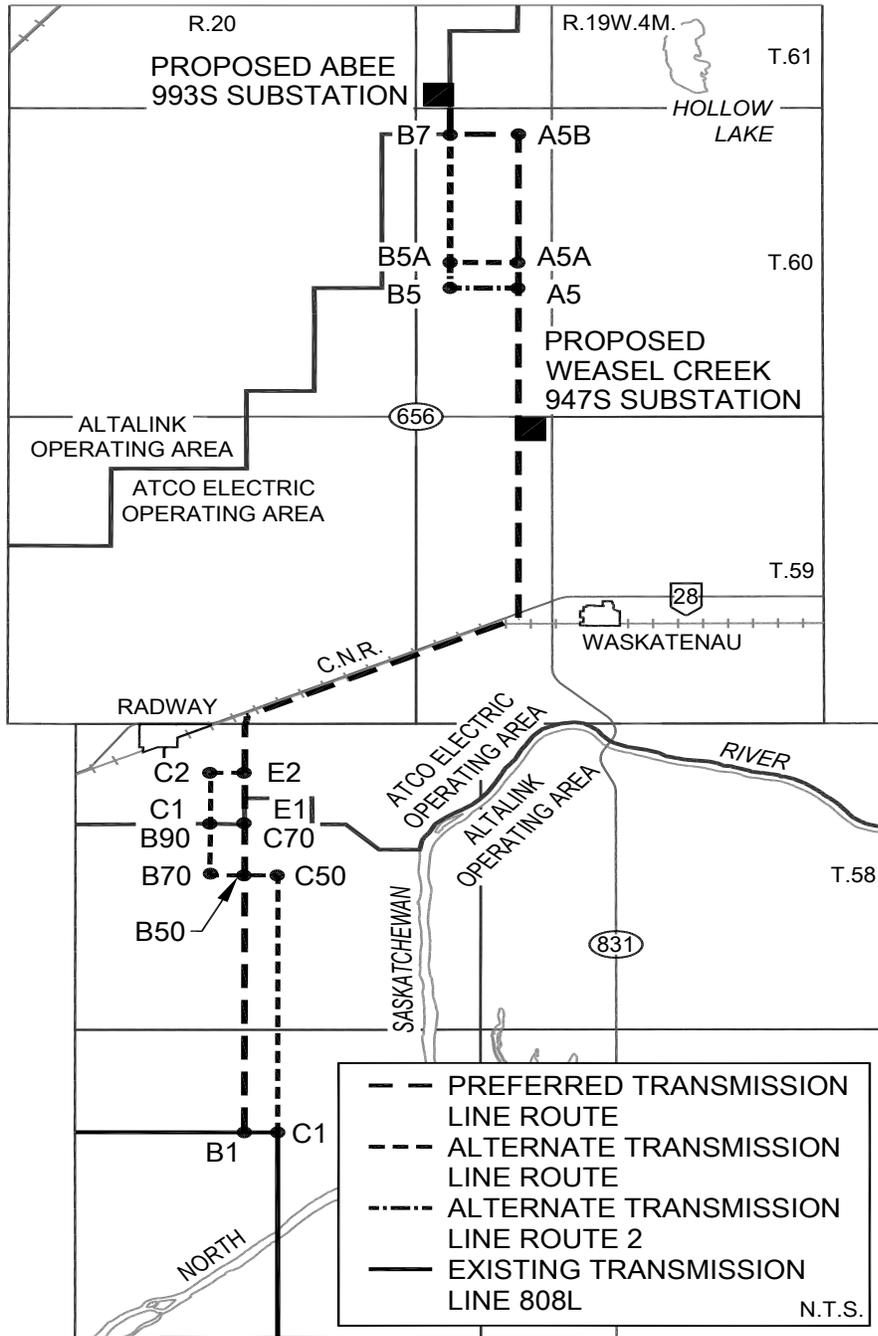
(original signed by)

Patrick Brennan
Acting Commission Member

Appendix A – Acronyms and abbreviations

AESO	Alberta Electric System Operator (also the ISO)
AUC	The Alberta Utilities Commission
The Commission	The Alberta Utilities Commission
AltaLink	AltaLink Management Ltd.
ATCO	ATCO Electric Ltd.
kV	kilovolt
MVA	megavolt ampere
BAI	Brubaker & Associates Inc.
NID	Needs Identification Document
EMF	electric and magnetic fields
Access	Access Pipelines Inc.
Enbridge	Enbridge Pipelines Inc.
EBA	EBA Engineering Consultants Ltd.
Serecon	Serecon Valuations Inc.
Thompson	Thompson Agricultural Consulting Inc.

Appendix B – Proposed alternatives for Weasel Creek and Abee transmission development



Appendix C – Hearing – registered appearances

Name of Organization (Abbreviation) Counsel or Representative (Applicants)	Witnesses
Alberta Electric System Operator (AESO or ISO) L. Jamieson	D. Sullivan S. Abdulsalam
AltaLink Management Ltd. (AltaLink) R. Lonergan K. McGlone	M. Johns W. Mundy
ATCO Electric Ltd. (ATCO) D. Sheehan S. Assié	P. Bothwell C. Kostyk L. Caden S. Martin C. Oakley G. Doll
D. Bury	
R. Secord Y. Cheng	R. Dodd V. Dodd M. Del Colle J. Dauphinais
Ace High Farms Ltd. R. Secord Y. Cheng	A. Shwetz S. Shwetz P. Shwetz
Blue Route Group D. Mallon D. O'Callaghan	P. Fortier J. Fortier P. Fortier V. Melnyk T. Melnyk D. Flaska D. MacKay R. MacKay T. Cline
Access Pipeline Inc. G. Kyle L. Manning E. Palezieux	

<p>Alberta Utilities Commission</p> <p>Commission Panel Anne Michaud, Commission Member and Panel Chair Neil Jamieson, Commission Member Patrick Brennan, Acting Commission Member</p> <p>Commission Staff J. Petch (Commission counsel) S. Jiang T. Wilde</p>
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Appendix D – Proceeding participants that did not participate in the hearing

Name of Organization (Abbreviation) Counsel or Representative
G. Klassen M. Rymar E. Hansen D. Flaska T. Flaska G. Flaska D. Kruhlak H. Andrusiak S. Andrusiak R. Ollikka M. Semeniuk Enbridge Pipeline Inc.